THE COLLEGE OF FAMILY PHYSICIANS OF CANADA
LE COLLÈGE DES MÉDECINS DE FAMILLE DU CANADA

Assessment Objectives for Certification in Family Medicine

2nd Edition

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Contents

Preface to the Second Edition

Similar to the first edition, this second edition of the document formerly titled *Defining Competence for the Purposes of Certification by the College of Family Physicians of Canada: Evaluation Objectives in Family Medicine* describes the essential skills and observable competencies that are expected from residents at the end of their training, and as such, serves as a major guide to both in-training assessment and the content of the Certification Examination.

The original version of the document[1], published in 2010, was envisioned as a living document that would be updated and enhanced to respond to the evolving nature of family medicine practice. The Working Group on the Certification Process[2], which evolved into the Certification Process and Assessment Committee (CPAC)[3], was tasked with the continuous maintenance of the document.

To minimize disruption on family medicine programs and residents, several updates made over the last five years have been coalesced and are all being released in this new edition.

The following changes and additions were made in this second edition:

1. **Renaming the document *Assessment Objectives for Certification in Family Medicine*** in English (The French name remains unchanged). This change reflects usage in English medical education literature, where training programs are evaluated for their efficacy, but individuals in those programs are assessed for competence.
2. **Six new priority topics.** The decision to add these new topics is based on responses to the 2014 validation survey, sent to 2,000 practicing family physicians across the country. Thus, we have grown from 99 to 105 priority topics, which now include: Chronic Pain, Heart Failure, Pain, Rash, Renal Failure, and Shortness of Breath.
3. **Updated key features for 16 existing mental health related priority topics** based on work completed by the Working Group on the Assessment of Competence in Mental Health[4]. Priority Topic name Substance Abuse was changed to Substance Use and Addiction, following a change in terminology.
4. **Changed French translation for 8 priority topic names,** based on changes in terminology and/or updates to their key features.
5. **Three supplementary documents** are now integrated into the Assessment Objectives document as appendices. These are:
    - Priority Topics and Key Features for Rural and Remote Family Medicine[5]

[1] *Defining competence for the purposes of certification by the College of Family Physicians of Canada: Evaluation Objectives in Family Medicine:* College of Family Physicians of Canada; 2010

[2] **Authors of the original 2010 document**: Tim Allen, MD; Cheri Bethune, MD; Carlos Brailovsky, MD; Tom Crichton, MD; Michel Donoff, MD; Tom Laughlin, MD; Kathrine Lawrence, MD; Stephen Wetmore, MD

[3] **CPAC members who contributed to the updated version**: Cheri Bethune, MD; Carlos Brailovsky, MD; Tom Crichton, MD; Kiran Dhillon, MD; Michel Donoff, MD; Theresa van der Goes, MD; Steven Hawrylyshyn, MD; Tom Laughlin, MD; Kathrine Lawrence, MD; Luce Pelissier-Simard, MD; Martin Potter, MD; Shelley Ross, PhD; Karen Schultz, MD

[4] **Working Group on the Assessment of Competence in Mental Health**: Ellen Anderson, MD; Marie Hayes, MD; Garey Mazowita, MD; Peter Selby, MD; Vicky Winterton, MD

[5] **Working Group on the Assessment of Competence in Rural and Remote Family Medicine**: Elaine Blau, MD; Garth Campbell, MD; Claudette Chase, MD; Paul Dhillon, MD; Brian Geller, MD; Fred Janke, MD; C. Stuart Johnston, MD; Mohamed Ravalia, MD; Hélène Rousseau, MD

- Priority Topics and Key Features for Intrapartum and Perinatal Care[6]
- Priority Topics and Key Features for Mental Health (other than those that overlap with the existing priority topics for family medicine)

These supplementary documents are available to be used as resources that can guide in-training assessment and design of learning opportunities for residents in family medicine residency programs.

A conscious choice has been made to keep the overall structure and purpose of this second edition the same as the first edition. We did not change Part I and Part II of the first edition. There are language choices from the first edition left unchanged for clarity purposes – for example the term "evaluation objectives" in Part I and Part II. We are aware that the whole document needs to be reviewed and its terminology revised and updated. The review will happen over time, but changes will only be made in five to seven-year cycles to minimize training program impacts and program resource implications.

As with the first edition, this second edition provides an extensive list of competencies in family medicine, extending far beyond the mere listing of important medical knowledge. We urge all readers to read (or re-read) and focus on Part 1, as its framing of what is important to assess, especially the overarching Skill Dimensions of Competence, remains crucial and relevant to the assessment of future family physicians today (namely, Clinical Reasoning, Selectivity, Patient-Centred Approach, Communication, Professionalism and Procedures).

We continue to describe competencies in terms of their most salient key features and observable behaviours. We emphasize that each competency is specific to the situation's context and to the phases of the clinical encounter; furthermore, each competency is linked back to the appropriate skill dimensions reinforcing this essential relationship.

The CFPC's 2018 Standards of Accreditation for Residency Programs in Family Medicine[7] indicate that the goal of training is to produce a candidate who is competent to enter and adapt to the independent (i.e., unsupervised) practice of comprehensive family medicine[8] anywhere in Canada.

Through continuous observational sampling, utilising the key features and reflection on a resident's behaviours and performances, assessors need to be eventually satisfied that a resident displays competency in all six essential skill dimensions of family medicine. Besides in-training assessment, the College of Family Physicians of Canada will continue to use the document as a foundation for examination content.

Awarding Certification in the College of Family Physicians (CCFP) is the responsibility of the CFPC's Board of Examinations and Certification. This decision is the end result of three discrete, but linked, decisions. The first is a candidate's qualifying to sit the examination, either through the decision by a training program to recommend a resident as ready to sit the Certification Examination, or by meeting the requirements of the Practice Eligible Route. The second is obtaining a pass on the Certification Examination in Family Medicine. The third is successfully completing all post-examination requirements, either the requirements of their

[6] **Working Group on the Assessment of Competence in Maternity and Newborn Care**: Anne Biringer, MD; William Ehman, MD; Shanna Fenton, MD; Lisa Graves, MD; Andrée Gagnon, MD; Kathrine J. Miller, MD; Sharon Northorp, MD

[7] *Standards of Accreditation for Residency Programs in Family Medicine.* Mississauga, ON: College of Family Physicians of Canada; 2018

[8] Comprehensive family medicine as defined by the *Family Medicine Professional Profile*, Mississauga, Ontario: College of Family Physicians of Canada; 2018

residency-training program or any practice eligible requirements set by the CFPC, within the Board of Examinations and Certification's prescribed timelines.

For further details about competence-based assessment and its components, please refer to the College's 2018 *Continuous Reflective Assessment for Training (CRAFT)* document[9].

[9] *Continuous Reflective Assessment for Training (CRAFT): A national programmatic assessment model for family medicine.* Mississauga, ON: College of Family Physicians of Canada; 2018

Priority Topics

New priority topics have been bolded and the ones with updated key features are marked by an asterisk. Topics with an updated translation into French are marked by (F).

1. Abdominal Pain
2. Advanced Cardiac Life Support
3. Allergy
4. Anemia
5. Antibiotics
6. Anxiety*
7. Asthma
8. Atrial Fibrillation
9. Bad News
10. Behavioural Problems* (F)
11. Breast Lump
12. Cancer
13. Chest Pain
14. Chronic Disease
15. Chronic Obstructive Pulmonary Disease
16. **Chronic Pain**
17. Contraception
18. Cough
19. Counselling* (F)
20. Crisis*
21. Croup (F)
22. Deep Venous Thrombosis
23. Dehydration
24. Dementia*
25. Depression*
26. Diabetes
27. Diarrhea
28. Difficult Patient
29. Disability
30. Dizziness
31. Domestic Violence
32. Dyspepsia
33. Dysuria
34. Earache
35. Eating Disorders*
36. Elderly
37. Epistaxis
38. Family Issues
39. Fatigue
40. Fever
41. Fractures
42. Gastro-intestinal Bleed
43. Gender Specific Issues (F)
44. Grief*
45. Headache
46. **Heart Failure**
47. Hepatitis
48. Hyperlipidemia (F)
49. Hypertension
50. Immigrants
51. Immunization
52. In Children
53. Infections
54. Infertility
55. Insomnia*
56. Ischemic Heart Disease
57. Joint Disorder
58. Lacerations
59. Learning (Patients/Self) (F)
60. Lifestyle
61. Loss of Consciousness
62. Loss of Weight
63. Low-back Pain
64. Meningitis
65. Menopause
66. Mental Competency* (F)
67. Multiple Medical Problems
68. Neck Pain
69. Newborn
70. Obesity
71. Osteoporosis
72. **Pain**
73. Palliative Care
74. Parkinsonism
75. Periodic Health Assessment/Screening
76. Personality Disorder*

77. Pneumonia
78. Poisoning
79. Pregnancy
80. Prostate
81. Rape/Sexual Assault
82. **Rash**
83. Red Eye
84. **Renal Failure**
85. Schizophrenia*
86. Seizures
87. Sex* (F)
88. Sexually Transmitted Infections
89. **Shortness of Breath**
90. Skin Disorder
91. Smoking Cessation
92. Somatization*
93. Stress
94. Stroke
95. Substance Use and Addiction*
96. Suicide*
97. Thyroid
98. Trauma
99. Travel Medicine
100. Upper Respiratory Tract Infection
101. Urinary Tract Infection
102. Vaginal Bleeding
103. Vaginitis
104. Violent/Aggressive Patient
105. Well-baby Care

Executive Summary

The Domain of Competence in Family Medicine

There are four major components in this definition:

1. Skill Dimensions of Competence
2. Phase of the Clinical Encounter
3. Priority Topics, Core Procedures, and Themes
4. Key Features and Observable Behaviours

Together they constitute the domain of competence in family medicine. Overall competence is determined through a process of continuous sampling, observation, and reflection of learner performance with respect to key features and observable behaviours for a series of problems (priority topics, procedures, themes), throughout the phases of the clinical encounter, until evaluators are satisfied that the physician is competent in all the skill dimensions.

The Components of the Evaluation Objectives:

1. ***Skill Dimensions of Competence***: There are six essential skills that enable the family physician to deal competently with problems in the domain of family medicine. The competent family physician has the potential to use all the skills for any problem, but competence is also characterized by adapting the choice of the skills used to the specific needs of the problem at hand.
   - *a)* ***Patient-centred approach*:** This is a hallmark of family medicine and represents one of the most efficient and effective methods for dealing with problems. The details of the method are well established in the literature, and the evaluation objectives for this dimension of competence are derived directly from this information.
   - *b)* ***Communication skills*:** Certain skills and behaviours facilitate communication, and good communication is essential for competence. Communication can be written or verbal, with patients or colleagues; it also involves listening and watching as much as or more than talking and showing.
   - *c)* ***Clinical reasoning skills*:** This dimension focuses on the problem-solving skills used to deal with the "medical aspects" of a problem. Although obviously knowledge dependent, many of the difficulties in this dimension are related to poor process (the how and why). Assessment of these processes is more important than assessing the final results or answers.
   - *d)* ***Selectivity*:** This dimension has not, to our knowledge, been described with respect to physician competence. It describes a set of skills cited as characterizing the competent family physician: such a physician does not do things in a routine fashion, but is selective in their approach, adapting it to the situation and patient. This physician sets priorities and focuses on the most important, knowing when to say something and when not to, gathering the most useful information without losing time on less contributory data, or doing something extra when it will be helpful. It is perhaps a subset of all the other dimensions, but it was used frequently enough to merit its own dimension.
   - *e)* ***Professionalism:*** This dimension was the most frequently cited in the descriptions of competence. It includes all the responses that dealt with respect and responsibility to patients, to colleagues, to oneself, to the profession, and to society. It includes ethical issues, as well as lifelong learning and the maintenance of quality of care. It also includes attitudinal aspects such as caring and compassion.
   - *f)* ***Procedure skills:*** In the initial survey, specific procedures themselves were not often cited as being characteristic of competence. It was recognized, however, that an individual about to enter independent practice should be able to competently perform certain procedures. A working group on procedure

skills identified 65 core procedures; assessment of competence in this dimension will be based on these **as well as general key features developed for procedure skills.**

2. ***Phase of the Clinical Encounter:*** This component plays an essential role in directing assessment toward the cognitive processes most critical to the competent resolution of a specific problem or situation. It covers the steps or phases from the beginning to end of a clinical encounter. It includes the processes usually identified with a hypothetico-deductive model of clinical problem solving, and with clinical decision making.
   a) **Hypothesis generation** (preliminary differential diagnosis)
   b) **History** (gather the appropriate information)
   c) **Physical examination** (gather the appropriate information)
   d) **Investigation** (gather the appropriate information)
   e) **Diagnosis, including problem identification** (interpret information)
   f) **Treatment (or management)**
   g) **Follow-up**
   h) **Referral**

3. ***Priority Topics, Core Procedures, and Themes:*** These constitute a list of the problems or situations that the competent family physician should be able to deal with at the start of independent practice. This list sets out and limits the content of competence in family medicine for the purposes of certification. The limits permit all concerned to concentrate their efforts, and the scope reassures us that overall competence can be reasonably inferred if assessment has been based on an adequate sampling of this content.
   a) ***Priority topics:*** This list was generated from the responses in the original survey. It includes diagnoses, symptoms, presentations, and tasks; there are also roles (periodic health/screening), groups (immigrants, newborn, elderly), issues (lifestyle), situations (family issues, difficult patients), and even some topics (antibiotics).
   b) ***Core procedures:*** Competence in this dimension is not limited to the technical skills required for the 65 core procedures. Other aspects, such as indications and contraindications, deciding to do or not to do a procedure, and choosing among several possible approaches should also be assessed. With this in mind, a key feature analysis was undertaken to identify the critical aspects of competence applicable to all procedures.
   c) ***Themes:*** The dimensions of the patient-centred approach, professionalism, and communication skills were not sufficiently defined by the key feature analysis of the priority topics. An additional iterative, a focus-group approach, using information from a variety of sources as inspiration, was used to develop a series of themes to organize the description of competence for each of these three dimensions.
4. ***Key Features and Observable Behaviours:*** These are the operational evaluation objectives describing competence in relatively objective and observable terms. This component is most useful for the assessment of competence during daily clinical supervision.
   a) ***Key features:*** Each priority topic underwent analysis to generate the key features for the topic. Key features are the specific situations most determinant of competence within a topic and the critical processes involved in dealing competently with each situation. They are determined by a group of practicing peers using a reflective, iterative process. Each key feature identifies the skill dimensions and phases of the clinical encounter that are to be used in assessing the competence for the situation and task in question.
   b) ***Observable behaviours:*** For each of the themes identified for communication skills and professionalism, an iterative process analogous to the key feature analysis was used to identify behaviours indicative of competence, or lack of it, for each theme. While the key feature analysis identifies a subset of situations thought to be indicative of overall competence for a topic, the observable behaviour analysis lists all behaviours potentially indicative of competence, and no particular subset is identified as being most critical to competence for the theme or the dimension in question.

Part I—The evaluation[10] objectives: what are they, where do they come from, and how can they be used?

[10] For consistency purposes, we have decided to keep the terminology used in the first edition

Introduction

The purpose of Part I is to encourage and to help you to use the new evaluation objectives to inspire and structure your assessment of competence in family medicine, whether this be assessment of others, or of yourself. This will be done in four steps.

- First presented is an overview of the structure and components of this definition of competence. This will provide some familiarity with the terms used in the definition, and how the different components may be used to help reach the goal of the assessment or evaluation of competence for the purposes of certification.
- Second, there is a brief discussion of some of the theoretical and practical considerations in designing successful evaluations. These considerations were kept in mind throughout the development of the evaluation objectives, and are the reason behind most of the choices made and the methods used.
- Third, we will discuss in more detail what the evaluation objectives are, and how they were derived. Understanding this process and how it relates to the considerations in the previous section are essential if the evaluation objectives are to be used as intended and with maximal usefulness and effectiveness.
- Finally, a few examples will be given of how these evaluation objectives can be used at this time, followed by some of the additional possibilities for the near future.

Part II presents all of the evaluation objectives in detail. It should be noted that the information that follows is presented in a somewhat heuristic fashion, so much of what may not seem clear as it is being read for the first time should become easier to understand once all the information is obtained and digested. This definition of competence is not linear or hierarchical; the components are, however, complementary. How they fit together and how they work to guide the evaluation of competence will become more evident once the whole picture has been viewed and reflected upon.

I. An overview of the structure and the components of this definition of competence

There are four major components in this definition, which is specific to family medicine.

1. ***The skill dimensions of competence***: There are six essential generic skills that enable the family physician to deal competently with problems in the domain of family medicine. The competent family physician has the potential to use all the skills for any problem, but competence is also characterized by adapting the choice of the skills used to the specific needs of the problem at hand. The six skill dimensions are as follows:

    a. **The Patient-Centred Approach**[11]

[11] We have opted to retain the use of the term "approach" rather than "method". "Patient-centred approach" includes the "patient-centred method", but the inverse is not necessarily as clearly true. Making sure our whole approach to practice is patient-centred is one of the defining characteristics of family medicine, so this term is used when defining competence.

b. **Communication Skills**

c. **Clinical Reasoning Skills**

d. **Selectivity**

e. **Professionalism**

f. **Procedure Skills**

This component is most useful in summative situations, and assessment of competence in any of the skill dimensions will be based on an adequate series of observations. Overall competence can be inferred when competence has been demonstrated in each of the six skill dimensions, and in the preferential use of the skills most appropriate to a particular problem.

2. ***The phase of the clinical encounter dimension of competence:*** This component is in a slightly secondary position, but plays a critical role in directing assessment toward the cognitive processes that are most critical to the competent resolution of a specific problem or situation. This dimension covers the steps or phases from the beginning to the end of a clinical encounter. It includes the processes usually identified with the hypothetico-deductive model of clinical problem solving, and with clinical decision making. It is most useful for directing and limiting assessment to the processes that are most likely to discriminate between competent and non-competent performances with respect to a specific problem or situation. For this reason it is also particularly useful for orienting additional learning for a trainee who is having recurrent or ongoing difficulty.

3. ***The priority topics, the core procedures, and the themes:*** These three, taken together, constitute a list of the problems or situations that the competent family physician should be able to deal with at the start of independent practice. As such, this component sets out and limits the basic content of the domain of competence in family medicine for the purposes of certification. The domain is, of course, only completely portrayed with the addition of the other three components, as they describe how competence is demonstrated or achieved for each of the problems or situations on these lists. This component is most useful for planning purposes, whether for teaching, learning, or assessment. The limits permit all concerned to concentrate their efforts, and the scope reassures one that overall competence can be reasonably inferred if assessment has been based on an adequate sampling of this content, from all three parts of the list. It also facilitates a periodic review of the domain to see if there are obvious gaps or duplications that may need to be corrected.

4. ***The key features and the observable behaviours:*** These are the operational evaluation objectives, using two different formats, which describe competence in relatively objective and observable terms for each of a series of specific situations that must be dealt with in family medicine. They represent the interactions between all the components for the purposes of assessing competence. There are approximately 1300 distinct elements in this component. This is the component that is most useful for the assessment of competence in specific situations, during daily clinical supervision.

In summary, this definition of overall competence in family medicine provides very problem-specific definitions of competence for a series of situations that must be dealt with by family physicians. These definitions are found

in the fourth component, the key features and the observable behaviours, which constitute the individual and specific evaluation objectives for certification in family medicine.

The other components provide both the framework and the details necessary to make the evaluation objectives operational and effective. Each objective includes, either implicitly or explicitly, the skills and the phases necessary for competent resolution. Each objective is also part of a more general topic or procedure or theme. The degree of detail of description is quite variable, but it is sufficient to direct the evaluation of performance for the situation in question, and to make sure that the performances and processes assessed are truly reflective of competence.

The evaluation objectives, using the term more generally, are described and defined by all four components of this definition of competence. The evaluation objectives and the definition of competence are, for most intents and purposes, the same thing.

Determining competence using the evaluation objectives:

It is perhaps important to emphasize at this time that this whole definition of competence was developed without any reference to assessment tools or examination formats. This was done in order to have a definition of competence and evaluation objectives that are free of the unfortunate biases that are often imposed by predetermined instruments and formats.

We can, however, present both schematic and verbal representations of how this model could be used to determine competence.

Observed in practice	**Skill dimensions**	**Phases**	**Competent Physician**
a)	**b)**	**c)**	
Key features and observable behaviours	• Patient-centred approach • Communication skills • Clinical reasoning skills • Selectivity • Professionalism • Procedure skills	Exhibited throughout the phases of the clinical encounter	*Continuous sampling, observation, and reflection based on (a), until this assures and satisfies the evaluators that the physician is competent in all the skills in (b)*
d) Priority topics, core procedures, themes			

This can also be expressed verbally:

> *"The evaluation objectives provide an extensive list of competencies in family medicine, in terms of key features and observable behaviours. Each of the competencies is specific to the situation to be dealt with and to the phases of the clinical encounter that are involved; each competence is linked to the six skill dimensions that are essential to overall competence in family medicine.*

Competence will be determined by continuous sampling, observation, and reflection on an individual's performances with respect to the key features and the observable behaviours until the evaluator(s) is (are) assured and satisfied that the individual is competent in all six of the skill dimensions essential to competence in family medicine."

The exact assessment tools and examination formats can be developed later.

II. Some theoretical and further practical considerations in defining competence and in designing successful evaluations

Two concepts are briefly discussed in this section: the characteristics of successful evaluations; levels of competence from a cognitive point of view, and the greater usefulness of the higher levels in predicting overall competence. These two concepts were used as guiding principles during the development of the evaluation objectives; understanding them will help one to understand the structure of the evaluation objectives, and will improve the chances of their being used appropriately, to full advantage.

Characteristics of successful evaluations:

Any high-stakes evaluation (such as our certification process in family medicine) should strive to perform well on five characteristics.[12] It should be

1. **Valid:** It should assess performances that are truly indicative of competence in the domain of tasks for the discipline in question.

2. **Reliable:** The evaluation must measure performance in a consistent fashion, and distinguish between competent and non-competent performances.

3. **Cost-effective:** This quality is important in terms of time, effort, and resources.

4. **Acceptable:** Both candidates and evaluators must feel that the evaluation is pertinent, rigorous, and fair.

5. **Positive in its effect on learning:** It should drive learning toward true competence rather than toward simply passing an examination.

The specific purpose of evaluation objectives is to provide clear direction for the development and use of assessment or evaluation tools or situations, so that these five criteria are met. The evaluation objectives should inform all types of evaluation: formative and summative, structured and unstructured, in-training and terminal, written and oral, and simulated and real-life clinical situations, to name but a few.

To succeed, the evaluation objectives should clearly describe the domain of competence to be tested, as well as competent performances for each of the tasks within the domain. As the particular nature of a competently

[12] Van der Vleuten CPM. The assessment of professional competence: developments, research and practical implications. Adv Health Sci Educ. 1996;1:41-67.

performed task is somewhat problem specific, good evaluation objectives include a definition at the level of each problem-task interaction.

If a peer group uses a structured and validated approach to develop all of the steps above (problems in the domain, tasks, and problem-task interactions), we can be reasonably sure that an assessment based on this definition will test performances indicative of competence. We can feel comfortable that the test has been valid, and that the successful candidate is competent—in our case, to start an independent family practice. This approach also permits the identification of performances that are likely to discriminate best between competent and non-competent candidates. Testing that concentrates on such discriminators is more efficient and more likely to generate reliable results. Many other practical issues must, of course, be considered to ensure evaluation reliability, but a valid definition of the competence to be tested is a prerequisite. The more its details outline the elements of competent performances, the easier the development of reliable test instruments and specific test items. This model therefore also tends to improve cost-effectiveness.

Acceptability is a complex issue, but for most of the players (the teachers, learners, and candidates) it has little to do with psychometric qualities of an evaluation program. An evaluation of very high quality can be unacceptable if it doesn't look or feel right, if it is perceived as being too hard or too easy, or if it is perceived as being not useful for daily activities of practice, clinical teaching, and learning. Evaluation is acceptable if it fits into these daily activities, and if the process and the results of the evaluations are helpful to all the players in achieving their educational goals. Evaluation for certification must also, of course, be of high psychometric quality, but this is not sufficient if it is not first acceptable on the basis of how it looks and feels, how it fits in, and how it is useful.

The effect of evaluation on learning is closely related to acceptability, but merits a few specific comments. The perverse effects of preparing for examinations are well known to postgraduate training programs: the trainees are essentially lost for extensive periods to activities dedicated to preparing to pass examinations. These activities usually concentrate on content and behaviours that have little if anything to do with real competence. Indeed, many might say that they actually reduce competence, devaluing the skills and behaviours that are associated with competence, as these "are not on the exam". The undeniable value and force of examinations in driving learning cannot be ignored, and were recognized throughout this project: the challenge was to express the evaluation objectives (and, hopefully, the examinations that are based on them) in terms that bring the preparation for examinations as close as possible to a preparation for true competence in family medicine.

Level of competence:

The second concept to be discussed is the difference between low and high levels of competence as far as cognitive skills are concerned, and the reasons why higher levels of competence may be more robust and efficient as indicators of overall competence, as well as being particularly pertinent to family medicine. This will also allow us to look at the difference between "performance" and "competence" and explain some of the preoccupations of the working group members as they developed this definition of competence in family medicine.

Evaluators really need to know what steps were taken, and why, in order to truly appreciate whether an operator acted in a competent manner while performing a task—the end result does not tell the whole story. It is difficult to assess competence without observing some performance, but the difference between the two terms is important. This difference between "competence" and "performance" is nicely illustrated by language-speaking skills. With respect to language, competence can be said to "refer specifically to the speaker's knowledge of a system of rules that they have assimilated in one way or another. These rules allow them to be creative and produce an unlimited number of grammatically correct phrases. In addition it allows the speaker to determine whether a phrase is grammatically correct or not."[13] Performance does not necessarily require an intimate knowledge of the preceding—many people speak a language very well without being at all aware of the rules and the system. If we wish to truly assess competence, then we should also look at the systems and rules being used during the performance of a task.

This is also important when considering the levels of competence to be assessed. In any profession, many daily activities are routine and do not require a high level of competence. These might even be considered to be routine performances, done without much thought or reflection, where the outcome depends little on the competence of the operator. They are routine problems with clear-cut solutions. Many argue that professional competence is more than this: it is the ability to manage ambiguous problems, tolerate uncertainty, and make decisions with limited information. True competence is manifested in unfamiliar situations, and has been defined as "the capacity to demonstrate cognitive flexibility and adaptability when faced with novel situations in a given domain, rather than a ritualized set of responses to a predictable set of stimuli".[14] Medical diagnostic problems can be characterized as usually ill structured: not all the relevant information is available to the problem solver, the potential causes are numerous, and there is often not a definite solution. Solving these problems requires deliberate reasoning, not reflex reaction or simple recognition, which has been called "low-road transfer". Deliberate reasoning involves the conscious abstraction from one context to another, or the "high-road transfer"[15] of knowledge and skills. The highly competent individual is able to generalize abstracted knowledge across a wide range of situations—in essence, attaining competence involves a maximization of high-road transfer. Low-level competence is extremely task-specific, and competence on one task does not at all predict competence on other tasks. Higher-level competence is much more generalizable from one task to another; this is perhaps not surprising as the skills themselves are not very task-specific. Finally, competence at the higher levels usually predicts competence (or clear awareness of the lack of competence) with respect to lower-level skills; the contrary is not at all true.

It is worthwhile noting at this time that the family physician must be competent to deal with many well-defined problems, but he or she must also be especially competent at dealing with the many problems that are undifferentiated, where diagnoses may remain uncertain for extended periods of time, and where multiple other factors (e.g., other illnesses, psychosocial elements, preferences, resources) come into play and must be considered. The skills required to handle these situations correspond very closely to the above definition of the higher-level cognitive skills of true competence.

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[13] James L. Prolegomena to a theory of communicative competence. Champaign, IL: Center for Comparative Psycholinguistics, University of Illinois; 1969/2003.

[14] Regehr G. Chickens and children do not an expert make. Acad Med. 1994;69(12):970-1.

[15] Patel V, Kaufman D. On poultry expertise, precocious kids, and diagnostic reasoning. Acad Med. 1994;69(12):971-2.

The implications of the above for a definition of competence for evaluation purposes are three: 1) the definition must include, either implicitly or explicitly, the how's and the why's of a competent performance of a task, not just the performance itself; 2) tasks requiring use of the higher levels of competence will permit us to make inferences about overall competence that are much more plausible than tasks requiring only the lower levels; 3) the higher levels of competence are particularly applicable and necessary for competence in family medicine. The working group maintained a healthy preoccupation with these three implications throughout. The key feature approach led naturally in this direction, requiring some definition of the how's and why's, and selecting tasks requiring the higher levels of competence, as these are often the ones that are most determinant of competence when handling a particular problem. The preoccupation was equally maintained when using approaches other than the key feature analysis.

III. Further details on the nature of the evaluation objectives, and how they were derived

This section starts with a brief description of the rationale for the revision of the evaluation objectives for certification, and of the methods used. Additional details on the four major components of the evaluation objectives will follow.

Revising the evaluation objectives: [16]

In 1998 the Board of Examiners [17] of the College decided to review the processes leading to certification. A critical part of this process is the determination of competence at a level appropriate to the start of independent practice as a family physician, so the assessment of this competence also came under review. The essential first step in planning an assessment of competence is to define in sufficient detail that which constitutes the competence in question. Surprisingly, perhaps, existing definitions for family medicine were found not to be detailed enough for the purposes required. For example, the Four Principles of Family Medicine are useful as an overview, providing general goals and guideposts, but they are nowhere near detailed enough to provide clear direction for determining competence. This remained true even though a layer of precision had been added under each principle.

The Board, therefore, decided to go back to the beginning and develop a competency-based definition for the purposes of assessment for certification. It was decided to ground this definition in the experience of practicing family physicians. The opinions of these physicians were sought through a postal questionnaire asking four open-ended questions about how they would define competence in family medicine at the start of independent practice. The results of this survey were analyzed by a focus group, which identified a series of headings that could be used to describe competence. Reanalysis of the survey results according to these headings showed that competence was described in terms of five skill dimensions, the phases of the clinical encounter, and a certain number of priority topics. A sixth skill dimension, procedure skills, was subsequently added, for reasons explained in the next section.

[16] This is only a very brief summary of the methodology used and of the results. Complete details have been presented in a series of reports to the College, and will also become available in a series of scholarly articles currently in preparation.
[17] Renamed to the Board of Examinations and Certification in 2019

These three components provided a clearer portrait of competence in family medicine, but it was still not detailed enough to provide adequate direction for the assessment of competence. The Board therefore charged other working groups to develop the detailed evaluation objectives using an appropriate combination of these components. A focus-group analysis approach was used, developing the evaluation objectives through multiple structured iterations, and two general formats were used for the final specific and operational evaluation objectives: key features and observable behaviours. These two together are the operational component or layer of the evaluation objectives: they direct how assessment of competence should be done in each situation under consideration.

The individual evaluation objectives themselves can be found elsewhere in this document under the appropriate headings. The next part of this section will, however, provide you with sufficient detail to understand what you should be looking for and how this will all fit together. There is obviously overlap between these various components—indeed a large part of competence is using them in the appropriate integrated fashion. From the pragmatic point of view it is most useful to separate them—this is essential for assessment, and quite likely preferable for teaching and learning at most stages of training.

Further details on the components of the evaluation objectives:

We will maintain the previous order of the components for the first parts of this section, but then discuss in detail the key features before coming back to the core procedures, themes, and observable behaviours. This follows more closely the order in which the components were developed, but, more important, the results of the key feature analysis had a major influence on subsequent steps. A full understanding of the key features makes it easier to understand why the core procedures, themes, and observable behaviours were developed as they were.

1. ***The skill dimensions of competence***:

General definitions of each of the six skills are presented here. The operational definitions for assessment of competence in each will be found throughout the topics, core procedures, themes, key features, and observable behaviours.

a) The patient-centred approach: This well-known approach is a hallmark of family medicine and represents one of the most efficient and effective methods for dealing with problems. It does this by concentrating on the patient and his or her context rather than on the disease alone. In this way a shared understanding and common ground can be reached between the patient and the practitioner concerning goals for dealing with the problems at hand. This approach also helps these goals to be realistic and achievable. The details of the method are well established in the literature, and the evaluation objectives for this dimension of competence are derived directly from this information.

b) Communication skills: Certain skills and behaviours facilitate communication, and good communication is essential for competence. It is a complex skill that permeates most of our other activities. Good communication facilitates the use of the other skills when dealing with problems and improves chances of a successful resolution, whereas poor communication is likely to be very detrimental.

Communication can be written or verbal, with patients or colleagues; it also involves listening and watching as much as or more than talking and showing. All of these aspects need to be assessed.

c) Clinical reasoning skills: This dimension deals with more familiar territory, and concerns the problem-solving skills used to deal with the so-called "medical aspects" of a problem. Although obviously knowledge dependent, knowledge alone is not sufficient. Many of the difficulties in this dimension are related to poor process, and not to knowledge deficiency. These difficulties in process have the most impact on competence, so assessment of the processes (how and why clinical reasoning is going on) is more important than assessing the final results or answers.

d) Selectivity: This dimension has not, to our knowledge, been previously described with respect to physician competence, although it is surely not an original idea. It is the term that was chosen to describe a set of skills that was frequently cited in the survey as characterizing the competent family physician: such a physician does not do things in a routine or stereotypical fashion, but is very selective in approach, adapting it to the situation and the patient. Competent physicians set priorities and focus on the most important; they know when to say something and when not to; they gather the most useful information without losing time on less contributory data, or they do something extra when it will likely be helpful. It is perhaps a subset of all the other dimensions, but it was used frequently enough in the descriptions of competence to merit its own dimension. As we saw earlier, selectivity is found at the higher levels of competence, and it could be an extremely robust indicator of overall competence when used for assessment purposes.

e) Professionalism: Acting professionally is a complex multi-faceted skill that has little effect by itself,[18] but is an absolutely necessary complementary skill for competent practice. It facilitates the use of the other skills when dealing with problems and improves chances of a successful resolution, whereas acting unprofessionally is usually extremely detrimental, even when other skills are good. This dimension was the most frequently cited in the descriptions of competence: it includes all the responses that dealt with respect and responsibility to patients, to colleagues, to oneself, to the profession, and to society at large; it includes ethical issues, as well as most of the issues pertaining to lifelong learning and the maintenance of the quality of care; it also includes important attitudinal aspects such as caring and compassion.

f) Procedure skills: In the initial survey, skills around specific procedures and other psychomotor skills themselves were not often cited as being characteristic of competence. This was not surprising because the competence we are interested in is more a question of individuals knowing what procedures they are or are not competent to do, and respecting these limits, rather than being able to perform an infinite and unspecified list of procedures. On the other hand, certification does imply that the certificant is competent to perform a certain number of procedures, at the start of independent practice. For these reasons, procedure skills were added as the sixth skill dimension, and measures were taken to define this dimension for the purposes of assessment.

[18] When everything else seems to be failing, however, acting professionally (in the widest sense, as used here) is perhaps the greatest indicator of competence, and represents the most useful thing we can be or do.

2. *The phase of the clinical encounter:*

Competence was also commonly described in terms of the phase of the clinical encounter without referring to a specific problem, e.g., "take a focused history, generate a good differential diagnosis, refer when indicated". All of the survey responses of this nature were grouped together in this single dimension, using the following eight subheadings, or phases.

i. Hypothesis generation (or early differential diagnosis)
ii. History (gather the appropriate information)
iii. Physical examination (gather the appropriate information)
iv. Investigation (gather the appropriate information)
v. Diagnosis (interpret information) (The term "diagnosis" is used in the general sense, and so includes problem identification.)
vi. Treatment (or management)
vii. Follow-up
viii. Referral

The subheadings were chosen to start to define the principal activity in each phase. The clarifications in parentheses after the subheadings are to remind us that the processes involved are quite different from a cognitive point of view: interpreting a history is quite different from gathering it, and the implications are very different for the assessment of competence. Although these subheadings are similar to those found in clinical reasoning skills, they do in fact mainly refer to the phase, and not to the cognitive skill: all of the six skill dimensions could be applicable in any of the eight phases. Having this separate layer of definition helps us to be more precise when planning or doing an assessment of competence. Competent resolution of one problem may require the use of a particular skill in a particular phase of the clinical encounter; the required skill and the pertinent phase may be totally different for another problem.

3. *The priority topics*:

These topics are only one part, albeit the major one, of the situations found in our domain of competence in family medicine, for the purposes of assessment of competence for certification; the other two parts are the core procedures and the themes for the observable behaviours. The justification for the latter two became most evident, however, after the development of the key features for the priority topics. For this reason this section will first give some details on the topics and their key features. This information will be helpful in understanding the subsequent presentation of the core procedures, the themes, and the observable behaviours.

The survey: The first question of the survey was *"List the most important problems or clinical situations that a newly practicing family physician should be competent to resolve"*. The responses were compiled, retaining the terminology and the level of specificity of the answers wherever possible. Reasonable synonyms were identified and converted to a single form, usually selecting the one that was used most often. This resulted in a total of 99 different topics being listed. The frequencies of the responses for each topic were then calculated. The topics and frequencies are presented on page 21 in tabular form.

Two features of this table are worthy of note:

The table shows a skewed frequency of citation of each topic, with a few topics being cited much more frequently than others. One could probably limit the topics used for assessment to fewer than 99: remember we are mainly interested in the skills used to deal with the problems in each topic, and less interested in the topics themselves. On the other hand, we do need to know that the certificant is competent to deal with a sufficient number of specific problems, as well as having the general skills, so it does not seem unreasonable to use all 99 topics as the domain for assessment. One might also argue that it would be more pertinent to base assessment on topics from the top one-third of the list than on topics from the bottom one-third, as the latter were really not cited very often at all.

The terminology used for the topics is extremely varied: practicing family physicians use an eclectic taxonomy to describe the problems that must be dealt with. There are many diagnoses, symptoms, presentations and tasks; there are also roles (periodic health/screening), groups (immigrants, newborn, elderly), issues (lifestyle), situations (family issues, difficult patients), and even some topics (antibiotics). Most of these terms are, however, quite familiar to most physicians, and will be understood quite readily. There are a few exceptions (e.g., "in child"), but the interpretation given these can be understood by looking at the key features for these topics.

Frequencies of citation by topic, in the initial survey				
TOPICS	**rate of citation**		**TOPICS**	**rate of citation**
Depression	87%		Behavioural problems	10%
Anxiety	87%		Allergy	10%
Substance abuse	60%		Multiple medical problems	9%
Ischemic heart disease	52%		Dizziness	9%
Diabetes	51%		Counselling	9%
Hypertension	50%		Earache	9%
Pregnancy	48%		Grief	8%
Headache	43%		Thyroid	8%
Periodic health/screening	42%		Stroke	8%
Palliative care	40%		Vaginitis	7%
Family issues	37%		Insomnia	7%
Abdominal pain	36%		Infections	7%
Upper respiratory infection	35%		Anemia	6%
Difficult patient	35%		Immunization	6%
Domestic violence	33%		Advanced cardiac life support	6%
Asthma	33%		Gastrointestinal bleeding	5%
Chest pain	32%		Obesity	5%
Dementia	32%		Lacerations	5%
Low-back pain	32%		Eating disorder	5%
Chronic disease	29%		Antibiotics	5%
Elderly	29%		Stress	4%
Contraception	28%		Prostate	4%
Sex	28%		Fracture	4%
Menopause	27%		Newborn	4%
Joint disorder	26%		Immigrant issues	4%
Sexually transmitted infections	24%		Deep venous thrombosis	4%
Well-baby care	24%		Hepatitis	3%
Schizophrenia	23%		Atrial fibrillation	3%
Skin disorder	23%		Parkinsonism	3%
Disability	20%		Learning	3%
Personality disorder	19%		Seizure	3%
Fatigue	18%		Infertility	3%
Lifestyle	18%		Loss of weight	2%
Urinary tract infection	16%		Mental competency	2%
Chronic obstructive pulmonary disease	16%		Osteoporosis	2%
Trauma	16%		Loss of consciousness	2%
Cancer	16%		Red eyes	2%
Vaginal bleeding	15%		Croup	2%
Fever	15%		Poisoning	2%
Smoking cessation	15%		Meningitis	2%
Bad news	14%		Travel medicine	2%
Violent/aggressive patient	14%		Dehydration	1%
Suicide	14%		Diarrhea	1%
Breast lump	14%		Neck pain	1%
Dyspepsia	13%		Crisis	1%
Hyperlipidemia	13%		Dysuria	1%
Pneumonia	13%		Rape/sexual assault	1%
In child	13%		Gender-specific issues	1%
Cough	12%		Epistaxis	1%
Somatization	12%			

Three frequent questions are asked concerning the priority topics, and can be answered here.

1. Is this list valid? Clearly the answer is yes. A second survey was completed with a different representative group of family physicians. The correlation was extremely high between both the topics cited and the relative frequencies of citations.

2. Should other topics be on the list? It is much more important to exclude topics or material that is not demonstrably valid from an evaluation than it is to include all possible valid material. The topics currently on the list have been validated, and they do cover a lot of territory. Demonstrable competence in dealing with these topics will let us infer that the candidate is competent to practice all aspects of family medicine, and that is what evaluation and certification need to do. There is no need to add further topics, although a mechanism should be established to regularly review the list in a structured and valid fashion.

3. Aren't these topics a bit too broad to direct the design of evaluations? This is a correct observation. Evaluation objectives that stop at this level (as many do) are not detailed enough to help us reach the five goals for successful evaluation, as stated earlier. In dealing with these topics in the specific context of family medicine, we need to identify the critical elements, the higher levels of competence, and the skills needed to deal with the situations under each topic. This was first done using the key feature analysis, as described both above and below.

4. ***Key features:***

A key feature analysis identifies two things: it first identifies the specific situations that are most determinant of competence within a topic; it then identifies the critical steps and the critical processes involved in dealing competently with each situation. The key feature is the interaction between the problem and the dimensions of competence necessary to deal with it; the key feature also clarifies, either implicitly or explicitly, both how and why things should be done in a competent fashion for this particular problem.

As a rule, key features are observable actions: They are processes or skills, not simple knowledge. In this respect they fit very well with the current trend toward "competency"-based teaching and assessment. Key features are not only problem or situation specific; they are also discipline specific. By developing the key features specific to each topic we can add the problem-task interaction layer to our definition of competence.

Key features are generated according to clinical experience, not theoretical considerations or literature searches. The number of key features will vary greatly from one problem to another. This number is essentially determined by the various elements considered essential to the competent resolution of that clinical problem. They are determined by a group of practicing peers, using a reflective, iterative process. The approach is intentionally selective; it covers only what is distinctive of competence.

How, then, do these characteristics of key features lend themselves particularly well to the task at hand: assessing competence in family medicine? Key features permit this assessment by promoting validity and reliability in testing. They are valid for two main reasons:

- They are generated by a group of practicing physicians, who base their analysis on the real-life solution of problems in family medicine.
- They identify the higher levels of competence, and these are the levels that distinguish best between the competent and the not-yet-competent practitioner during the certification process.

Key features help to improve reliability by permitting assessment to be selective, concentrating on skills that are likely to discriminate between candidates, and by identifying criteria that can be used to assess performances

objectively in test situations. The key features are not themselves test items, but they are signposts that clearly suggest both the content and the format of the test items that would be most appropriate.

In short, key features permit assessment to be concentrated on skills that discriminate between competent and not-yet-competent physicians in a fair, valid, and objective fashion. Experience elsewhere has shown that reliable results can be achieved in a relatively short testing time when test construction is based on key features. Key features are also quite intuitive (although the process of developing them is much less so); for this reason, evaluations based on key features are usually well accepted by all concerned as valid or authentic. In addition, because they reflect the performances related to true competence, key feature-based evaluations tend to stimulate appropriate learning.

The key features for the priority topics: As stated in the initial section of this report, a key feature specifies a particular clinical or situational starting point within a topic, and then identifies a task or action to be done that is critical to the competent resolution of the problem at hand. It specifies, implicitly or explicitly, the skill and the phase dimensions that are involved. It is important to emphasize that as a key feature is being developed there is no preconceived determination of the skills or phases to be included—these are determined by the problem itself, and by the processes required for its competent resolution. Each key feature is therefore a mini-competence, specific to the problem in question, and contains sufficient detail to be used as an evaluation objective that will clearly direct assessment in the intended direction. All the key features, by topic, are listed in Part II.

An assessment based on all the key features for one topic should determine whether competence has been reached for that topic; an assessment based on the key features of all the priority topics should determine whether competence has been achieved for this definition of the domain of competence of family medicine. It is important to know, therefore, whether such an assessment would adequately cover all the dimensions (skills and phases) of competence that we have previously identified as essential. To this end, the last step in the development of every key feature was to code it for the skill and phase dimensions that it assessed, permitting a maximum of two skills and two phases per key feature. These codes are not yet visibly attached to their key features in this current posting, although they are available in working files. The overall compilation is available, however, for all the key features of all 99 priority topics, and is given in the following table.

Descriptive coding of the key features:

A total of 773 key features were generated for the 99 topics, for an average of 7.8 key features per topic. The implications of the relative frequencies in the boxes are discussed below.

Skill dimensions	**% of key features**		**Phase dimension**	**% of key features**		
Patient-centred approach	14%		Hypothesis generation (= early DDx)	22%	Gather	
Communication skills	4%		History	14%	=	Diagnose
Clinical reasoning skills	60%		Physical	4%	47%	=
Selectivity	16%		Investigation	7%		63%
Professionalism	5%		Diagnosis (includes problem identification)	16%	Interpret = 16%	
Psychomotor	1%		Treatment	30%	Manage	Manage
			Follow-up	5%	=	=
			Referral	2%	37%	37%
1080 codes for 773 key features = 1.4 codes/key feature			1128 codes for 773 key features = 1.5 codes/key feature			

Relative percentages for the skill dimensions: These percentages in no way reflect the relative importance of these dimensions; it simply means that key feature analysis of the priority topics identifies many opportunities to assess three of the skill dimensions, but few opportunities for three others, namely communication skills, professionalism, and procedure skills. We must define these latter three by a complementary process and plan their assessment by parallel means.

As already mentioned, a core procedures list (analogous to the priority topics list) was developed, and the general key features for procedure skills were developed. The latter can be used to guide the assessment of competence for the individual procedures. Both the list of core procedures and their general key features are found later in this document.

For professionalism and communication skills, the definitions were completed using our "observable behaviour" approach. The method was briefly introduced earlier in this report, and is expanded upon below under "The themes and observable behaviours".

One other important point is not evident in this table—even though ample opportunity is provided for the assessment of the patient-centred method, the key features do not provide much specific direction as to how to assess or judge this competence objectively. For this reason we also generated some observable behaviours to help guide the assessment of this dimension. They were derived directly from the excellent already-published material on this dimension, and they are listed with the other evaluation objectives in Part II. If further detail is

felt to be necessary, this could be generated *de novo*, but it could also probably be done using the same published material.

Relative percentages for the phase dimension: The three columns show progressive groupings of frequencies in terms of the different clinical tasks, which do require somewhat different cognitive skills. Once again, all the phases are important to overall competence, but we do interpret these figures to indicate the relative importance of the various cognitive skills in dealing with our priority topics in family medicine, in contradistinction to the skill dimensions. We see that the essential skills for the majority of the key features deal with diagnosis (63%), and that nearly half (47%) deal with the active process of gathering the pertinent data to make an adequate diagnosis. Sixteen percent deal with making a diagnosis given certain data, and slightly more than one-third deal with management. These figures are important for two reasons. First, data-gathering skills in this context represent a higher cognitive level of competence than data-interpretation skills or management choices. Second, traditional evaluations have often concentrated more on management, and have neglected the diagnostic phases as being too difficult to evaluate or too basic to be important. The opposite is actually true. The higher cognitive levels of competence (as represented here by diagnostic skills) are much better predictors of overall competence than are the lower levels, such as management choices, which are usually quite problem specific. While competence obviously requires the demonstrated ability to manage many problems in family medicine, it is much more important for us to concentrate our efforts on the higher levels if we wish our evaluation process to be valid and efficient.

> ***Are we sure that these key features are the right ones?*** Similar questions can be asked about the validity and inclusiveness of the key features as were asked of the topics: Would other groups of physicians develop different key features, and would the inclusion of others improve the evaluation process?
>
> The answer to the first question is yes, and to the second, no. The key features method has been validated elsewhere, and a validation study of our key features showed that a different group of physicians agreed with over 95% of the key features. This other group did suggest some additional key features, but these usually addressed the same concepts with different examples. We therefore are confident that the current key features are more than sufficient, even though they are not absolutely complete. Once again, the establishment of a mechanism for the ongoing review of key features is important, but we do not expect them to change significantly over the short term.
>
> ***How does one get from key features to evaluations?*** Key features are the starting point for developing various evaluation instruments or situations, both formal and informal, which can be used throughout a certification process. Key features serve as reference points and signposts throughout all evaluation activities, as they are a major component of our operational definition of competence. They are one of the "keys" to maintaining validity throughout the certification process.
>
> There remain for presentation the three areas not well defined by the key feature analysis: procedure skills, communication skills, and professionalism.

5. *The core procedures and their key features:*

Procedure skills are a good example of the different levels of competence. As far as an individual procedure is concerned, cognitive skills are generally low level: the technique is learned and practiced and becomes routine.

Indications and contraindications, deciding to do or not to do a procedure, and choosing among several possible approaches to a problem are examples of the higher levels of competence. As a general rule, the individual at the higher levels of competence

- will not perform a procedure at which he or she is not skilled and
- will arrange to learn a procedure that he or she is going to need in his or her particular practice.

This is surely the most important aspect of competence to assess for certification.

Certification cannot, however, limit itself to this level. An independent practice requires a certain level of experiential competence; the practitioner is assumed to have the technical skills to perform a certain number of procedures. The challenge is to define what these essential, or basic, procedures are. Very few (1%) of the key features for the priority topics involved procedure skills in their resolution. It was therefore decided to use a parallel process to better define competence in this skill dimension.

Another working group assumed this task, surveying a group of practicing family physicians to identify and validate a list of core procedures for the start of an independent practice. This group identified 65 core procedures and 15 enhanced procedures. The 65 core procedures are the procedures upon which the assessment of competence will be based—these procedures are listed in Part II. It must be remembered that not only the technical aspects of individual procedures are important. The higher levels of competence will also be assessed, as always, in the context of family medicine: the details of these were defined by a key feature analysis, and these can also be found with the core procedures in Part II.

6. ***The themes and the observable behaviours:***

The other two skill dimensions that were not well defined by the key feature analysis of the priority topics are not the least important—indeed the dimensions of professionalism and communication skills are often neglected as far as rigorous assessment is concerned, even though a lack of competence in these dimensions will have negative effects throughout all the other dimensions as well. These dimensions were defined through a focus-group approach, using information from various sources as inspiration, first developing a series of themes under each dimension. This was followed by a multiple-iteration process to identify behaviours that were indicative of competence, or lack of it, under each theme. The process was continued until satisfaction and saturation were achieved. The behaviours had to be observable (= potentially assessable in a fairly objective fashion); hence the term "observable behaviours".

This process is analogous to the key feature analysis, but differs in two important ways. First, it is dimension based rather than topic based; we started with the dimension, identifying observable behaviours that are indicative of competence (or lack of it) in that dimension in certain situations in family medicine. Second, whereas the key feature analysis identifies a subset of situations and competencies thought to be indicative of overall competence in the topic in question, the observable behaviour analysis does not attempt to do this: all potentially indicative behaviours are listed, both major and minor, and no particular subset has been identified at this time as being most critical to competence. This could well be a useful exercise at a future date.

The themes of the two dimensions are presented here—the observable behaviours themselves are listed in Part II.

Communication skills:

The themes or skill subsets are as follows. Noteworthy for this dimension is that observable behaviours under each subset were developed twice, once for communication with colleagues, and once for communication with patients. There is considerable overlap, but there are some major differences.

1. Listening skills
2. Language skills
    i. Verbal
    ii. Written
    iii. Charting skills
3. Non-verbal skills
    i. Expressive
    ii. Receptive
4. Cultural and age appropriateness
5. Attitudinal

Professionalism:

Knowing how to act professionally and actually doing it in a consistent fashion are not one and the same, and this has major implications for the context of any evaluation. Assessment should probably be based on observations of real-life, real-time behaviours—it does not really lend itself to assessment in simulated situations. In this dimension, competence was defined as being demonstrated by a series of observable behaviours that have been grouped under 12 themes. The themes are listed below. The observable behaviours are listed in Part II.

1. Day-to-day behaviour reassures one that the physician is responsible, reliable, and trustworthy.
2. The physician knows his or her limits of clinical competence and seeks help appropriately.
3. The physician demonstrates a flexible, open-minded approach that is resourceful and deals with uncertainty.
4. The physician evokes confidence without arrogance, and does so even when needing to obtain further information or assistance.
5. The physician demonstrates a caring and compassionate manner.
6. The physician demonstrates respect for patients in all ways, maintains appropriate boundaries, and is committed to patient well-being. This includes time management, availability, and a willingness to assess performance.
7. The physician demonstrates respect for colleagues and team members.
8. Day-to-day behaviour and discussion reassure one that the physician is ethical and honest.
9. The physician practices evidence-based medicine skillfully. This implies not only critical appraisal and information-management capabilities, but incorporates appropriate learning from colleagues and patients.
10. The physician displays a commitment to societal and community well-being.

11. The physician displays a commitment to personal health and seeks balance between personal life and professional responsibilities.
12. The physician demonstrates a mindful approach to practice by maintaining composure/equanimity, even in difficult situations, and by engaging in thoughtful dialogue about values and motives.

IV. Using the evaluation objectives

The main target audience of this section at this time consists of trainees and their preceptors, and the use of the evaluation objectives during training and daily supervision. They are already being used in other contexts, but these are dealt with elsewhere.

The first piece of advice may seem paradoxical, but should improve the chances of getting started and eventually using the evaluation objectives to their full potential:

1) ***Do not read the evaluation objectives in any great detail:*** Both preceptors and trainees should start by getting into the habit of using some type of field note after most supervised clinical encounters to stimulate discussion, identify the critical steps in the resolution (or not) of the situation in question, reflect on the performance with respect to these, and document one or two points that seem to be most useful. Start to concentrate as much or more on the process (why and how) as on the results, paying particular attention to diagnostic reasoning and decision making. Many of these steps are already being done, but often without an awareness of the cognitive processes involved, and without always being able to articulate the judgments, reflection, and feedback that will be most useful in moving toward competence. Such a repetitive analytical approach will gradually become intuitive, for both trainees and preceptors. This would now be the time, if it has not already been done, to get to know the evaluation objectives in detail.

2) ***Consult the evaluation objectives to help to articulate the analysis, reflection, and feedback on clinical performances, either by supervision or by self-assessment:*** Much of the difficulty experienced with in-training evaluations comes from not being able to articulate clearly and objectively why a certain performance does or does not meet the standards of competence, and what might need to be changed to reach competence. The "does not" situation is particularly problematic, as the result is often a vague response from a preceptor, or no comment and no useful documentation at all of a series of subpar performances, with no useful constructive feedback for change. Similarly, the apparently competent performance often deserves a more insightful analysis and feedback, so that any continuing minor weaknesses can be identified and corrected, or if all truly seems well, then future teaching and learning can be concentrated on other areas.

   The evaluation objectives provide this articulation for most of the situations that will be met during training in family medicine. They also depersonalize, in a useful way, the judgments and feedback, making them easier to accept by providing clear reference points and justified descriptions of competence in a pragmatic fashion.

3) ***Use the evaluation objectives to help to structure, organize, and document progress toward competence:*** The evaluation objectives provide a frame of reference and clear guideposts for achieving and demonstrating competence in family medicine. They are equally applicable for regular unstructured daily clinical supervision, for planned direct observations, or for any structured assessment activity. They are particularly useful for a trainee in some difficulty—the areas of weakness can be better defined, thus permitting specific educational prescriptions and further assessment in these specific areas as necessary.

   Some may prefer more structured field notes, even for the unstructured supervisions. The components of the evaluation objectives may be used to develop these: the skill dimensions, the phase of the clinical encounter, the priority topics, and the procedures. Whatever structure is used, the feedback and documentation should be inspired by the key features or the observable behaviours. It is also important to remember that for most preceptor-trainee clinical interactions, the analysis and feedback should be limited to one or two specific areas or points.

   The evaluation objectives are designed for an individual, but can also obviously be used to plan group-learning activities—topics can be reviewed through the key features. Prototypical critical incidents tend to be identified, so they can be discussed ahead of time—wisdom and experience cannot really be taught, but some of the lessons learned can be passed on ahead of time.

   Future developments may include topic- and dimension-specific field notes, perhaps computer generated on demand. Electronic filing and compilation would permit ready revision of progress and help with planning of future training. There is perhaps no limit at this time on how the evaluation objectives might be used—it is hoped that experiences and new ideas will be shared, so that all may benefit.

4) ***Other uses of the evaluation objectives:*** The evaluation objectives are already being used to design and develop the certification examinations. They could also be used in several other ways.

Levels of competence, core competence: The expected performances at certain levels of training can be defined using the evaluation objectives. This would be useful for deciding on promotion, equivalence of previous training, needs for additional training, etc.

Curriculum design: Curriculum design is a complex issue, with many limiting factors. The measure of the pertinence of an activity should, however, no longer be its name and its duration. The measure should be the contribution of the activity to the progressive acquisition of competencies, and the degree to which it can demonstrate that it is fulfilling this objective. The evaluation objectives provide a pragmatic reference tool to which a curriculum and its parts may be compared and against which they may be judged. They are structured so that the comparisons should be quite straightforward and the judgments transparent, leading to changes within an existing activity or to a new activity. In this way, they can be used for continuous quality improvement and help to ensure that our curricula in family medicine evolve in a dynamic fashion as we strive to make sure that our training programs promote, in an efficient and predictable manner, the acquisition of all the competencies required of the family physician in today's society.

Defining the specialty of family medicine, with comments on postgraduate and undergraduate training: A medical specialty or discipline is defined by many characteristics, and may include many variants or even subspecialties. There usually is, however, an identifiable central competence common to all these variants and subspecialties within one specialty. This situation applies to family medicine, and the evaluation objectives do represent an operational definition of this central competence, one that should be common to all family physicians. As such they can be used to determine the resources needed to provide the necessary common training and assessment of competence, and to justify these needs to academic institutions, licensing bodies, provincial governments, and society at large. This competency-based definition of family medicine is quite transparent, and the link between the desired result (competent family physicians) and the postgraduate training required (in which clinical milieu, with which kind of preceptors, to what level of desired competence) should be just as transparent. It is also quite detailed and factual or objective, so both inadvertent redundancies and gaps can be identified, and specific limited corrective modifications can be made, without changing the whole curriculum.

This competency-based definition also permits those involved with undergraduate training to look ahead to what competencies are required for family medicine. Curricular modifications at this level may then better prepare students for postgraduate training in family medicine, and they may well be able to justify even more significant curricular changes to achieve objectives that move toward competencies common to more than one specialty. Our evaluation objectives define the nature of competence at the point of entry into independent practice in family medicine. Nothing in our definition states, however, when these competencies must be acquired or in what order. This is more properly the domain of the educators, those who look after the training at all levels, by designing curricula and supervising activities, and by assessing, on a regular basis, progress toward the desired competencies and overall competence. Once again, the evaluation objectives are an essential reference point and a useful tool for achieving this result in family medicine.

End of Part I

Part II—Essential Skills, Themes, and Observable Behaviours

Introduction

Part I of the evaluation objectives document provides a fairly detailed description of the processes used for the development of these evaluation objectives, as well as the rationale for the choices made. It can be found on pages 10-30 of this document (see menu).

Part II of the document, which is the subject of the following pages, is the operational level, containing all the details necessary to assess performances in family medicine, to make objective judgments about competence in specific situations, and to stimulate reflection than can lead to interpretive feedback and suggestions for future learning and changes that will help the trainee or the practitioner to move toward competence. These objectives should also help to concentrate efforts on those elements that are most determinant of competence, both in general and with respect to specific situations. In this way, time spent on evaluation will be both more effective and more efficient. Finally, as these objectives are entirely competency based, their use should drive learning toward competency, rather than toward simply passing examinations at various times.

They are organized according to the six essential skill dimensions of competence. The format varies with the dimension, but in each case it should be sufficient to clearly orient evaluation of the dimension in the context of daily clinical practice and supervision. Each dimension could be considered a menu of useful items to be selected according to the specific needs of the situation. As such it is helpful to be familiar with the whole menu before making the selections that fit the needs. The dimensions are followed by the priority topics and key features: they are not cross-referenced at this time, and so searching for the right combinations may require several steps. The next version of these objectives will be cross-referenced and searchable by various parameters.

These objectives do not contain any test instruments or examinations or scoring scales or performance levels or forms, nor any prescription for developing these tools. This omission is intentional, as was explained in Part I of the objectives. As these tools are developed, these evaluation objectives will provide the primary matter that will direct both the content and the format of the instruments used, and increase the chances that any evaluation will do well according to the five parameters associated with successful evaluations.

Could these evaluation objectives be used as a study guide or a curriculum, and should they be? The answer is mixed. As a curriculum, the evaluation objectives are incomplete. They will represent one set of terminal objectives, but a curriculum must also pay attention to the intermediate and enabling objectives necessary to learning, as well as to other possible end points. As a study guide, these evaluation objectives are more usable, as long as the reader remembers that performances will be assessed in the context of *all* the layers of our definition of competence in family medicine. This means that assessment will concentrate as much on the skills and processes used to deal with problems as it does on the actual answers or solutions to specific problems. With this caveat, it can be said that a physician who can show competence in dealing with an adequate sample of the topics, procedures, and themes on this list, demonstrating the higher levels of competence in each of the six essential skill dimensions, in all phases of the physician-patient encounter, and in the context of the Four Principles of Family Medicine, probably does indeed deserve certification to start independent practice.

The Patient-Centred Approach

This dimension encompasses the clinical method established by the Centre for Studies in Family Medicine at The University of Western Ontario.

The method sets out to understand a patient's presenting problem through learning about the disease and how the individual experiences it. One must learn what patients feel in connection to their symptoms, how they explain what they are experiencing, the effect it is having on their lives, and how they hope the physician will be able to help to address the problem.

This is connected to the process of gaining a greater understanding of the whole person— "who the patient is", his or her "context". Who the people in their lives are and how they relate to them, who or what their supports are, and what social factors exist all play a role in understanding patients' context. This context weaves through the patient's "disease" and how he or she experiences it.

In attempting to address a concern, the patient and the physician work to come to a common understanding of the problem and their roles in addressing it. Understanding a patient and his or her context is also important in effective health promotion and prevention, which are incorporated into this method.

It is a realistic approach and, like care in family medicine, a longitudinal one. The priorities of the patient and physician are respected and balanced. The resources of individuals and the community are considered in the process.

This method is considered an essential tool in building the patient-physician relationship. The working group felt that the details of the method are clearly articulated in *Patient-Centered Medicine: Transforming the Clinical Method* by Stewart, Brown, Weston, McWhinney, McWilliam, and Freeman. We did not attempt to redefine the method, but have instead tried to express the various components of the method as specific actions that can be observed during the clinical encounter. The patient-centred approach permeates all of our clinical encounters, but there are specific instances in which skill in this dimension may be better assessed. Many examples of these instances can be found within the priority topics and key features.

Observable Behaviours:

1. Actively explores patients' experience with a problem by inquiring about:

    - what they feel in connection with their problem (feelings)
    - how they explain what they are experiencing (ideas)
    - the effect it is having on their life (impact on function)
    - how they hope the physician will be able to help them address the problem (expectations)

2. In assessing a clinical problem, attempts to gain a greater knowledge and understanding of the whole person by asking about his or her context (i.e., who else is in his or her life [family, partner, children], who or what supports are, other social factors [work, finances, education, etc.])

3. In moving toward developing a management plan for a patient's problem, integrates a patient's context with his or her illness experience in a clear and empathetic way

4. In attempting to address a problem, works with the patient to come to a shared understanding of it and each person's role in addressing it by

    - encouraging discussion
    - providing the patient with opportunities to ask questions
    - encouraging feedback
    - seeking clarification and consensus
    - addressing disagreements

5. In finding common ground around the management of a problem, incorporates relevant health promotion and prevention.

6. Approaches a patient's problems with a realistic and longitudinal view, which respects and appropriately balances the priorities of the patient and physician; considers the resources of individuals and the community.

Communication Skills

Communication skills were clearly identified as one of the skill dimensions essential for the competent practice of family medicine. There is a large body of literature on communication and the working group did not attempt to redefine communication or develop a theoretical definition. We chose instead to articulate a pragmatic approach focused on skills and behaviours that facilitate communication.

We began by identifying those themes or skill subsets that are essential to good communication. We then used an interactive focus-group approach to define the themes and observable behaviours that should predict competence for entry to the independent practice of family medicine. Other observable behaviours may be added to this list; however, those identified below should be more than sufficient to determine competence.

These are the themes identified:

1. Listening skills
2. Language skills
    a) Verbal
    b) Written
    c) Charting skills
3. Non-verbal skills
    a) Expressive
    b) Receptive
4. Cultural and age appropriateness
5. Attitudinal

The working group felt there were tangible differences between communication with health team members and with patients. Physicians may be able to communicate effectively with one group and not with the other; therefore we chose to separate these areas in our definition. For each group we have identified observable behaviours for each type of interaction. Some behaviours appear in both sections. They have been duplicated in order to be comprehensive.

For each subset of skills we have identified behaviours, expressed either positively (✓) or negatively (✗), that reflect competence. Positive behaviours are listed first, followed by negative behaviours. We have not placed the behaviours in any order of priority. For the most part, only the positive or negative expression of the behaviour was described.

Effective Communication with Patients

1. Listening Skills

Uses both general and active listening skills to facilitate communication

Observable Behaviours:

- ✓ Appropriately looks at the patient while the patient is talking
- ✓ Allows the time for appropriate silences
- ✓ Feeds back to the patient what he or she has understood from the patient
- ✓ Provides appropriate non-verbal responses to patient's statements
- ✓ At all times responds to verbal cues (e.g., does not go on with regular questioning when the patient reveals major life or situation changes like "I just lost my mother")
- ✓ Clarifies jargon when used by the patient
- ✓ Comprehends what the patient says
- ✓ Lets the patient tell his or her story (does not interrupt the patient inappropriately)

- × Does other things while the patient is talking (e.g., looks at computer chart, takes phone calls)

2. Language Skills

a) Verbal:

Adequate to be understood by the patient; able to converse at an appropriate level for the patient's age and educational level; appropriate tone for the situation—to ensure good communication and patient comfort

Observable Behaviours:

- ✓ Asks open- and closed-ended questions appropriately
- ✓ Checks back with the patient to ensure understanding (e.g., "If I say this, am I understanding you correctly?")
- ✓ Facilitates the patient's story (e.g., "Can you clarify that for me?")
- ✓ Provides clear and organized information in a way the patient understands (e.g., test results, pathophysiology, side effects) and checks back to ensure the patient understands
- ✓ Provides explanations to accompany examinations and/or procedures
- ✓ When first meeting a patient, clarifies how the patient would like to be addressed

- × Fails to greet the patient
- × Interrupts patients inappropriately
- × Uses inappropriate word choices for the individual's level of understanding (e.g., use of scientific language that the patient cannot understand, overuse of jargon)
- × Displays inappropriate anger
- × Uses inappropriate humour
- × Uses paternalistic language (e.g., use of "dear")
- × Uses offensive language (e.g., swearing)
- × Shouts or uses excessively loud speech

- ✗ Asks multiple questions without awaiting the answers
- ✗ Has language skills that are insufficient to be easily understood by the majority of patients (i.e., patients can't understand what the physician is saying)

b) Written:
Clearly articulates and communicates thoughts in a written fashion (e.g., in a letter to a patient, educational materials for the patient, instructions for a patient)

Observable Behaviours:

- ✓ Writes legibly
- ✓ Written material is organized so the patient can understand (spelling, grammar, and punctuation must be sufficient to permit understanding)
- ✓ When providing written information, chooses materials that are appropriate to the patient's level of understanding

- ✗ Uses abbreviations that are not understood by the patient

3. Non-Verbal Skills

a) Expressive:
Being conscious of the impact of body language on communication with the patient and adjusting it appropriately when it inhibits communication

Observable Behaviours:

- ✓ Sits while interviewing the patient (in order to convey the feeling of providing the patient with more time and attention)
- ✓ Eye contact is appropriate for the culture and comfort of the patient
- ✓ Is focused on the conversation
- ✓ Adjusts demeanour to be appropriate to the patient's context (e.g., is pleasant, appropriately smiles, is appropriately serious, is attentive, is patient and empathetic)
- ✓ Communicates at eye level (e.g., with children, patients who are bedridden)
- ✓ Physical contact is appropriate for the patient's comfort

- ✗ Fidgets
- ✗ Hygiene or dress that inhibit communication
- ✗ Gets too close (not respectful of other's personal space)

b) Receptive:
Aware of and responsive to body language, particularly feelings not well expressed in a verbal manner (e.g., dissatisfaction, anger, guilt)

Observable Behaviours:

- ✓ Responds appropriately to the patient's discomfort (e.g., gets a tissue for a patient crying, shows appropriate empathy with the patient's difficulties)
- ✓ Verbally checks the significance of body language (e.g., "You seem nervous/upset/uncertain/in pain; is that right?")
- ✓ Comments on behaviour/non-verbal actions of the patient when appropriate (e.g., "You seem quiet/unhappy/angry/worried/in pain")
- ✓ Modifies actions during examination or history-taking in response to the patient's discomfort (e.g., adjusts angle of exam table when patients are short of breath during an abdominal exam)

- × Misses signs that the patient does not understand what is being said (e.g., blank look, look of astonishment, puzzlement)

4. Culture and Age Appropriateness

Adapts communication to the individual patient for reasons such as culture, age, and disability (e.g., the young child or teenager, or someone with speech deficits, hearing deficits, or language difficulties)

Observable Behaviours:

- ✓ Uses appropriate communication skills with adolescents (e.g., offers to see them independently, respects the capacity to make decisions, acknowledges issues of confidentiality, specifically directs questions to the adolescent, is not judgmental)
- ✓ Adapts communication style to the patient's disability (e.g., writes for deaf patients)
- ✓ Asks about the need for an interpreter and arranges for one
- ✓ Speaks at a volume appropriate for the patient's hearing
- ✓ Adapts communication style based on the patient's cultural expectations or norms (e.g., other family members in the room)
- ✓ Uses appropriate words for children and teens (e.g., "pee" vs. "void")

- × Ignores the patient while exclusively engaging the caregiver, especially with children, the elderly, those with cognitive impairment (e.g., no questions to the patient, patient not involved in management plan)
- × Makes assumptions based on the patient's appearance or dress (i.e., stereotyping the patient)
- × Uses colloquialisms that the patient does not understand

5. Attitudinal

This permeates all levels of communication. This includes the ability to hear, understand, and discuss an opinion, idea, or value that may be different from your own while maintaining respect for the patient's right to decide for himself or herself. Communication conveys respect for the patient.

Observable Behaviours:

- ✓ Shows interest in the patient's opinion
- ✓ Is empathetic
- ✓ Maintains an appropriate attitude in response to inappropriate/offensive language or comments made by the patient

- Appears rude
- Appears impatient
- Displays irritation or anger
- Belittles the patient
- Trivializes or dismisses the patient's ideas or concerns
- Is sarcastic
- Appears intimidating
- Appears arrogant (e.g., ignores the patient's concerns or opinions about the management plan)

Effective Communication with Colleagues

("Colleague", for our purposes, means all members of the health care team.)

1. Listening Skills

Many specific listening skills are better assessed in the context of communication with patients. Some are well assessed in the context of communication with colleagues.

Observable Behaviours that Can Be Assessed with Colleagues:

- ✓ Is attentive
- ✓ Stops and takes the time to listen respectfully to colleagues
- ✓ Appropriately maintains eye contact while discussing issues with all members of the health care team
- ✓ Allows sufficient time for colleagues to articulate their concerns

- × Does other tasks that interfere with listening

2. Language Skills

a) Verbal:

Adequate to be understood in face-to-face communication, and with all other commonly used methods (e.g., phone, video conferencing, etc.); adequate to understand complex profession-specific conversation; appropriate for colleagues with different backgrounds, professions, and education; appropriate tone for the situation, to ensure good communication and colleague comfort

Observable Behaviours:

- ✓ Introduces self when meeting a colleague for the first time
- ✓ When asking colleagues to do something, makes a clear request and ensures that it is understood
- ✓ Offers rationale for a plan or an approach to improve understanding
- ✓ Adjusts tone to be appropriate to circumstances
- ✓ Asks rather than demands
- ✓ Uses non-blaming, appropriate, and specific observations when addressing difficult circumstances

- × Case presentations are poorly organized or incomplete
- × Is not specific with requests
- × Interrupts colleagues
- × Asks multiple questions without awaiting the answers
- × Does not target language to the individual's professional background and level of understanding
- × Displays inappropriate anger
- × Uses inappropriate humour
- × Uses condescending language
- × Shouts or uses excessively loud speech
- × Swears or uses offensive language

b) Written:
(e.g., hospital and office charting, consultant letter, lawyer letter)

- Clearly articulates and communicates thoughts in a written fashion
- Has spelling, grammar, legibility, and punctuation that are adequate to facilitate understanding

Observable Behaviours:

✓ Writes legibly
✓ Written material is organized
✓ When writing to request consultation, is specific about questions/reasons and provides relevant information

✓ Patient-care plans (e.g., test requests, follow-up orders) are:
a) clearly written and
b) securely transmitted to the appropriate recipient

× Uses abbreviations that are not universally known or are prone to misinterpretation

c) Charting Skills
Assessment should concentrate mainly on the charting of individual encounters. Overall organization and structure of the ongoing clinical record are important, but these are often predetermined and outside the control of the individual—they can be assessed, but in a different context. Note that these charting skills are formatted as a set of key features.

a) A clinical note must
   a) be legible.
   b) avoid using acronyms or abbreviations that may be misunderstood or confusing (e.g., "U" for "units").
   c) be organized so as to facilitate reading and understanding.
   d) follow an agreed-upon structure within a practice setting.

b) Charting must be done in a timely fashion, so as to minimize inaccuracies and lost information, and to ensure that the information is available for others involved in care. It should usually be done immediately after the encounter; if delayed, notes must be made to direct the later charting.

c) Corrections or changes to the note must be clearly visible as such, and dated if not made at the time of the original entry.

d) Should not write anything in the chart that you would not want the patient to read (e.g., disparaging remarks)

e) Must not falsify data (e.g., don't include data in the note that has not been gathered)

f) The clinical note must

   a) reflect all the phases of the clinical encounter that are relevant to the presenting situation.

b) show an obvious and logical link between the data recorded and the conclusions and plan.
c) include the relevant negative findings, as well as the relevant positive findings.
d) avoid inappropriate verbatim reporting of the encounter (it should synthesize the data gathered).

g) As part of ongoing care, acknowledge additional received data (e.g., test results, consultation reports) and document follow-up action when appropriate.

h) As new information is gathered during an encounter, maintain the chart according to the expectations of the work milieu (e.g., flow sheets, summary page).

i) Structure and use the clinical record as a tool to try to improve comprehensiveness and continuity of care.

3. Non-Verbal Skills

a) Expressive:
Appropriate eye contact, respectful of others' personal space, appropriate demeanour (e.g., pleasant, smiles appropriately, appropriately serious, attentive, patient and empathetic), and conscious of the impact of body language on the colleague

Observable Behaviours:

- ✓ Is focused on the conversation
- ✓ Eye contact is appropriate for the culture and comfort of the colleague
- ✓ Adjusts demeanour to be appropriate to the colleague's context
- ✓ Physical contact is appropriate for the colleague's comfort

b) Receptive:
Aware of and responsive to body language, especially as seen with dissatisfaction; correctly interprets signs of feelings not expressed, such as anger and frustration

Observable Behaviours:

- ✓ When a colleague is manifesting signs of distress, demonstrates awareness by actions such as modifying demands, exploring concerns, seeking resolution

4. Culture and Age Appropriateness
There may be instances where communication with colleagues and other team members from different cultural backgrounds can be problematic. Awareness of these potential problems and subsequent adjustments to communication are elements of competence. This, however, is better assessed in the context of communication with patients and in professionalism.

5. Attitudinal
This permeates all levels of communication. Competent family physicians possess an attitude that allows them to respectfully hear, understand, and discuss an opinion, idea, or value that may be different from their own.

Observable Behaviours:

- ✓ Seeks to understand rather than judge
- ✓ Returns the focus to effective patient care when interprofessional conflicts occur
- ✓ Attempts to resolve difficulties before ending the discussion or walking away
- ✓ Apologizes when appropriate

- × Appears rude
- × Appears impatient
- × Belittles colleagues or their field of work
- × Trivializes or dismisses ideas or concerns of colleagues
- × Appears arrogant
- × Displays anger or irritation
- × Uses derogatory language when describing a patient's circumstances or case
- × Appears threatening or intimidating

Professionalism

The key feature analysis of the priority topics for evaluation did not lead to the required detailed operational definition of competence in the dimension of professionalism. It was therefore necessary to use a different process to define this dimension. The working group used a process analogous to the priority topic–key feature approach, more or less simply inverting it. We went from the general behaviours characteristic of professionalism to specific behaviours in certain situations, rather than the other way round.

Twelve general behaviours or themes were identified following analysis of the terms used to describe professionalism by the practicing family physicians who replied to our initial survey. We then used small groups and multiple iterations to generate lists of behaviours in certain situations that reflect on competence in each of the 12 general behaviours and so on the dimension of professionalism as a whole. These 12 themes and examples of behaviours under each theme make up most of the content of this section.

We do not think that it will be pertinent to assess the 12 themes individually as they are rather interdependent, and any separation risks becoming artificial. For example, from the point of view of competence, how can we draw a clear line between ethics and professionalism? For the same reason, even though there is considerable overlap between the behaviours listed under the 12 themes, we made little effort to eliminate this overlap: better to have too many concrete examples from which to develop assessment tools and programs than not enough. Any necessary conciliation can be done when this next step (assessment tools and programs) is reached.

There was one other major difference in our approach to the definition of competence in professionalism. Throughout the process of developing evaluation objectives we had intentionally stayed away from test instruments and specific examination scenarios, not wishing to bias the evaluation objectives toward that which is testable by existing instruments or examinations. The process of developing test instruments and examinations has been intentionally left to a second independent step. We soon realized that this was not entirely possible for professionalism, as the nature and structure of our detailed evaluation objectives for this dimension must make some assumptions about the context of the ultimate assessments. Before giving these assumptions, we will first list the observations that justify this slight deviation from our usual approach:

1. Professionalism is perhaps the most multi-faceted dimension of competence; it is essentially subjective, determined by all those working around the individual (e.g., patients, colleagues, employees, employers, occasional contacts) and the cultural environment in which we find ourselves.

2. Although there is a considerable body of knowledge on "professionalism", the demonstration of the possession of this knowledge itself is not sufficient for competence, as it does not seem to predict, in any way, adequate professional behaviour. We are, therefore, more interested in specific behaviours that are indicative of acting professionally than in knowledge about professionalism.

3. Examples of professional behaviour may be quite context specific, and may depend on local expectations. Expectations in any evaluation situation should, therefore, be quite explicit, and any apparently unprofessional behaviour should first be discussed and explored before any final judgment is made.

4. There are many circumstances during practice and training that may demonstrate, to a greater or lesser degree, whether an individual is acting in a professional manner. Professional behaviour is the sum of an appropriate mix of all these. In this sense, there is no one set of key features for professionalism.

5. No one is expected to be perfect all the time, but we expect certification of competence to imply that the individual acts in a professional manner. Competence in this domain is absent when there is a pattern of repeated unprofessional behaviour that cannot be readily justified or explained. There may also be a single incident of behaviour that is fundamentally incompatible with certification of competence in this dimension.

Professionalism can be defined in theoretical terms or in a pragmatic fashion. We have opted again for the pragmatic fashion, starting with input from practicing family physicians, then using a focus group to identify common themes, and then listing specific examples of behaviours (positive or negative) that reflect on professionalism.

For these reasons we feel that our working definition of competence in professionalism requires the assessment to have certain characteristics:

a) It must be done on real-life performances, either immediately or at a distance. It would appear to be easiest to do this during residency training; it is just as important, however, to be able to do the equivalent for those already in practice.

b) Many performances, in many situations, over an extended period of time, must be included in the evaluation. This also implies the involvement of many different assessors or judges of the different performances.

c) All judgments will be based on certain criteria specific to the situation at hand, but the judgment will still be subjective, made by the observer-assessor most appropriate for the situation and performance.

d) All initial judgments of unprofessional behaviour must be subject to discussion, and possible resolution, before being maintained. Staff or preceptors may not always behave professionally.

e) The criteria for certification remain to be established, but it is unlikely that certification of professionalism will be based on scores or averages. Competence is essentially the absence of unprofessional behaviour over a period of sufficient exposure and observation.

Twelve Themes that Define Professionalism in Family Medicine

(Examples of observable behaviours related to each theme can be found on the following pages.)

1. Day-to-day behaviour reassures one that the physician is responsible, reliable, and trustworthy.
2. The physician knows his or her limits of clinical competence and seeks help appropriately.
3. The physician demonstrates a flexible, open-minded approach that is resourceful and deals with uncertainty.
4. The physician evokes confidence without arrogance, and does so even when needing to obtain further information or assistance.
5. The physician demonstrates a caring and compassionate manner.

6. The physician demonstrates respect for patients in all ways, maintains appropriate boundaries, and is committed to patient well-being. This includes time management, availability, and a willingness to assess performance.
7. The physician demonstrates respect for colleagues and team members.
8. Day-to-day behaviour and discussion reassure one that the physician is ethical and honest.
9. The physician practices evidence-based medicine skillfully. This implies not only critical appraisal and information-management capabilities, but incorporates appropriate learning from colleagues and patients.
10. The physician displays a commitment to societal and community well-being.
11. The physician displays a commitment to personal health and seeks balance between personal life and professional responsibilities.
12. The physician demonstrates a mindful approach to practice by maintaining composure/equanimity, even in difficult situations, and by engaging in thoughtful dialogue about values and motives.

A few remarks on the organization and wording of the behaviours listed under each theme:

Although the behaviours are listed under 12 different themes, they could be considered as one list, to be used in the most general sense as a menu from which to draw concrete examples that can be used when giving feedback on professional or unprofessional behaviour, or when assessing the same in a more structured fashion.

We have not placed the behaviours under each theme in any order of priority. For each theme, positive behaviours are listed first, with negative behaviours second. The choice of positivity or negativity in the formulation was spontaneous—it might be advantageous to generate the opposite formulation when using a particular behaviour in an assessment, but that can be done at the appropriate moment. Some behaviours are quite similar to others, some are opposites, but no conscious effort was made to determine the latter. In general, only the positive or the negative manifestation of the behaviour was described. At the moment, in this list, there are about 80 behaviours expressed positively, and about 50 behaviours expressed negatively.

No standard structure or formulation was used. Some are quite general and others very specific. Taken together, however, we do feel that they provide a sufficient and clear operational definition that can serve as the basis for the development of a structured evaluation of professionalism in most of the contexts applicable to family medicine. The user will make both the selection and the refinements appropriate to the situation.

1. Day-to-day behaviour reassures one that the physician is responsible, reliable, and trustworthy.

Observable Behaviours:

- ✓ Comes to clinic when expected
- ✓ Answers pages when on call
- ✓ Notifies attending colleague if he or she is going away and has a maternity patient due or is following an in-patient
- ✓ Notifies others when away for illness or emergencies as soon as possible
- ✓ Sets up systems for follow-up of patients
- ✓ Does not lie

- × Does not look up questions after specific requests
- × Leaves early, arrives late, without advising

- × Inappropriately double schedules activities
- × Switches schedules to personal advantage
- × Does not do patient rounds appropriately i.e., too infrequent, too cursory
- × Is unavailable for clinical responsibilities for personal reasons, without consideration of the needs of the patient or team
- × Allows chart completion to back up unreasonably
- × Does not document lab results as normal or abnormal; does not document follow-up
- × Does not do letters, summaries
- × Cheats on exams or quizzes (e.g., ALSO, NRP)
- × Goes into SOOs with foreknowledge of cases (i.e., cheats on exams)
- × Does not check allergies or interactions when prescribing
- × Fails to follow up in a timely fashion with patients when investigations are pending (e.g., a skin biopsy), or in potentially serious clinical situations (e.g., a depressed adolescent who does not show up for an appointment)
- × Lies about prior experience with a procedure to get to do it
- × Signs in for others when attendance is taken at academic events
- × Plagiarizes on projects

2. The physician knows his or her limits of clinical competence and seeks help appropriately.

Observable Behaviours:

- ✓ Seeks opportunities to address limitations to improve knowledge and skills (electives/continuing education)
- ✓ Does not use the excuse of limited clinical competence to avoid challenging clinical problems

- × Argues about deficiencies in clinical competence in spite of examples to illustrate concerns
- × Ignores clinical problems to mask clinical limitations
- × Refers cases even when he or she has the skills and resources to perform the tasks (does not take the time to do appropriate medical procedures)
- × Does not initiate the management of complex/difficult problems when a patient presents— defers to an attending physician or a consultant
- × Does not prepare adequately for a procedure

3. The physician demonstrates a flexible, open-minded approach that is resourceful and deals with uncertainty.

Observable Behaviours:

- ✓ In patient encounters, consistently demonstrates a willingness to explore the patient's ideas of cause and take steps to include or exclude these from the ensuing differential diagnosis
- ✓ Is willing to adapt diagnosis/plan when provided with an alternative view/information/perspective (willing to change his or her mind)
- ✓ Provides time to deal with the emotion related to an uncertain diagnosis
- ✓ Does not unnecessarily limit patient options (i.e., does not display paternalism)
- ✓ Is satisfied with "symptom diagnosis" (e.g., says "dyspepsia", not "peptic ulcer disease") when information is limited or diagnosis is not confirmable

- ✓ Formulates a patient-centred stepwise plan to deal with a situation even when he or she doesn't know the answer

- × Cuts patients off
- × Refuses to deal with a major problem during an office visit because of time
- × Refuses to see a patient who arrives slightly late for an appointment
- × Shows anger/rigidity when patients don't follow a prescribed course of action
- × Becomes dismissive of patient ideas when they don't fit his or her own
- × Uses manipulative techniques to influence patient behaviour ("I won't be able to take care of you if you choose to do…")

4. The physician evokes confidence without arrogance, and does so even when needing to obtain further information or assistance.

Observable Behaviours:

- ✓ Says, "I don't know but I know how I am going to find out"
- ✓ Management discussions with patients are clearly helpful to the patient with "value added", even without a certain diagnosis or final opinion about available treatment
- ✓ Projects appropriate confidence in non-verbal communication: looks patients in the eye when he or she says,"I don't know"

- × Uses own experience to devalue the patient's experience (e.g., "I didn't have to have an epidural")
- × Tells patients what to do without understanding their circumstances (displays arrogance, paternalism)

5. The physician demonstrates a caring and compassionate manner.

Observable Behaviours:

- ✓ Allows patients time to verbalize their concerns without cutting them off; listens for a while before talking—actively listens before talking
- ✓ Does not belittle the patient's losses/fears
- ✓ Asks patients about their feelings, worries, hopes
- ✓ Sits down with patients whenever possible while communicating
- ✓ Addresses issues or behaviours with patients rather than confronting them personally or judgmentally
- ✓ Expands on healthy options or choices with patients
- ✓ Keeps patients' needs foremost when faced with own personal concerns about medical errors/disasters/accusations
- ✓ Is willing to acknowledge the patient's emotions within the encounter
- ✓ Does not blame patients for difficult situations they encounter
- ✓ When dealing with a difficult patient, recognizes his or her own feelings and avoids expressing anger inappropriately
- ✓ Despite time and workload pressure, maintains a pleasant, compassionate approach

6. The physician demonstrates respect for patients in all ways, maintains appropriate boundaries, and is committed to patient well-being. This includes time management, availability, and a willingness to assess performance.

Observable Behaviours:

- ✓ Respects the patient's time as if it were his or her own: does his or her best to be on time; acknowledges when he or she is not
- ✓ Does not impose personal religious, moral, or political beliefs on a patient
- ✓ Does not ask for or accept offers of dates from patients
- ✓ Does not ask patients for favours
- ✓ Does not accept inappropriate gifts
- ✓ Does not make jokes at a patient's expense
- ✓ Respects a patient's lifestyle choices as his or hers to make
- ✓ Appreciates the power differential in the physician-patient interaction
- ✓ Maintains personal appearance to facilitate patient comfort and confidence for individual patients, or for specific patient populations
- ✓ Comments and behaviours reinforce and enhance the patient's abilities and capabilities
- ✓ Does not lend patients money (or borrow money from patients)
- ✓ Recognizes the difference between maintaining confidentiality and seeking appropriate professional advice when needed in difficult situations
- ✓ Actively looks at his or her practice with assessment tools, and implements appropriate changes
- ✓ Thinks and speaks about patients in a positive manner
- ✓ Attempts to understand the patient's issues that precipitate difficult behaviour or non-compliance, and adapts his or her response accordingly

- × Always seems rushed or burdened by too many demands
- × Complains about other team members in front of patients
- × Blames others for a personal lack of organization or harried approach ("Who took my stethoscope this time?", "Where's my pen?", "I'm late because there are no parking spots", "The secretary didn't remind me I had to be there", "My charts weren't out")
- × Is reluctant or refuses to see some patients

7. The physician demonstrates respect for colleagues and team members.

Observable Behaviours:

- ✓ Does not undermine and avoids making negative comments about other providers, especially those who may have seen patients in different settings or contexts
- ✓ When consulted or asked for help, listens to concerns and tries to respond positively and to be available ("How can I help?" vs. "I don't need to see this patient")
- ✓ When needing to talk to someone unexpectedly, waits and picks the right moment; does not interrupt unduly
- ✓ Thinks and speaks about colleagues in a positive manner; respects their time as if it were his or her own
- ✓ Arrives on time

- ✓ Pays attention when others are speaking
- ✓ Lets others speak/continue; hears them out and stays respectful even if he or she may not agree with topics or points of view

- × Provides inappropriate feedback in an insensitive manner (non-specific, wrong place, wrong time)
- × Leaves early, picks the easy tasks, leaves tasks unfinished, etc., such that others have more work
- × Discusses contentious issues in public, or gossips
- × Avoids the discussion of contentious issues that are having or may have a major impact on team dynamics and outcomes
- × Argues with other team members
- × Does not make personal adjustments in spite of repeated messages from others about performance in the workplace
- × A male trainee does not accept feedback from a female colleague or faculty
- × Does other things (i.e., does not pay attention) while a colleague is speaking (e.g., text messages, reads paper, does charts)

8. Day-to-day behaviour and discussion reassure that the physician is ethical and honest.

Observable Behaviours:

- ✓ When an error has been made, acknowledges his or her own contribution, discusses it with the appropriate parties, tries to clarify why the error was made and apply corrective action for the future
- ✓ Obtains informed consent, asks about privacy/communication/confidentiality
- ✓ Respects patient autonomy, and assesses whether patient decision making is impaired
- ✓ Provides honest estimates concerning time, services, and billing

- × Discloses patient information against his or her expressed wishes, especially with respect to adolescents, the elderly, and patients with different cultural issues
- × Discusses patients in "public" places
- × Provides medical treatment inappropriately to colleagues, including writing prescriptions
- × Claims (to colleagues, patients, others) to have done something that has not been done (e.g., history, physical exam, lab tests, phone calls, follow-up)
- × Takes credit for work done by others (for monetary reasons, for prestige, for any reason)
- × Has inappropriate prescribing practices:
    - Puts in the name of someone with a drug plan instead of the patient
    - Prescribes inappropriately for self-gain
    - Prescribes without sufficient assessment
- × Makes unjustifiable claims on insurance or other forms

9. The physician practices evidence-based medicine skillfully. This implies not only critical appraisal and information-management capabilities, but incorporates appropriate learning from colleagues and patients.

Observable Behaviours:

- ✓ Does not give undue weight to evidence-based medicine: incorporates the patient's and family's expertise about the uniqueness of their situation; incorporates the experience and expertise of colleagues and team members, as well as his or her own
- ✓ When a patient questions care or makes suggestions, is open to respectful discussion; responds positively to patients who bring materials from the Internet
- ✓ When using guidelines or the results of clinical trials (on large populations), customizes and adapts them to ensure applicability to the individual patient in question
- ✓ Does not change a current treatment plan when temporarily dealing with someone else's patient; if thinks changes are desirable, discusses them first with the regular provider
- ✓ Checks as to whether practice is consistent with recent evidence, and makes changes consistent with this evidence
- ✓ Identifies knowledge gaps in own clinical practice, and develops a strategy to fill it; frames clinical questions that will facilitate the search for "answers" to these gaps

- × Does not use resources to acquire up-to-date information about specific cases
- × Following a group discussion and decision, does not incorporate agreed-upon changes into clinical practice
- × Relies too much on a limited set of inappropriate information resources (e.g., drug company representatives, unselected Internet material, The Medical Post, "expert" opinion)
- × Does not critically question information

10. The physician displays a commitment to societal and community well-being.

Observable Behaviours: **

- ✓ Does not dismiss concerns raised by patients on local issues that have an impact on their health (e.g., safe walking areas, pollution)
- ✓ Tries to empower the patient who raises concerns about community issues; acts in a confidential manner
- ✓ Responds positively to community requests for participation: will dedicate some time and experience, some resources (e.g., put a poster up)

- × Does not respect the duty to report in situations where there is a clear danger to others (e.g., meningococcal disease, capacity to drive, child abuse)
- × Does not report inappropriate behaviour (e.g., substance abuse) of professional colleagues to the appropriate supervisor or authority

** Although many examples around this theme may be found later in practice, we do not think it practical or fair to assess this theme in great detail at the time of certification, namely during training or at the very beginning of independent practice. The other themes of professionalism provide better opportunities for the appropriate assessment of this dimension.

11. The physician displays a commitment to personal health and seeks balance between personal life and professional responsibilities.

Observable Behaviours:

- ✓ Takes appropriate time to fulfill personal needs
- ✓ Is willing to discuss observations from colleagues or team members when behaviour suggests difficulty because of stress
- ✓ When a conflict between professional and personal activities is brought to his or her attention, discusses it, makes an appropriate adjustment or not
- ✓ Sometimes puts the patient first, ahead of personal need, and demonstrates satisfaction and appreciation of the value of this action
- ✓ Has a healthy lifestyle: does not smoke, does not drink to excess, drives reasonably

- × Takes frustration, etc., out on colleagues/staff (e.g., is rude and inappropriate)
- × Fails or refuses to recognize or deal with significant illness or a condition that may have an impact on professional activities, especially when concerns are identified by others
- × Stays overtime inappropriately, comes to work sick, is unwilling to take time off
- × Burdens co-workers when taking care of own needs (i.e., leaves many things undone without communicating with colleagues)
- × Transfers tasks to colleagues without clear justification, without adequate communication; changes availability for professional tasks "frequently", "at the last minute"
- × Seeks medical care from friends or colleagues outside of a normal physician-patient relationship; acts as own physician

12. The physician demonstrates a mindful approach to practice by maintaining composure/equanimity, even in difficult situations, and by engaging in thoughtful dialogue about values and motives.

Observable Behaviours:

- ✓ Given a difficult situation, maintains composure and is able to act appropriately (e.g., with angry patients, an unexpected clinical turn of events, an overwhelming demand, examinations)
- ✓ Is consistently attentive to a patient or colleague throughout any interaction
- ✓ Tries to understand the behaviour of others without getting mad or being hurt
- ✓ Does not display anger, inappropriate humour, or other emotions when this could undermine constructive work with patients or colleagues
- ✓ When emotions are intense or visible, can nevertheless explain or suggest a constructive plan of action
- ✓ Does not lose his or her cool—even when the other person in the room loses it
- ✓ Can allow for multiple perspectives from various participants in complex situations; entertains or solicits other viewpoints
- ✓ Is willing to engage in dialogue, in order to learn from experience and others, when
    - o a bad/unexpected outcome occurs
    - o there are conflicting ideas

  - he or she is asked questions (does not perceive these as a threat; makes time to discuss them vs. being "too busy to talk about it")

✓ When a mistake appears to have been made, acknowledges it and looks first for personal responsibility rather than directing blame elsewhere

Clinical Reasoning Skills

This dimension of competence is one of two that are currently almost entirely defined by and within the key features of the priority topics.

Each key feature suggests, explicitly or implicitly, the dimensions of competence as well as the phase of the clinical encounter, and, hence, the specific cognitive skills, that are characteristic of competence when dealing with the problem in question. All the key features have been individually coded as to the skills and phases assessed, but these codes are not yet visible in this version of the evaluation objectives document—the majority of the key features (60%), however, involve clinical reasoning skills, so using them in an unselected fashion will certainly touch on this dimension.

Clinical reasoning is a more familiar territory and the framework used is that of clinical problem solving using the hypothetico-deductive model, with particular emphasis, however, on using it in an expert fashion. The skilled physician will use this model efficiently, in a manner adapted to the patient's needs, as well as to those of the problem at hand and the context of the encounter, to deal with a patient's problems.

What are some of the characteristics of expert clinical reasoning, as opposed to the not-yet-expert? Repeated studies have shown that the history is the most important part of the clinical encounter and that it is usually sufficient to suggest the correct diagnoses. We use the term "diagnosis" in its widest sense, including problem identification at all levels, not just medical diagnoses. The experienced clinician often generates the diagnostic possibilities or hypotheses within the first minute of the clinical encounter. The expert then uses these hypotheses to direct the subsequent data gathering: he may collect less information than a non-expert, but the information selected is often much more detailed around the important points—he or she gathers the data necessary to deal with the problem, and does not lose time gathering non-contributory information for the problem at hand. The data is interpreted as it is obtained, to finish with a second round of diagnostic hypotheses—this step certainly requires expertise, but it is often self-evident if the initial diagnostic hypotheses and the data gathering have been done in a skilled fashion. The physical examination and investigation phase often play minor roles—indeed it is often a question of confirming or eliminating diagnostic possibilities generated by the history.

Is it reasonable to almost equate clinical reasoning skills (and medical problem solving) with skill in arriving at an accurate diagnosis? Most would agree with this assumption, for two reasons. First, management and treatment certainly require skill, but they are heavily knowledge dependent, so they are situated closer to the lower cognitive levels of clinical competence, as well as being particularly dependent on an accurate set of diagnoses. Second, with a few domain-specific exceptions, the various cognitive and non-cognitive skills required in the later phases of the clinical encounter are all required to a higher degree in making an accurate and pertinent diagnosis.

Of course, although skill at making accurate diagnoses is a necessary element of competence in clinical reasoning skills, it is probably not sufficient by itself. A well-planned assessment of competence in clinical reasoning skills will put great emphasis on taking the history and making diagnoses, but it will also include some tasks situated in the later parts of the clinical encounter. It will not do this in a random fashion, however. This brings us back to the concept of the interaction between the patient, the physician, and the problem. Each interaction will itself determine which steps are most critical: for some it may well be the treatment or the physical examination, and, if this is so, then this is where competence lies for this interaction, and this is what should be assessed. The challenge, for valid assessment, is to match the evaluation with the interaction. The key feature analysis did this, so the best definition of competence in clinical reasoning skills can be found in the Priority Topics and Key Features List.

Selectivity

This dimension has not, to our knowledge, been previously described with respect to physician competence, although it is surely not an original idea. It is the term that was chosen by the initial focus group to describe a set of skills that was frequently cited in the survey as characterizing the competent family physician: such a physician does not do things in a routine or stereotypical fashion but is very adaptable and selective in approach, modifying it to suit both the situation and the patient. Some of the ways in which a physician demonstrates competence in this dimension are as follows:

- Sets priorities and focuses on the most important
- Knows when to say something and when not to
- Gathers the most useful information without losing time on less contributory data
- Does something extra when it will likely be helpful
- Distinguishes the emergent from the elective and intervenes in a timely fashion
- Acts when necessary, even though information may be incomplete
- Determines the likelihoods, pertinence, and priorities in his or her differential diagnoses
- Distinguishes the sick from the not sick
- Selects and modifies a treatment to fit the particular needs of a patient and a situation

Selectivity could perhaps be considered a subset of all the other dimensions, but it was used frequently enough in the descriptions of competence to merit its own dimension. As we saw earlier, selectivity is found at the higher levels of competence, and it could be an extremely robust indicator of overall competence when used for assessment purposes. It could also be considered to be one of the operational levels that go to make up clinical judgment, and provides a way to assess this important concept.

This dimension of competence is one of two that are currently almost entirely defined by and within the key features of the priority topics. Each key feature suggests, explicitly or implicitly, the dimensions of competence, as well as the phase of the clinical encounter, and, hence, the specific cognitive skills that are characteristic of competence when dealing with the problem in question. Sixteen percent of the key features involve selectivity as an essential skill, most often (although not exclusively) associated with clinical reasoning skills. It may be sufficient to assess selectivity only in this context, but we could also envisage its assessment in other dimensions, if necessary. The concept surely applies. It would simply remain to develop a further operational definition of selectivity as it is expressed in the other dimensions.

Procedure Skills

Certification for independent practice requires a certain level of experiential competence: this includes the technical skills to perform a certain number of procedures. Sixty-five core procedures are listed below, and these are the procedures upon which the assessment of competence will be based[19]. It should be remembered that it is not only the technical aspects of the individual procedures that are important. The higher levels of competence must also be assessed, as always, in the context of family medicine—the key features describe this aspect.

The General Key Features of Procedure Skills*

1. In order to decide whether or not you are going to do a procedure, consider the following:
   a) The indications and contraindications to the procedure
   b) Your own skills and readiness to do the procedure (e.g., your level of fatigue and any personal distractions)
   c) The context of the procedure, including the patient involved, the complexity of the task, the time needed, the need for assistance, and location
2. Before deciding to go ahead with the procedure:
   a) Discuss the procedure with the patient, including a description of the procedure and possible outcomes, both positive and negative, as part of obtaining their consent.
   b) Prepare for the procedure by ensuring the appropriate equipment is ready.
   c) Mentally rehearse the following:
      - The anatomic landmarks necessary for procedure performance.
      - The technical steps necessary in sequential fashion, including any preliminary examination.
      - The potential complications and their management.
3. During performance of the procedure:
      - Keep the patient informed to reduce anxiety.
      - Ensure patient comfort and safety always.
4. When the procedure is not going as expected, re-evaluate the situation, and stop and/or seek assistance as required.
5. Develop a plan with your patient for after care and follow-up after completion of a procedure.

* Apply to all procedures. These can be used to guide the development of specific evaluation tools for specific procedures.

[19] [19] Wetmore SW, Rivet C, Tepper J, Tatemichi S, Donoff M, Rainsberry P. Defining core procedure skills for Canadian family medicine training. Can Fam Physician. 2005; 51(10): 1364-5.

Part III: Priority Topics and Key Features

Priority Topics

Abdominal Pain

	Key Feature	*Skill*	*Phase*
1	Given a patient with abdominal pain, paying particular attention to its location and chronicity:		
	a) Distinguish between acute and chronic pain.	*Clinical Reasoning*	*History*
	b) Generate a complete differential diagnosis (ddx).	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	c) Investigate in an appropriate and timely fashion.	*Clinical Reasoning Selectivity*	*Investigation*
2	In a patient with diagnosed abdominal pain (e.g., gastroesophageal reflux disease, peptic ulcer disease, ulcerative colitis, Crohn's disease), manage specific pathology appropriately (e.g., with. medication, lifestyle modifications).	*Clinical Reasoning*	*Treatment*
3	In a woman with abdominal pain:		*Hypothesis generation*
	a) Always rule out pregnancy if she is of reproductive age.	*Clinical Reasoning*	*Investigation*
	b) Suspect gynecologic etiology for abdominal pain.	*Clinical Reasoning*	*Hypothesis generation*
	c) Do a pelvic examination, if appropriate.	*Clinical Reasoning*	*Physical* *Diagnosis*
4	In a patient with acute abdominal pain, differentiate between a surgical and a non-surgical abdomen.	*Clinical Reasoning Selectivity*	*Physical* *Diagnosis*
5	In specific patient groups (e.g., children, pregnant women, the elderly), include group-specific surgical causes of acute abdominal pain in the ddx.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Diagnosis*
6	Given a patient with a life-threatening cause of acute abdominal pain (e.g., a ruptured abdominal aortic aneurysm or a ruptured ectopic pregnancy):		
	a) Recognize the life-threatening situation.	*Selectivity*	*Diagnosis*
	b) Make the diagnosis.	*Clinical Reasoning*	*Diagnosis*
	c) Stabilize the patient.	*Selectivity* *Clinical Reasoning*	*Treatment*
	d) Promptly refer the patient for definitive treatment.	*Selectivity*	*Diagnosis* *Referral*
7	In a patient with chronic or recurrent abdominal pain:		
	a) Ensure adequate follow-up to monitor new or changing symptoms or signs.	*Clinical Reasoning*	*Follow-up*
	b) Manage symptomatically with medication and lifestyle modification (e.g., for irritable bowel syndrome).	*Clinical Reasoning* *Communication*	*Treatment*
	c) Always consider cancer in a patient at risk.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
8	Given a patient with a diagnosis of inflammatory bowel disease (IBD) recognize an extra intestinal manifestation.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*

Advanced Cardiac Life Support

	Key Feature	*Skill*	*Phase*
1	Keep up to date with advanced cardiac life support (ACLS) recommendations (i.e., maintain your knowledge base).	*Professionalism*	*Treatment*
2	Promptly defibrillate a patient with ventricular fibrillation (V fib), or pulseless or symptomatic ventricular tachycardia (V tach).	*Clinical Reasoning Selectivity*	*Treatment*
3	Diagnose serious arrhythmias (V tach, V fib, supraventricular tachycardia, atrial fibrillation, or second- or third-degree heart block), and treat according to ACLS protocols.	*Clinical Reasoning*	*Diagnosis* *Treatment*
4	Suspect and promptly treat reversible causes of arrhythmias (e.g., hyperkalemia, digoxin toxicity, cocaine intoxication) before confirmation of the diagnosis.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Treatment*
5	Ensure adequate ventilation (i.e., with a bag valve mask), and secure the airway in a timely manner.	*Clinical Reasoning Selectivity*	*Treatment*
6	In patients requiring resuscitation, assess their circumstances (e.g., asystole, long code times, poor pre-code prognosis, living wills) to help you decide when to stop. (Avoid inappropriate resuscitation.)	*Clinical Reasoning*	*Diagnosis* *Treatment*
7	In patients with serious medical problems or end-stage disease, discuss code status and end-of-life decisions (e.g., resuscitation, feeding tubes, levels of treatment), and readdress these issues periodically.	*Patient-centred Approach*	*Treatment* *Follow-up*
8	Attend to family members (e.g., with counselling, presence in the code room) during and after resuscitating a patient.	*Professionalism* *Communication*	*Treatment*
9	In a pediatric resuscitation, use appropriate resources (e.g., Braeslow tape, the patient's weight) to determine the correct drug doses and tube sizes.	*Clinical Reasoning*	*Treatment*

Note: Shock is not dealt with in this topic.

Allergy

	Key Feature	*Skill*	*Phase*
1	In all patients, always inquire about any allergy and clearly document it in the chart. Re-evaluate this periodically.	*Clinical Reasoning*	*History* *Follow-up*
2	Clarify the manifestations of a reaction in order to try to diagnose a true allergic reaction (e.g., do not misdiagnose viral rashes as antibiotic allergy, or medication intolerance as true allergy).	*Clinical Reasoning*	*History* *Diagnosis*
3	In a patient reporting allergy (e.g., to food, to medications, environmental), ensure that the patient has the appropriate medication to control symptoms (e.g., antihistamines, bronchodilators, steroids, an EpiPen).	*Clinical Reasoning*	*Treatment*
4	Prescribe an EpiPen to every patient who has a history of, or is at risk for, anaphylaxis.	*Clinical Reasoning*	*Treatment*
5	Educate appropriate patients with allergy (e.g., to food, medications, insect stings) and their families about the symptoms of anaphylaxis and the self-administration of the EpiPen, and advise them to return for immediate reassessment and treatment if those symptoms develop or if the EpiPen has been used.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment* *Follow-up*
6	Advise patients with any known drug allergy or previous major allergic reaction to get a MedicAlert bracelet.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
7	In a patient presenting with an anaphylactic reaction: a) Recognize the symptoms and signs.	*Selectivity* *Clinical Reasoning*	*Diagnosis*
	b) Treat immediately and aggressively.	*Selectivity* *Clinical Reasoning*	*Treatment*
	c) Prevent a delayed hypersensitivity reaction through observation and adequate treatment (e.g., with steroids).	*Clinical Reasoning*	*Treatment*
8	In patients with anaphylaxis of unclear etiology refer to an allergist for clarification of the cause.	*Clinical Reasoning*	*Referral*
9	In the particular case of a child with an anaphylactic reaction to food: a) Prescribe an EpiPen for the house, car, school, and daycare.	*Clinical Reasoning*	*Treatment*
	b) Advise the family to educate the child, teachers, and caretakers about signs and symptoms of anaphylaxis, and about when and how to use the EpiPen.	*Clinical Reasoning*	*Treatment*
10	In a patient with unexplained recurrent respiratory symptoms, include allergy (e.g., sick building syndrome, seasonal allergy) in the differential diagnosis.	*Clinical Reasoning*	*Hypothesis Generation*

Anemia

	Key Feature	*Skill*	*Phase*
1	Assess the risk of decompensation of anemic patients (e.g., volume status, the presence of congestive heart failure [CHF], angina, or other disease states) to decide if prompt transfusion or volume replacement is necessary.	*Clinical Reasoning Selectivity*	*Diagnosis* *Treatment*
2	In a patient with anemia, classify the anemia as microcytic, normocytic, or macrocytic by using the MCV (mean corpuscular value) or smear test result, to direct further assessment and treatment.	*Clinical Reasoning*	*Diagnosis* *Investigation*
3	In all patients with anemia, determine the iron status before initiating treatment.	*Clinical Reasoning*	*Investigation* *Diagnosis*
4	In a patient with iron deficiency, investigate further to find the cause.	*Clinical Reasoning*	*Investigation*
5	Consider and look for anemia in appropriate patients (e.g., those at risk for blood loss [those receiving anticoagulation, elderly patients taking a nonsteroidal anti-inflammatory drug]) or in patients with hemolysis (mechanical valves), whether they are symptomatic or not, and in those with new or worsening symptoms of angina or CHF.	*Clinical Reasoning Selectivity*	*Hypothesis Generation* *Investigation*
6	In patients with macrocytic anemia: a) Consider the possibility of vitamin B_{12} deficiency.	*Clinical Reasoning*	*Hypothesis Generation*
	b) Look for other manifestations of the deficiency (e.g., neurologic symptoms) in order to make the diagnosis of pernicious anemia when it is present.	*Clinical Reasoning*	*History* *Physical*
7	As part of well-baby care, consider anemia in high-risk populations (e.g., those living in poverty) or in high-risk patients (e.g., those who are pale or have a low-iron diet or poor weight gain).	*Clinical Reasoning Selectivity*	*Hypothesis Generation*
8	When a patient is discovered to have a slightly low hemoglobin level, look carefully for a cause (e.g., hemoglobinopathies, menorrhagia, occult bleeding, previously undiagnosed chronic disease), as one cannot assume that this is normal for them.	*Clinical Reasoning Selectivity*	*Hypothesis Generation* *Diagnosis*
9	In anemic patients with menorrhagia, determine the need to look for other causes of the anemia.	*Clinical Reasoning*	*Hypothesis Generation*

Antibiotics

	Key Feature	*Skill*	*Phase*
1	In patients requiring antibiotic therapy, make rational choices (i.e., first-line therapies, knowledge of local resistance patterns, patient's medical and drug history, patient's context).	*Clinical Reasoning Selectivity*	*Treatment*
2	In patients with a clinical presentation suggestive of a viral infection, avoid prescribing antibiotics.	*Clinical Reasoning*	*Treatment*
3	In a patient with a purported antibiotic allergy, rule out other causes (e.g., intolerance to side effects, non-allergic rash) before accepting the diagnosis.	*Clinical Reasoning*	*Hypothesis Generation History*
4	Use a selective approach in ordering cultures before initiating antibiotic therapy (usually not in uncomplicated cellulitis, pneumonia, urinary tract infections, and abscesses; usually for assessing community resistance patterns, in patients with systemic symptoms, and in immunicompromised patients).	*Selectivity*	*Investigation*
5	In urgent situations (e.g., cases of meningitis, septic shock, febrile neutropenia), do not delay administration of antibiotic therapy (i.e., do not wait for confirmation of the diagnosis).	*Selectivity*	*Treatment*

Anxiety

	Key Feature	*Skill*	*Phase*
1	For a patient with multiple unexplained symptoms or behaviours, look for anxiety as a primary or contributing cause.	*Clinical Reasoning* *Patient-centred Approach*	*Hypothesis Generation* *Diagnosis*
2	When a patient presents with symptoms of anxiety, clearly distinguish between distress (e.g. fear, nervousness, worry) and an anxiety disorder.	*Clinical Reasoning* *Patient-centred Approach*	*History* *Diagnosis*
3	In a patient presenting with acute symptoms of panic (e.g., shortness of breath, palpitations, hyperventilation), do not attribute the symptoms to anxiety without first excluding serious medical pathology (e.g., pulmonary embolism, myocardial infarction) from the differential diagnosis, especially in patients with established anxiety disorder.	*Selectivity* *Clinical Reasoning*	*Hypothesis Generation* *Diagnosis*
4	When working up a patient with symptoms of anxiety, and before making the diagnosis of an anxiety disorder, a) Exclude serious medical pathology	*Selectivity* *Clinical reasoning*	*Hypothesis generation* *Diagnosis*
	b) Identify: • other co-morbid psychiatric conditions • abuse • substance use	*Clinical reasoning*	*History*
	c) Assess the risk of suicide	*Clinical reasoning*	*History*
	d) Discuss functional impact with the patient	*Patient-centred Approach*	*History*
5	When an anxiety disorder is suspected, assess and classify according to established diagnostic criteria, as treatment will vary according to the classification.	*Clinical reasoning*	*Diagnosis*
6	In patients with known anxiety disorders, do not assume all new symptoms are attributable to the anxiety disorder.	*Selectivity* *Clinical reasoning*	*Hypothesis generation*
7	When planning management of anxiety, offer appropriate treatment, which may include one or a combination of the following: • Self-management techniques • Regular office follow-up • Community resources • Structured therapies (Cognitive Behavioral Therapy, psychotherapy) • Judicious use of pharmacotherapy • Referral to other health professionals with ongoing shared care	*Patient-centred Approach*	*Treatment* *Referral*
8	When managing anxiety or an anxiety disorder do not use medication as a sole treatment.	*Patient-centred Approach* *Clinical reasoning*	*Treatment*
9	When assessing and managing anxiety, discuss the use of alcohol and substances as harmful self-medication.	*Patient-centred Approach* *Communication*	*Treatment*

Asthma

	Key Feature	*Skill*	*Phase*
1	In patients of all ages with respiratory symptoms (acute, chronic, recurrent): a) Include asthma in the differential diagnosis.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	b) Confirm the diagnosis of asthma by appropriate use of: - history. - physical examination. - spirometry.	*Clinical Reasoning*	*History* *Physical*
2	In a child with acute respiratory distress, distinguish asthma or bronchiolitis from croup and foreign body aspiration by taking an appropriate history and doing a physical examination.	*Clinical Reasoning Selectivity*	*History* *Physical*
3	In a known asthmatic, presenting either because of an acute exacerbation or for ongoing care, objectively determine the severity of the condition (e.g., with history, including the pattern of medication use), physical examination, spirometry). Do not underestimate severity.	*Clinical Reasoning*	*Diagnosis*
4	In a known asthmatic with an acute exacerbation: a) Treat the acute episode (e.g., use beta-agonists repeatedly and early steroids, and avoid under-treatment).	*Clinical Reasoning Selectivity*	*Treatment*
	b) Rule out co-morbid disease (e.g., complications, congestive heart failure, chronic obstructive pulmonary disease).	*Selectivity* *Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	c) Determine the need for hospitalization or discharge (basing the decision on the risk of recurrence or complications, and on the patient's expectations and resources).	*Selectivity* *Clinical Reasoning*	*Treatment*
5	For the ongoing (chronic) treatment of an asthmatic, propose a stepwise management plan including: - self-monitoring. - self-adjustment of medication. - when to consult back.	*Clinical Reasoning* *Patient Centered*	*Treatment*
6	For a known asthmatic patient, who has ongoing or recurrent symptoms: a) Assess severity and compliance with medication regimens.	*Clinical Reasoning* *Patient Centered*	*History* *Diagnosis*
	b) Recommend lifestyle adjustments (e.g., avoiding irritants, triggers) that may result in less recurrence and better control.	*Clinical Reasoning* *Patient Centered*	*Treatment*

Atrial Fibrillation

	Key Feature	*Skill*	*Phase*
1	In a patient who presents with new onset atrial fibrillation, look for an underlying cause (e.g., ischemic heart disease, acute myocardial infarction, congestive heart failure, cardiomyopathy, pulmonary embolus, hyperthyroidism, alcohol, etc.)	*Clinical Reasoning*	*Hypothesis generation*
2	In a patient presenting with atrial fibrillation, a) Look for hemodynamic instability,	*Clinical Reasoning Selectivity*	*Hypothesis generation*
	b) Intervene rapidly and appropriately to stabilize the patient.	*Clinical Reasoning Selectivity*	*Treatment*
3	In an individual presenting with chronic or paroxysmal atrial fibrillation, a) Explore the need for anticoagulation based on the risk of stroke with the patient,	*Patient-centred Approach* *Clinical Reasoning*	*Diagnosis* *Treatment*
	b) Periodically reassess the need for anticoagulation.	*Clinical Reasoning*	*Hypothesis generation* *Follow-up*
4	In patients with atrial fibrillation, when the decision has been made to use anticoagulation, institute the appropriate therapy and patient education, with a comprehensive follow-up plan.	*Clinical Reasoning*	*Treatment* *Follow-up*
5	In a stable patient with atrial fibrillation, identify the need for rate control.	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
6	In a stable patient with atrial fibrillation, arrange for rhythm correction when appropriate.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Treatment*

Bad News

	Key Feature	*Skill*	*Phase*
1	When giving bad news, ensure that the setting is appropriate, and ensure patient's confidentiality.	*Patient-centred Approach* *Communication*	*Treatment*
2	Give bad news: • in an empathic, compassionate manner • allowing enough time. • providing translation, as necessary	*Communication*	*Treatment*
3	Obtain patient consent before involving the family.	*Patient-centred Approach* *Professionalism*	*Treatment*
4	After giving bad news, arrange definitive follow-up opportunities to assess impact and understanding.	*Patient-centred Approach* *Communication*	*Follow-up*

Behavioural Problems

	Key Feature	*Skill*	*Phase*
1	In all patients, when working up a behavioural problem, a) Ensure a thorough assessment of medical and mental health conditions (e.g., schizophrenia in adolescents and young adults) and psychosocial factors before offering a diagnosis or definitive advice (i.e., do not dismiss the problem as being "a phase," or "hormones," or "just adolescence")	*Clinical reasoning* *Patient-centred Approach*	*Hypothesis generation* *History*
	b) Use a validated assessment tool if available	*Selectivity* *Clinical reasoning*	*History* *Investigation*
	c) Use multiple sources of information (e.g., workplace, family, school) with consent	*Professionalism*	*History*
	d) Explore the patient's own perspective, not just that of the caregiver	*Patient-centred Approach*	*History*
2	In assessing behavioural problems in adolescents specifically look for substance use, peer issues, abuse, and other stressors.	*Clinical reasoning* *Patient-centred Approach*	*History*
3	While assessing behavioural problems in a patient, a) Evaluate the impact of the behaviour	*Clinical reasoning* *Patient-centred Approach*	*History*
	b) Explore any underlying emotional distress with the patient	*Communication* *Patient-centred Approach*	*History* *Treatment*
	c) Destigmatize embarrassing behaviours	*Communication* *Patient-centred Approach*	*Treatment*
4	When making a diagnosis of a behavioural problem in a patient, a) Avoid premature labelling of a behaviour as a disorder	*Clinical reasoning*	*Hypothesis generation* *Diagnosis*
	b) Follow up with support and regular visits until the situation is clearer and any therapeutic requirements are more evident	*Clinical reasoning*	*Follow-up*
5	When managing behavioural problems: a) Assess and address immediate risk for the patient and others	*Patient-centred Approach*	*Treatment*
	b) Do not limit treatment to medication; address other dimensions (e.g., do not just use amphetamines to treat ADD, but add social skills teaching, time management, etc.) and match to available community resources	*Patient-centred Approach*	*Treatment*
6	When there is a challenging relationship with a patient with behavioural problems maintain a continuous, therapeutic, and non-judgmental relationship with the patient and family.	*Patient-centred Approach* *Professionalism*	*Follow-up*

Breast Lump

	Key Feature	*Skill*	*Phase*
1	Given a well woman with concerns about breast disease, during a clinical encounter (annual or not): a) Identify high-risk patients by assessing modifiable and non-modifiable risk factors	*Clinical Reasoning Selectivity*	*History* *Diagnosis*
	b) Advise regarding screening (mammography, breast self-examination) and its limitations.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
	c) Advise concerning the woman's role in preventing or detecting breast disease (breast self-examination, lifestyle changes).	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
2	Given a woman presenting with a breast lump (i.e., clinical features): a) Use the history, features of the lump, and the patient's age to determine (interpret) if aggressive work-up or watchful waiting is indicated.	*Selectivity* *Clinical Reasoning*	*Diagnosis* *Treatment*
	b) Ensure adequate support throughout investigation of the breast lump by availability of a contact resource.	*Patient-centred Approach* *Professionalism*	*Treatment* *Follow-up*
	c) Use diagnostic tools (e.g., needle aspiration, imaging, core biopsy , referral) in an appropriate manner (i.e., avoid over- or under-investigation, misuse) for managing the breast lump.	*Clinical Reasoning*	*Investigation* *Treatment*
3	In a woman who presents with a malignant breast lump and knows the diagnosis: a) Recognize and manage immediate and long-term complications of breast cancer.	*Clinical Reasoning*	*Diagnosis* *Treatment*
	b) Consider and diagnose metastatic disease in the follow-up care of a breast cancer patient by appropriate history and investigation.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *History*
	c) Appropriately direct (provide a link to) the patient to community resources able to provide adequate support (psychosocial support).	*Patient-centred Approach* *Clinical Reasoning*	*Follow-up* *Treatment*

Cancer

	Key Feature	*Skill*	*Phase*
1	In all patients, be opportunistic in giving cancer prevention advice (e.g., stop smoking, reduce unprotected sexual intercourse, prevent human papillomavirus infection), even when it is not the primary reason for the encounter.	*Patient-centred Approach* *Communication*	*Treatment*
2	In all patients, provide the indicated evidence-based screening (according to age group, risk factors, etc.) to detect cancer at an early stage (e.g., with Pap tests, mammography, colonoscopy, digital rectal examinations, prostate-specific antigen testing).	*Clinical Reasoning Selectivity*	*Diagnosis*
3	In patients diagnosed with cancer, offer ongoing follow-up and support and remain involved in the treatment plan, in collaboration with the specialist cancer treatment system. (Don't lose track of your patient during cancer care.)	*Patient-centred Approach* *Professionalism*	*Follow-up* *Treatment*
4	In a patient diagnosed with cancer, actively inquire, with compassion and empathy, about the personal and social consequences of the illness (e.g., family issues, loss of job), and the patient's ability to cope with these consequences.	*Patient-centred Approach* *Communication*	*History*
5	In a patient treated for cancer, actively inquire about side effects or expected complications of treatment (e.g., diarrhea, feet paresthesias), as the patient may not volunteer this information.	*Clinical Reasoning*	*History* *Follow-up*
6	In patients with a distant history of cancer who present with new symptoms (e.g., shortness of breath, neurologic symptoms), include recurrence or metastatic disease in the differential diagnosis.	*Clinical Reasoning*	*Hypothesis generation*
7	In a patient diagnosed with cancer, be realistic and honest when discussing prognosis. (Say when you don't know.)	*Communication* *Professionalism*	*Treatment* *Follow-up*

Note: For pain control, see the key features on chronic disease and palliative care. See also the key feature on depression.

Chest Pain

	Key Feature	*Skill*	*Phase*
1	Given a patient with undefined chest pain, take an adequate history to make a specific diagnosis (e.g., determine risk factors, whether the pain is pleuritic or sharp, pressure, etc.).	*Clinical Reasoning*	*History*
2	Given a clinical scenario suggestive of life-threatening conditions (e.g., pulmonary embolism, tamponade, dissection, pneumothorax), begin timely treatment (before the diagnosis is confirmed, while doing an appropriate work-up).	*Selectivity*	*Diagnosis* *Treatment*
3	In a patient with unexplained chest pain, rule out ischemic heart disease.*	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Investigation*
4	Given an appropriate history of chest pain suggestive of herpes zoster infection, hiatal hernia, reflux, esophageal spasm, infections, or peptic ulcer disease: a) Propose the diagnosis.	*Clinical Reasoning*	*Diagnosis*
	b) Do an appropriate work-up/follow-up to confirm the suspected diagnosis.	*Clinical Reasoning*	*Investigation*
5	Given a suspected diagnosis of pulmonary embolism: a) Do not rule out the diagnosis solely on the basis of a test with low sensitivity and specificity.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	b) Begin appropriate treatment immediately.	*Selectivity*	*Treatment*

Chronic Disease

	Key Feature	*Skill*	*Phase*
1	In a patient with a diagnosed chronic disease who presents with acute symptoms, diagnose: • acute complications of the chornic disease (e.g., diabetic ketoacidosis). • acute exacerbations of the disease (e.g., asthma exacerbation, acute arthritis). • a new, unrelated condition.	*Clinical Reasoning*	*Diagnosis*
2	Regularly reassess adherence (compliance) to the treatment plan (including medications).	*Clinical Reasoning*	*History* *Follow-up*
3	In patients with chronic disease: a) Actively inquire about pain.	*Clinical Reasoning*	*History*
	b) Treat appropriately by: • titrating medication to the patient's pain. • taking into account other treatments and conditions (e.g., watching for interactions). • considering non-pharmacologic treatment and adjuvant therapies.	*Clinical Reasoning*	*Treatment* *Hypothesis generation*
4	In patients with chronic disease, actively inquire about: • the psychological impact of diagnosis and treatment. • functional impairment. • underlying depression or risk of suicide. • underlying substance abuse.	*Patient-centred Approach* *Clinical Reasoning*	*History*
5	Given a non-compliant patient, explore the reasons why, with a view to improving future adherence to the treatment plan.	*Patient-centred Approach*	*History*

Chronic Obstructive Pulmonary Disease

	Key Feature	*Skill*	*Phase*
1	In all patients presenting with symptoms of prolonged or recurrent cough, dyspnea, or decreased exercise tolerance, especially those who also have a significant smoking history, suspect the diagnosis of chronic obstructive pulmonary disease (COPD).	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
2	When the diagnosis of COPD is suspected, seek confirmation with pulmonary function studies (e.g., FEV1).	*Clinical Reasoning*	*Investigation*
3	In patients with COPD, use pulmonary function tests periodically to document disease progression.	*Clinical Reasoning*	*Investigation* *Follow-up*
4	Encourage smoking cessation in all patients diagnosed with COPD.*	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
5	Offer appropriate vaccinations to patients diagnosed with COPD (e.g., influenza/pneumococcal vaccination).	*Clinical Reasoning*	*Treatment*
6	In an apparently stable patient with COPD, offer appropriate inhaled medication for treatment (e.g., anticholinergics/bronchodilators if condition is reversible, steroid trial).	*Clinical Reasoning*	*Treatment*
7	Refer appropriate patients with COPD to other health professionals (e.g., a respiratory technician or pulmonary rehabilitation personnel) to enhance quality of life.	*Clinical Reasoning*	*Referral*
8	When treating patients with acute exacerbations of COPD, rule out co-morbidities (e.g., myocardial infarction, congestive heart failure, systemic infections, anemia).	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
9	In patients with end-stage COPD, especially those who are currently stable, discuss, document, and periodically re-evaluate wishes about aggressive treatment interventions.	*Patient-centred Approach* *Clinical Reasoning*	*Treatment* *Follow-up*

See also: Smoking Cessation

Chronic Pain

	Key Feature	*Skill*	*Phase*
1	In a patient with chronic pain:		
	a) Establish the etiology	*Clinical reasoning* *Selectivity*	*Diagnosis*
	b) Reassess and periodically review the etiology (e.g., previously undisclosed abuse, evolution of the underlying cause)	*Clinical reasoning* *Selectivity*	*Diagnosis* *Follow-up*
	c) Periodically look for potential comorbidities or complications, particularly mental illness and addictions	*Clinical reasoning*	*Hypothesis* *Follow-up*
2	In a patient with chronic pain who complains of significantly increased pain, search for an alternative etiology (e.g., malignancy, addiction, diversion) as you cannot assume that the original cause of the pain is the reason for the exacerbation.	*Clinical reasoning*	*Hypothesis* *Diagnosis*
3	In a patient in whom you did not make the initial diagnosis of chronic pain:		
	a) Establish an effective relationship	*Clinical reasoning*	*Treatment*
	b) Verify the diagnosis	*Clinical reasoning*	*Diagnosis*
	c) Clarify goals of treatment and plans for management	*Patient-centred Approach*	*Treatment*
4	In managing a patient with chronic pain:		
	a) Use shared decision-making	*Clinical reasoning* *Patient-centered approach*	*Treatment*
	b) Engage other professionals in this care when appropriate	*Clinical reasoning* *Professionalism*	*Treatment* *Referral*
5	In a patient with chronic pain:		
	a) Comprehensively document the assessment, plan, goals, and prescription details	*Communication*	*Follow-up*
	b) Make the treatment plan appropriately accessible (e.g., to the patient, team members, emergency department, on-call doctors, pharmacy)	*Communication* *Professionalism*	*Follow-up*
6	When prescribing medications with abuse potential in a patient with chronic pain where you have no established relationship or insufficient records, be prudent in your prescribing (e.g., limit doses, document reasons, check for double doctoring). Do not simply provide or refuse to prescribe.	*Professionalism* *Selectivity*	*Diagnosis* *Treatment*
7	Use a written treatment contract with realistic consequences (e.g., limiting prescribed quantities/carries) when prescribing medications with abuse potential to a patient with chronic pain.	*Communication* *Professionalism*	*Treatment* *Follow-up*
8	When a patient with chronic pain has breached a contract:		
	a) Manage your own emotions	*Professionalism*	*Treatment*
	b) Address the possible impact on your staff and team	*Professionalism*	*Treatment*
	c) Apply or judiciously amend the contract (e.g., not putting a patient into immediate withdrawal)	*Clinical reasoning* *Professionalism*	*Treatment*
9	In a patient with chronic pain and addiction who presents with a destabilization of behaviour, carefully identify the etiology and contributing factors to adapt your management plan.	*Clinical reasoning* *Patient-centred Approach*	*Hypothesis* *Treatment*

Contraception

	Key Feature	*Skill*	*Phase*
1	With all patients, especially adolescents, young men, postpartum women, and perimenopausal women, advise about adequate contraception when opportunities arise.	*Patient-centred Approach* *Communication*	*Treatment*
2	In patients using specific contraceptives, advise of specific factors that may reduce efficacy (e.g., delayed initiation of method, illness, medications, specific lubricants).	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
3	In aiding decision-making to ensure adequate contraception: a) Look for and identify risks (relative and absolute contraindications).	*Clinical Reasoning*	*History*
	b) Assess (look for) sexually transmitted disease exposure.	*Clinical Reasoning* *Patient-centred Approach*	*History*
	c) Identify barriers to specific methods (e.g., cost, cultural concerns).	*Patient-centred Approach* *Communication*	*History*
	d) Advise of efficacy and side effects, especially short-term side effects that may result in discontinuation.	*Clinical Reasoning*	*Treatment*
4	In patients using hormonal contraceptives, manage side effects appropriately (i.e., recommend an appropriate length of trial, discuss estrogens in medroxyprogesterone acetate [Depo–Provera]).	*Clinical Reasoning*	*Treatment*
5	In all patients, especially those using barrier methods or when efficacy of hormonal methods is decreased, advise about post-coital contraception.	*Clinical Reasoning*	*Treatment*
6	In a patient who has had unprotected sex or a failure of the chosen contraceptive method, inform about time limits in post-coital contraception (emergency contraceptive pill, intrauterine device).	*Clinical Reasoning*	*Treatment*

Cough

	Key Feature	*Skill*	*Phase*
1	In patients presenting with an acute cough: a) Include serious causes (e.g., pneumothorax, pulmonary embolism [PE]) in the differential diagnosis.	*Clinical Reasoning Selectivity*	*Hypothesis generation*
	b) Diagnose a viral infection clinically, principally by taking an appropriate history.	*Clinical Reasoning*	*Diagnosis*
	c) Do not treat viral infections with antibiotics. (Consider antiviral therapy if appropriate.)	*Clinical Reasoning*	*Treatment*
2	In pediatric patients with a persistent (or recurrent) cough, generate a broad differential diagnosis (e.g., gastroesophageal reflux disease [GERD], asthma, rhinitis, presence of a foreign body, pertussis).	*Clinical Reasoning*	*Hypothesis generation*
3	In patients with a persistent (e.g., for weeks) cough: a) Consider non-pulmonary causes (e.g., GERD, congestive heart failure, rhinitis), as well as other serious causes (e.g., cancer, PE) in the differential diagnosis. (Do not assume that the child has viral bronchitis).	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Diagnosis*
	b) Investigate appropriately.	*Clinical Reasoning*	*Investigation*
4	Do not ascribe a persistent cough to an adverse drug effect (e.g., from an angiotensin-converting enzyme inhibitor) without first considering other causes.	*Clinical Reasoning*	*Diagnosis*
5	In smokers with persistent cough, assess for chronic bronchitis (chronic obstructive pulmonary disease) and make a positive diagnosis when it is present. (Do not just diagnose a smoker's cough.)	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*

Counselling

	Key Feature	*Skill*	*Phase*
1	When counselling a patient:		
	a) Set clear therapeutic goals with the patient	*Clinical reasoning* *Patient-centred Approach*	*Treatment*
	b) Allow adequate time	*Patient-centred Approach* *Professionalism*	*Treatment*
	c) Evaluate your own skills (e.g., Does the problem exceed the limits of your abilities? Are you the right person and is this the right time to unpack the patient's concerns?)	*Professionalism*	*Treatment*
	d) Recognize when you are approaching or exceeding boundaries (e.g., transference, counter-transference)	*Professionalism*	*Treatment*
	e) Recognize when your beliefs or biases may interfere with counselling	*Professionalism*	*Treatment*
	f) Remain aware of the risks of offering advice versus providing options	*Professionalism*	*Treatment*
	g) Pay close attention to the quality of the therapeutic relationship and alliance	*Patient-centred Approach* *Communication*	*Treatment* *Follow-up*
2	For a patient who is considering or requesting referral for counselling/psychotherapy, clarify concerns and provide realistic information about the process and available resources (e.g., expectations, timing, frequency, costs, duration, homework, starting/ending the relationship if ineffective).	*Clinical reasoning* *Patient-centred Approach*	*Treatment* *Referral*

See also: Crisis

Crisis

	Key Feature	*Skill*	*Phase*
1	When a patient presents with acute emotional distress: a) Take the necessary time to assist the patient, even if they present unexpectedly	*Selectivity*	*Hypothesis generation*
	b) Acknowledge their feelings and help them de-escalate	*Communication* *Patient-centred Approach*	*History* *Treatment*
	c) Employ the therapeutic effect of conversation	*Clinical reasoning* *Communication*	*Treatment*
2	As part of your management of a patient facing a crisis: a) Identify your patient's personal resources for support (e.g., family, internal strength, friends) as part of your management of a patient facing a crisis.	*Clinical reasoning* *Patient-centred Approach*	*History* *Treatment*
	b) Offer appropriate community resources (e.g., counsellor) as part of your ongoing management of a patient with a crisis	*Selectivity* *Patient-centred Approach*	*Treatment* *Referral*
	c) Negotiate a follow-up plan with the patient	*Communication* *Patient-centred Approach*	*Treatment* *Follow-up*
	d) Be careful not to cross boundaries when treating a patient in crisis (e.g., lending money, providing appointments outside regular hours)	*Professionalism*	*Treatment* *Hypothesis*
3	When a patient presents with emotional distress or declares themselves in crisis: a) Carefully assess the risk of harm to themselves or others	*Clinical reasoning*	*Diagnosis* *History*
	b) Ask your patient if there are others needing help associated with the crisis	*Clinical reasoning* *Patient-centred Approach*	*Treatment* *Follow-up*
	c) Act accordingly	*Clinical reasoning* *Selectivity*	*Diagnosis* *Treatment*
4	Use psychoactive medication rationally to assist patients in crisis.	*Clinical Reasoning* *Selectivity*	*Diagnosis* *Treatment*
5	Inquire about unhealthy coping methods (e.g., drugs, alcohol, eating, gambling, violence, sloth, promiscuity) in your patients facing crisis.	*Clinical Reasoning* *Professionalism*	*History*
6	Prepare your practice environment for possible crises or disasters and include colleagues and staff in the planning for both medical and non-medical crises.	*Professionalism*	*Hypothesis generation* *Treatment*

7	When dealing with an unanticipated medical crisis (e.g., seizure, shoulder dystocia):		
	a) Be calm and methodical	*Professionalism* *Clinical reasoning*	*History* *Treatment*
	b) Assess the environment for needed and available resources (people, material)	*Selectivity*	*Treatment*
	c) Ask for the help you need	*Professionalism* *Communication*	*Treatment* *Referral*
	d) Take timely action as appropriate in the context of the situation (e.g., resuscitation in the waiting room of the clinic versus in the emergency department)	*Clinical reasoning* *Selectivity*	*Treatment*
8	In all patients, to identify possible previous crises and avoid re-traumatization during medical encounters:		
	a) Be attentive to triggers for re-traumatization	*Clinical reasoning* *Patient-centred Approach*	*Hypothesis generation* *Diagnosis*
	b) Recognize different manifestations of emotional distress	*Clinical reasoning* *Patient-centred Approach*	*Diagnosis*
	c) Address as appropriate	*Clinical reasoning* *Patient-centred Approach*	*Diagnosis* *Treatment*

Croup

	Key Feature	*Skill*	*Phase*
1	In patients with croup, a) Identify the need for respiratory assistance (e.g., assess ABCs, fatigue, somnolence, paradoxical breathing, in drawing)	*Selectivity* *Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	b) Provide that assistance when indicated.	*Clinical Reasoning Selectivity*	*Treatment*
2	Before attributing stridor to croup, consider other possible causes (e.g., anaphylaxis, foreign body (airway or esophagus), retropharyngeal abcess, epiglottitis).	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Diagnosis*
3	In any patient presenting with respiratory symptoms, look specifically for the signs and symptoms that differentiate upper from lower respiratory disease (e.g., stridor vs. wheeze vs. whoop).	*Clinical Reasoning*	*History* *Physical*
4	In a child presenting with a clear history and physical examination compatible with mild to moderate croup, make the clinical diagnosis without further testing (e.g., do not routinely X-ray).	*Clinical Reasoning Selectivity*	*Diagnosis* *Investigation*
5	In patients with a diagnosis of croup, use steroids (do not under treat mild-to-moderate cases of croup).	*Clinical Reasoning*	*Treatment*
6	In a patient presenting with croup, address parental concerns (e.g., not minimizing the symptoms and their impact on the parents), acknowledging fluctuating course of the disease, providing a plan anticipating recurrence of the symptoms.	*Clinical Reasoning* *Communication*	*Treatment* *Follow-up*

Deep Venous Thrombosis

	Key Feature	*Skill*	*Phase*
1	In patients complaining of leg pain and/or swelling, evaluate the likelihood of deep venous thrombosis (DVT) as investigation and treatment should differ according to the risk.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Diagnosis*
2	In patients with high probability for thrombotic disease (e.g., extensive leg clot, suspected pulmonary embolism) start anticoagulant therapy if tests will be delayed.	*Clinical Reasoning Selectivity*	*Treatment*
3	Identify patients likely to benefit from DVT prophylaxis.	*Selectivity* *Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
4	Utilize investigations for DVT allowing for their limitations (e.g., Ultrasound and D-dimer).	*Clinical Reasoning Selectivity*	*Investigation* *Diagnosis*
5	In patients with established DVT use oral anticoagulation appropriately, (e.g., start promptly, watch for drug interactions, monitor lab values and adjust dose when appropriate, stop warfarin when appropriate, provide patient teaching).	*Clinical Reasoning*	*Treatment* *Follow-up*
6	Consider the possibility of an underlying coagulopathy in patients with DVT, especially when unexpected.	*Clinical Reasoning*	*Hypothesis generation*
7	Use compression stockings in appropriate patients, to prevent and treat post-phlebitic syndrome.	*Clinical Reasoning*	*Treatment*

Dehydration

	Key Feature	*Skill*	*Phase*
1	When assessing the acutely ill patient, look for signs and symptoms of dehydration. (e.g., look for dehydration in the patient with a debilitating pneumonia).	*Clinical Reasoning*	*Hypothesis generation*
2	In the dehydrated patient, assess the degree of dehydration using reliable indicators (e.g., vital signs) as some patients' hydration status may be more difficult to assess (e.g., elderly, very young, pregnant).	*Clinical Reasoning*	*Physical Investigation*
3	In a dehydrated patient, a) Determine the appropriate volume of fluid for replacement of deficiency and ongoing needs,	*Clinical Reasoning*	*Treatment* *Diagnosis*
	b) Use the appropriate route (oral if the patient is able; IV when necessary).	*Clinical Reasoning*	*Treatment*
4	When treating severe dehydration, use objective measures (e.g., lab values) to direct ongoing management.	*Clinical Reasoning*	*Investigation* *Treatment*
5	In a dehydrated patient, a) Identify the precipitating illness or cause, especially looking for non-gastro-intestinal, including drug-related, causes,	*Clinical Reasoning*	*Hypothesis generation*
	b) Treat the precipitating illness concurrently.	*Clinical Reasoning*	*Treatment*
6	Treat the dehydrated pregnant patient aggressively, as there are additional risks of dehydration in pregnancy.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Treatment*

Dementia

	Key Feature	*Skill*	*Phase*
1	In patients with early, non-specific signs of cognitive impairment: a) Suspect dementia as a diagnosis.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	b) Use validated tests of cognitive function and careful functional inquiry, as well as a careful history (including collateral history from family and caregivers if available) and physical examination, to make an early positive diagnosis.	*Clinical Reasoning*	*Diagnosis*
2	In patients with obvious cognitive impairment, a) Select proper laboratory investigations and neuroimaging techniques to complement the history and physical findings and to distinguish between dementia, delirium, and depression	*Clinical reasoning*	*Investigation*
	b) Consider possible contributing causes, including mental health, alcohol or substance use problems, or delirium	*Clinical reasoning*	*Hypothesis generation*
3	In patients with dementia, distinguish Alzheimer's disease from other dementias, as treatment and prognosis differ.	*Clinical Reasoning*	*Diagnosis*
4	In patients with dementia who exhibit worsening function, look for other diagnoses (i.e., don't assume the dementia is worsening). These diagnoses may include depression, infection, concurrent medical illness, substance use, etc.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
5	When disclosing the diagnosis of dementia, a) Do so compassionately	*Patient-centred Approach* *Communication*	*Diagnosis* *Treatment*
	b) Respect the patient's right to autonomy, confidentiality, and safety	*Professionalism*	*Treatment*
6	In patients with dementia, assess competency to involve them in decision making, as appropriate to the situation	*Clinical Reasoning*	*Diagnosis* *Treatment*
7	In following patients diagnosed with dementia: a) Assess function and cognitive impairment on an ongoing basis.	*Clinical Reasoning*	*Follow-up* *Physical*
	b) Assist with and plan for appropriate interventions (e.g., deal with medication issues, behavioural disturbance management, safety issues, caregiver issues, comprehensive care plans, advanced care planning, driving safety, placement) in the context of disease progression	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
	c) Manage comorbidities, including mental health problems based on the goals of care	*Patient-centred Approach* *Clinical reasoning*	*Treatment*
	d) Review pharmacotherapy (e.g. side effects, drug interaction, polypharmacy)	*Selectivity*	*Treatment*
8	Assess the needs of and supports for caregivers of patients with dementia.	*Patient-centred Approach*	*History*

9	Report patients with dementia to the appropriate authorities if you suspect they should not be driving.	*Professionalism* *Clinical Reasoning*	*Treatment*
10	In patients with early-onset dementia, consider genetic testing	*Clinical Reasoning* *Patient-centred Approach*	*Hypothesis generation* *History*

Depression

	Key Feature	*Skill*	*Phase*
1	In a patient with a diagnosis of depression: a) Assess the patient for the risk of suicide	*Clinical reasoning* *Communication*	*History* *Diagnosis*
	b) Decide on appropriate management (i.e., hospitalization or close follow-up, which will depend, for example, on severity of symptoms, psychotic features, and suicide risk)	*Clinical Reasoning*	*Treatment*
2	Identify patients who may be at a higher risk for depression (e.g., certain socio-economic groups, those who suffer from substance abuse, postpartum women, people with chronic pain) and assess appropriately.	*Clinical reasoning*	*History*
3	In patients who have medically unexplained symptoms consider and assess for depression.	*Clinical reasoning* *Patient-centred Approach*	*Hypothesis generation* *History*
4	After a diagnosis of depression is made look for and diagnose other comorbid psychiatric conditions (e.g., anxiety, bipolar disorder, personality disorder).	*Clinical reasoning*	*Hypothesis generation* *Diagnosis*
5	In a patient diagnosed with depression: a) Manage appropriately (e.g., medications, psychotherapy, supported self-management)	*Clinical reasoning* *Patient-centred Approach*	*Treatment*
	b) Monitor their response to therapy and modify appropriately (e.g., augmentation, dose changes, medication changes)	*Clinical reasoning*	*Treatment* *Follow-up*
	c) Reassess the patient's safety	*Clinical reasoning*	*Follow-up*
	d) Set goals, including a return-to-work plan	*Patient-centred Approach*	*Treatment*
	e) Refer as necessary (including community resources)	*Clinical reasoning* *Patient-centred Approach*	*Referral*
6	In a patient presenting with symptoms consistent with depression consider and rule out serious organic pathology using a targeted history, physical examination, and investigations (especially in elderly or difficult patients).	*Clinical reasoning*	*Hypothesis generation* *History*
7	In patients presenting with depression inquire about abuse: • Sexual, physical, and emotional abuse (past and current, witnessed or inflicted) • Addictions (e.g., substance use/abuse, gambling)	*Clinical reasoning* *Selectivity*	*History*
8	In a patient with symptoms of depression differentiate major depression from adjustment disorder, dysthymia, and a grief reaction.	*Clinical reasoning*	*History* *Diagnosis*
9	Following failure of an appropriate treatment in a patient with depression consider other diagnoses (e.g., bipolar disorder, schizoaffective disorder, organic disease).	*Clinical reasoning*	*Hypothesis generation*
10	In very young and elderly patients presenting with changes in	*Clinical reasoning*	*Hypothesis generation*

	behaviour consider the diagnosis of depression (as they may not present with classic features).		
11	When treating a patient with antidepressants use them in a selective and careful manner, adapted to the presentation and the needs of the individual patient, by: • Selecting the most appropriate antidepressant and dose for the patient based on patient factors and on pharmacological factors (e.g., possible drug interactions) • Monitoring medication effectiveness, including adherence and the patient's possible self-medication using other substances (e.g., herbal and naturopathic remedies, alcohol, cannabis) • Considering augmentation strategies when appropriate • Monitoring side effects carefully when initiating treatment, especially in young and elderly patients • Discontinuing medication gradually, monitoring for relapse, recognizing risk, and following response	*Clinical reasoning* *Selectivity*	*History* *Treatment*
12	When developing a return-to-work plan for a patient who is being treated for depression: a) Assess the impact of residual symptoms on work hardiness, performance, and safety	*Patient-centred Approach* *Selectivity*	*Treatment*
	b)Communicate with the patient and the workplace to ensure the plan is realistic and provides clear guidance	*Patient-centred Approach* *Communication*	*Treatment*

Diabetes

	Key Feature	*Skill*	*Phase*
1	Given a symptomatic or asymptomatic patient at high risk for diabetes (e.g., patients with gestational diabetes, obese, certain ethnic groups, and those with a strong family history), screen at appropriate intervals with the right tests to confirm the diagnosis.	*Clinical Reasoning Selectivity*	*Investigation* *Hypothesis generation*
2	Given a patient diagnosed with diabetes, either new-onset or established, treat and modify treatment according to disease status (e.g., use oral hypoglycemic agents, insulin, diet, and/or lifestyle changes).	*Clinical Reasoning*	*Treatment* *Follow-up*
3	Given a patient with established diabetes, advise about signs and treatment of hypoglycemia/hyperglycemia during an acute illness or stress (i.e., gastroenteritis, physiologic stress, decreased intake.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
4	In a patient with poorly controlled diabetes, use effective educational techniques to advise about the importance of optimal glycemic control through compliance, lifestyle modification, and appropriate follow-up and treatment.	*Communication Patient-centred Approach*	*Treatment*
5	In patients with established diabetes: a) Look for complications (e.g., proteinuria). b) Refer them as necessary to deal with these complications	*Clinical Reasoning* *Clinical Reasoning*	*Hypothesis generation* *Diagnosis* *Treatment* *Follow-up*
6	In the acutely ill diabetic patient, diagnose the underlying cause of the illness and investigate for diabetic ketoacidosis and hyperglycemia.	*Clinical Reasoning Selectivity*	*Diagnosis* *Treatment*
7	Given a patient with diabetic ketoacidosis, manage the problem appropriately and advise about preventing future episodes.	*Clinical Reasoning Selectivity*	*Treatment* *Follow-up*

Diarrhea

	Key Feature	*Skill*	*Phase*
1	In all patients with diarrhea, a) Determine hydration status,	*Clinical Reasoning*	*Diagnosis*
	b) Treat dehydration appropriately.	*Clinical Reasoning*	*Treatment*
2	In patients with acute diarrhea, use history to establish the possible etiology (e.g., infectious contacts, travel, recent antibiotic or other medication use, common eating place for multiple ill patients).	*Clinical Reasoning*	*Hypothesis generation* *History*
3	In patients with acute diarrhea who have had recent hospitalization or recent antibiotic use, look for clostridium difficile.	*Clinical Reasoning*	*Hypothesis generation*
4	In patients with acute diarrhea, counsel about the timing of return to work/school (re: the likelihood of infectivity).	*Clinical Reasoning*	*Treatment*
5	Pursue investigation, in a timely manner, of elderly with unexplained diarrhea, as they are more likely to have pathology.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Investigation*
6	In a young person with chronic or recurrent diarrhea, with no red flag symptoms or signs, use established clinical criteria to make a positive diagnosis of irritable bowel syndrome (do not overinvestigate).	*Clinical Reasoning Selectivity*	*Diagnosis*
7	In patients with chronic or recurrent diarrhea, look for both gastro-intestinal and non-gastro-intestinal symptoms and signs suggestive of specific diseases (e.g., inflammatory bowel disease, malabsorption syndromes, and compromised immune system).	*Clinical Reasoning*	*History* *Physical*

Difficult Patient

	Key Feature	*Skill*	*Phase*
1	When physician-patient interaction is deemed difficult, diagnose personality disorder when it is present in patients.	*Clinical Reasoning*	*Diagnosis*
2	When confronted with difficult patient interactions, seek out and update, when necessary, information about the patient's life circumstances, current context, and functional status.	*Patient-centred Approach*	*History* *Diagnosis*
3	In a patient with chronic illness, expect difficult interactions from time to time. Be especially compassionate and sensitive at those times.	*Patient-centred Approach* *Professionalism*	*Treatment* *Follow-up*
4	With difficult patients remain vigilant for new symptoms and physical findings to be sure they receive adequate attention (e.g., psychiatric patients, patients with chronic pain).	*Selectivity*	*Hypothesis generation* *Diagnosis*
5	When confronted with difficult patient interactions, identify your own attitudes and your contribution to the situation.	*Professionalism*	*Treatment* *Diagnosis*
6	When dealing with difficult patients, set clear boundaries.	*Professionalism*	*Treatment*
7	Take steps to end the physician-patient relationship when it is in the patient's best interests.	*Professionalism Patient-centred Approach*	*Treatment*
8	With a difficult patient, safely establish common ground to determine the patient's needs (eg. threatening or demanding patients).	*Patient-centred Approach* *Professionalism*	*Treatment*

Disability

	Key Feature	*Skill*	*Phase*
1	Determine whether a specific decline in functioning (e.g., social, physical, emotional) is a disability for that specific patient.	*Patient-centred Approach* *Clinical Reasoning*	*Diagnosis*
2	Screen elderly patients for disability risks (e.g., falls, cognitive impairment, immobilization, decreased vision) on an ongoing basis.	*Clinical Reasoning*	*History* *Hypothesis generation*
3	In patients with chronic physical problems (e.g., arthritis, multiple sclerosis) or mental problems (e.g., depression), assess for and diagnose disability when it is present.	*Clinical Reasoning* *Patient-centred Approach*	*Diagnosis* *Hypothesis generation*
4	In a disabled patient, assess all spheres of function (emotional, physical, and social, the last of which includes finances, employment, and family).	*Patient-centred Approach*	*History*
5	For disabled patients, offer a multi-faceted approach (e.g., orthotics, lifestyle modification, time off work, community support) to minimize the impact of the disability and prevent further functional deterioration.	*Patient-centred Approach* *Professionalism*	*Treatment*
6	In patients at risk for disability (e.g., those who do manual labour, the elderly, those with mental illness), recommend primary prevention strategies (e.g., exercises, braces, counselling, work modification).	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
7	Do not limit treatment of disabling conditions to a short-term disability leave (i.e., time off is only part of the plan).	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*

Dizziness

	Key Feature	*Skill*	*Phase*
1	In patients complaining of dizziness, rule out serious cardiovascular, cerebrovascular, and other neurologic disease (e.g., arrhythmia, myocardial infarction [MI], stroke, multiple sclerosis).	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
2	In patients complaining of dizziness, take a careful history to distinguish vertigo, presyncope, and syncope.	*Clinical Reasoning*	*History*
3	In patients complaining of dizziness, measure postural vital signs.	*Clinical Reasoning* *Procedures Skills*	*Physical*
4	Examine patients with dizziness closely for neurologic signs.	*Clinical Reasoning* *Procedures Skills*	*Physical* *Hypothesis generation*
5	In hypotensive dizzy patients, exclude serious conditions (e.g., MI, abdominal aortic aneurysm, sepsis, gastrointestinal bleeding) as the cause.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
6	In patients with chronic dizziness, who present with a change in baseline symptoms, reassess to rule out serious causes.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
7	In a dizzy patient, review medications (including prescription and over-the-counter medications) for possible reversible causes of the dizziness.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
8	Investigate further those patients complaining of dizziness who have: • signs or symptoms of central vertigo. • a history of trauma. • signs, symptoms, or other reasons (e.g., anticoagulation) to suspect a possible serious underlying cause.	*Selectivity*	*Investigation*

Domestic Violence

	Key Feature	*Skill*	*Phase*
1	In a patient with new, obvious risks for domestic violence, take advantage of opportunities in pertinent encounters to screen for domestic violence (e.g., periodic annual exam, visits for anxiety/depression, ER visits).	*Patient-centred Approach* *Clinical Reasoning*	*History*
2	In a patient in a suspected or confirmed situation of domestic violence: a) Assess the level of risk and the safety of children (i.e., the need for youth protection).	*Selectivity* *Clinical Reasoning*	*History*
	b) Advise about the escalating nature of domestic violence.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
3	In a situation of suspected or confirmed domestic violence, develop, in collaboration with the patient, an appropriate emergency plan to ensure the safety of the patient and other household members.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
4	In a patient living with domestic violence, counsel about the cycle of domestic violence and feelings associated with it (e.g., helplessness, guilt), and its impact on children.	*Patient-centred Approach* *Communication*	*Treatment*

Dyspepsia

	Key Feature	*Skill*	*Phase*
1	In a patient presenting with dyspepsia, include cardiovascular disease in the differential diagnosis.	*Clinical Reasoning*	*Hypothesis generation*
2	Attempt to differentiate, by history and physical examination, between conditions presenting with dyspepsia (e.g., gastroesophageal reflux disease, gastritis, ulcer, cancer), as plans for investigation and management may be very different.	*Clinical Reasoning*	*History* *Physical*
3	In a patient presenting with dyspepsia, ask about and examine the patient for worrisome signs/symptoms (e.g., gastrointestinal bleeding, weight loss, dysphagia).	*Clinical Reasoning*	*History* *Physical*

Dysuria

	Key Feature	*Skill*	*Phase*
1	In a patient presenting with dysuria, use history and dipstick urinalysis to determine if the patient has an uncomplicated urinary tract infection.	*Clinical Reasoning Selectivity*	*Diagnosis*
2	When a diagnosis of uncomplicated urinary tract infection is made, treat promptly without waiting for a culture result.	*Clinical Reasoning Selectivity*	*Treatment*
3	Consider non-urinary tract infection related etiologies of dysuria (e.g., prostatitis, vaginitis, sexually transmitted disease, chemical irritation) and look for them when appropriate.	*Clinical Reasoning*	*Hypothesis generation*
4	When assessing patients with dysuria, identify those at higher risk of complicated urinary tract infection (e.g., pregnancy, children, diabetes, urolithiasis).	*Clinical Reasoning Selectivity*	*Hypothesis generation*
5	In patients with recurrent dysuria, look for a specific underlying cause (e.g., post-coital urinary tract infection, atrophic vaginitis, retention).	*Clinical Reasoning*	*Hypothesis generation*

Earache

	Key Feature	*Skill*	*Phase*
1	Make the diagnosis of otitis media (OM) only after good visualization of the eardrum (i.e., wax must be removed), and when sufficient changes are present in the eardrum, such as bulging or distorted light reflex (i.e., not all red eardrums indicate OM).	*Clinical Reasoning* *Procedures Skills*	*Diagnosis* *Physical*
2	Include pain referred from other sources in the differential diagnosis of an earache (eg. Tooth abscess, trigeminal Neuralgia, TMJ dysfunction, pharyngitis, etc.).	*Clinical Reasoning*	*Hypothesis generation*
3	Consider serious causes in the differential diagnosis of an earache (eg. tumors, temporal arteritis, mastoiditis).	*Clinical Reasoning*	*Hypothesis generation*
4	In the treatment of otitis media, explore the possibility of not giving antibiotics, thereby limiting their use (e.g., through proper patient selection and patient education because most otitis Media is of viral origin), and by ensuring good follow-up (e.g., reassessment in 48 hours).	*Selectivity* *Communication*	*Treatment*
5	Make rational drug choices when selecting antibiotic therapy for the treatment of otitis media. (Use first-line agents unless given a specific indication not to.)	*Selectivity* *Professionalism*	*Treatment*
6	In patients with earache (especially those with otitis media), recommend appropriate pain control (oral analgesics).	*Clinical Reasoning*	*Treatment*
7	In a child with a fever and a red eardrum, look for other possible causes of the fever (i.e., do not assume that the red ear is causing the fever).*	*Clinical Reasoning*	*Hypothesis generation*
8	Test children with recurrent ear infections for hearing loss.	*Clinical Reasoning*	*Investigation*

See also: Fever

Eating Disorders

	Key Feature	*Skill*	*Phase*
1	During clinical encounters with children, adolescents, and young adults include an assessment of the risk of eating disorders, irrespective of the patient's gender, as this may be the only opportunity.	*Clinical reasoning* *Patient-centred Approach*	*History* *Hypothesis generation*
2	When caring for a patient with ongoing psychological distress or unexplained physical symptoms ask about body image and self-harm behaviours, including disordered eating.	*Clinical reasoning* *Patient-centred Approach*	*History* *Hypothesis generation*
3	In a patient for whom concerns about eating behaviours have been identified take an appropriate history, including: • Eating patterns, relationship with food, body image, distress • Underlying mental health, alcohol, and substance use problems, including previous psychological trauma • Use of prescribed and over-the-counter medications, tobacco, caffeine, laxatives, and supplements	*Clinical reasoning* *Patient-centred Approach*	*History*
4	In a patient with disordered eating behaviour(s): a) Assess for physiological and metabolic complications b) Determine if there is a need for hospitalization or immediate intervention	*Clinical reasoning* *Patient-centred Approach* *Clinical reasoning* *Patient-centred Approach*	*Physical* *Investigation* *Treatment*
5	When an eating disorder has been diagnosed: a) Discuss the impact and potential consequences, regardless of the patient's acceptance of the diagnosis	*Professionalism* *Patient-centred Approach*	*Treatment*
	b) Engage the parents/caregivers/partners in treatment when appropriate and with consent	*Professionalism* *Patient-centred Approach*	*Treatment*
	c) Collaborate with the patient and, when appropriate, family to develop a treatment plan, including an inter- and intra-professional referral when necessary	*Communication* *Patient-centred Approach*	*Treatment* *Referral*
	d) Use simple cognitive behavioural intervention first (i.e., do not automatically assume tertiary care is needed)	*Clinical reasoning* *Selectivity*	*Treatment*
	e) Periodically reassess behaviours and their impact on mood, anxiety, cognitive function, and relationships	*Clinical reasoning* *Patient-centred Approach*	*History* *Follow-up*
6	When assessing a patient presenting with a problem that has defied diagnosis (e.g., arrhythmias without cardiac disease, an electrolyte imbalance without drug use or renal impairment, amenorrhea without pregnancy) include "complication of an eating disorder" in the differential diagnosis.	*Clinical reasoning* *Patient-centred Approach*	*Hypothesis generation*

Elderly

	Key Feature	*Skill*	*Phase*
1	In the elderly patient taking multiple medications, avoid polypharmacy by: • monitoring side effects. • periodically reviewing medication (e.g., is the medication still indicated, is the dosage appropriate). • monitoring for interactions.	*Clinical Reasoning*	*Treatment* *Follow-up*
2	In the elderly patient, actively inquire about non-prescription medication use (e.g., herbal medicines, cough drops, over-the-counter drugs, vitamins).	*Clinical Reasoning*	*History*
3	In the elderly patient, screen for modifiable risk factors (e.g., visual disturbance, impaired hearing) to promote safety and prolong independence.	*Clinical Reasoning*	*History* *Hypothesis generation*
4	In the elderly patient, assess functional status to: • anticipate and discuss the eventual need for changes in the living environment. • ensure that social support is adequate.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment* *History*
5	In older patients with diseases prone to atypical presentation, do not exclude these diseases without a thorough assessment (e.g., pneumonia, appendicitis, depression).	*Selectivity* *Clinical Reasoning*	*Hypothesis generation* *Diagnosis*

Epistaxis

	Key Feature	*Skill*	*Phase*
1	Through history and/or physical examination, assess the hemodynamic stability of patients with epistaxis.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
2	While attending to active nose bleeds, recognize and manage excessive anxiety in the patient and accompanying family.	*Patient-centred Approach* *Clinical Reasoning*	*Treatment* *Diagnosis*
3	In a patient with an active or recent nosebleed, obtain a focused history to identify possible etiologies (e.g., recent trauma, recent upper respiratory infection, medications).	*Clinical Reasoning*	*History* *Hypothesis generation*
4	In a patient with an active or recent nosebleed, a) Look for and identify anterior bleeding sites,	*Clinical Reasoning*	*Physical*
	b) Stop the bleeding with appropriate methods.	*Clinical Reasoning* *Procedures Skills*	*Treatment*
5	In a patient with ongoing or recurrent bleeding in spite of treatment, consider a posterior bleeding site.	*Clinical Reasoning*	*Hypothesis generation*
6	In a patient with a nosebleed, obtain lab work only for specific indications (e.g., unstable patient, suspicion of a bleeding diathesis, use of anticoagulation)	*Clinical Reasoning Selectivity*	*Investigation* *Hypothesis generation*
7	In a patient with a nosebleed, provide thorough aftercare instructions (e.g., how to stop a subsequent nose bleed, when to return, humidification, etc.)	*Clinical Reasoning*	*Treatment* *Follow-up*

Family Issues

	Key Feature	*Skill*	*Phase*
1	Routinely ask about family issues to understand their impact on the patient's illness and the impact of the illness on the family.	*Patient-centred Approach*	*History*
2	Ask about family issues • periodically • at important life-cycle points (e.g., when children move out, after the birth of a baby) • when faced with problems not resolving in spite of appropriate therapeutic interventions (e.g. medication compliance, fibromyalgia, hypertension)	*Patient-centred Approach* *Clinical Reasoning*	*Hypothesis generation* *History*

Fatigue

	Key Feature	*Skill*	*Phase*
1	In all patients complaining of fatigue, include depression in the differential diagnosis.	*Clinical Reasoning*	*Hypothesis generation*
2	Ask about other constitutional symptoms as part of a systematic approach to rule out underlying medical causes in all patients complaining of fatigue.	*Clinical Reasoning*	*History*
3	Exclude adverse effects of medication as the cause in all patients complaining of fatigue.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
4	Avoid early, routine investigations in patients with fatigue unless specific indications for such investigations are present.	*Selectivity*	*Investigation*
5	Given patients with fatigue in whom other underlying disorders have been ruled out, assist them to place, in a therapeutic sense, the role of their life circumstances in their fatigue.	*Patient-centred Approach* *Communication*	*Treatment*
6	In patients whose fatigue has become chronic, manage supportively, while remaining vigilant for new diseases and illnesses.	*Patient-centred Approach* *Clinical Reasoning*	*Hypothesis generation* *Treatment*

Fever

	Key Feature	*Skill*	*Phase*
1	In febrile infants 0-3 months old: a) Recognize the risk of occult bacteremia.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	b) Investigate thoroughly (e.g., blood cultures, urine, lumbar puncture +/- chest X-ray).	*Clinical Reasoning*	*Investigation*
2	In a febrile patient with a viral infection, do NOT prescribe antibiotics.	*Clinical Reasoning*	*Treatment*
3	In a febrile patient requiring antibiotic therapy, prescribe the appropriate antibiotic(s) according to likely causative organism(s) and local resistance patterns.	*Clinical Reasoning*	*Treatment*
4	Investigate patients with fever of unknown origin appropriately (e.g., with blood cultures, echocardiography, bone scans).	*Clinical Reasoning*	*Investigation*
5	In febrile patients, consider life-threatening infectious causes (e.g., endocarditis, meningitis).	*Selectivity*	*Hypothesis generation* *Diagnosis*
6	Aggressively and immediately treat patients who have fever resulting from serious causes before confirming the diagnosis, whether these are infectious (e.g., febrile neutropenia, septic shock, meningitis) or non-infectious (e.g., heat stroke, drug reaction, malignant neuroleptic syndrome).	*Selectivity*	*Treatment*
7	In the febrile patient, consider causes of hyperthermia other than infection (e.g., heat stroke, drug reaction, malignant neuroleptic syndrome).	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
8	In an elderly patient, be aware that no good correlation exists between the presence or absence of fever and the presence or absence of serious pathology.	*Clinical Reasoning*	*Hypothesis generation*

Fractures

	Key Feature	*Skill*	*Phase*
1	In a patient with multiple injuries, stabilize the patient (e.g., airway, breathing, and circulation, and life-threatening injuries) before dealing with any fractures.	*Clinical Reasoning*	*Treatment*
2	When examining patients with a fracture, assess neurovascular status and examine the joint above and below the injury.	*Clinical Reasoning*	*Physical*
3	In patients with suspected fractures that are prone to have normal X-ray findings (e.g., scaphoid fractures in wrist injuries, elbow fracture, growth plate fracture in children, stress fractures), manage according to your clinical suspicion, even if X-ray	*Clinical Reasoning Selectivity*	*Treatment*
4	In assessing elderly patients with an acute change in mobility (i.e., those who can no longer walk) and equivocal X-ray findings (e.g., no obvious fracture), investigate appropriately (e.g., with bone scans, computed tomography) before excluding a fracture.	*Clinical Reasoning*	*Investigation*
5	Identify and manage limb injuries that require urgent immobilization and/or reduction in a timely manner.	*Selectivity*	*Treatment* *Diagnosis*
6	In assessing patients with suspected fractures, provide analgesia that is timely (i.e., before X-rays) and adequate (e.g., narcotic) analgesia.	*Clinical Reasoning*	*Treatment*
7	In patients presenting with a fracture, look for and diagnose high-risk complications (e.g., an open fracture, unstable cervical spine, compartment syndrome).	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
8	Use clinical decision rules (e.g., Ottawa ankle rules, C-spine rules, and knee rules) to guide the use of X-ray examinations.	*Clinical Reasoning Selectivity*	*Investigation*

Note: These key features do not include technical and or psychomotor skills such as casting, reduction of dislocations, etc. See Procedural Skills.

Gastro-intestinal Bleed

	Key Feature	*Skill*	*Phase*
1	In a patient with blood in the stools who is hemodynamically stable, use history to differentiate upper vs. lower gastro-intestinal (GI) bleed as the investigation differs.	*Clinical Reasoning*	*Diagnosis* *History*
2	In a patient with suspected blood in the stool, explore other possible causes (e.g., beet ingestion, iron, Pepto-Bismol) before doing extensive investigation.	*Clinical Reasoning*	*Hypothesis generation* *History*
3	Look for patients at higher risk for GI bleed (e.g., previous GI bleed, intensive care unit admission, nonsteroidal anti-inflammatory drugs, alcohol) so as to modify treatment to reduce risk of GI bleed (e.g cytoprotection).	*Clinical Reasoning*	*Hypothesis generation* *History*
4	In a patient with obvious GI bleeding, identify patients who may require timely treatment even though they are not yet in shock.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Diagnosis*
5	In a stable patient with lower GI bleeding, look for serious causes (e.g., malignancy, inflammatory bowel disease, ulcer, varices) even when there is an apparent obvious cause for the bleeding (e.g., do not attribute a rectal bleed to hemorrhoids or to oral anticoagulation).	*Clinical Reasoning Selectivity*	*Hypothesis generation*
6	In a patient with an upper GI bleed, a) Include variceal bleeding in your differential,	*Clinical Reasoning*	*Hypothesis generation*
	b) Use history and physical examination to assess the likelihood of a variceal bleed as its management differs.	*Clinical Reasoning*	*History* *Physical*

Gender Specific Issues

	Key Feature	*Skill*	*Phase*
1	In the assessment of clinical problems that might present differently in men and women, maintain an inclusive differential diagnosis that allows for these differences (e.g., women with coronary artery disease, depression in males).	*Clinical Reasoning*	*Hypothesis generation*
2	As part of caring for women with health concerns, assess the possible contribution of domestic violence.	*Clinical Reasoning*	*Hypothesis generation* *History*
3	When men and women present with stress-related health concerns, assess the possible contribution of role-balancing issues (e.g., work-life balance or between partners).	*Patient-centred Approach* *Clinical Reasoning*	*Hypothesis generation* *History*
4	Establish office policies and practices to ensure patient comfort and choice, especially with sensitive examinations (e.g., positioning for Pap, chaperones for genital/rectal exams).	*Professionalism*	*Physical*
5	Interpret and apply research evidence for your patients in light of gender bias present in clinical studies (e.g., ASA use in women).	*Clinical Reasoning* *Professionalism*	*Hypothesis generation*

Grief

	Key Feature	*Skill*	*Phase*
1	In patients who have experienced a loss prepare them for the types of reactions (e.g., emotional, physical, varying length) they may have.	*Clinical reasoning* *Patient-centred Approach*	*Treatment*
2	In all grieving patients, especially those with a prolonged or complex grief reaction:		
	a) Inquire about depression, suicidal ideation, self-medication, and alcohol and substance use	*Clinical reasoning*	*History* *Hypothesis generation*
	b) Consider the requirement for additional treatments or referral	*Clinical reasoning*	*Treatment*
3	Recognize that grief reactions may vary based on the individual's context and experiences; life cycle and developmental stages; and cultural and family contexts.	*Patient-centred Approach*	*Hypothesis generation*
4	In patients with presentations suggestive of grief reactions without obvious triggers look for triggers that may be unique to each patient (e.g., death of a pet, loss of a job, reactions to anniversary).	*Clinical reasoning* *Patient-centred Approach*	*History* *Hypothesis generation*
5	In patients with unexplained or unresponsive physical or mental health concerns; alcohol or substance use; or functional or behavioural change ask about loss and/or grief as possible contributing factors.	*Clinical reasoning*	*History* *Hypothesis generation*

Headache

	Key Feature	*Skill*	*Phase*
1	Given a patient with a new-onset headache, differentiate benign from serious pathology through history and physical examination.	*Selectivity*	*History* *Physical*
2	Given a patient with worrisome headache suggestive of serious pathology (e.g., meningitis, tumour, temporal arteritis, subarachnoid bleed): a) Do the appropriate work-up (e.g., biopsy, computed tomography [CT], lumbar puncture [LP], erythrocyte sedimentation rate).	*Selectivity* *Clinical Reasoning*	*Investigation*
	b) Make the diagnosis.	*Selectivity* *Clinical Reasoning*	*Diagnosis*
	c) Begin timely appropriate treatment (i.e., treat before a diagnosis of temporal arteritis or meningitis is confirmed).	*Selectivity*	*Treatment*
	d) Do not assume that relief of symptoms with treatment excludes serious pathology.	*Clinical Reasoning*	*Diagnosis*
3	Given a patient with a history of chronic and/or relapsing headache (e.g., tension, migraine, cluster, narcotic-induced, medication-induced), treat appropriately, and avoid narcotic, barbiturate dependence.	*Clinical Reasoning*	*Treatment*
4	In a patient with a history of suspected subarachnoid bleed and a negative CT scan, do a lumbar puncture.	*Selectivity* *Clinical Reasoning*	*Hypothesis generation* *Investigation*
5	In a patient suffering from acute migraine headache: a) Treat the episode.	*Clinical Reasoning*	*Treatment*
	b) Assess the ongoing treatment plan. (referral when necessary, take a stepwise approach).	*Clinical Reasoning* *Patient-centred Approach*	*Treatment* *Referral*

Heart Failure

	Key Feature	*Skill*	*Phase*
1	In patients with newly diagnosed heart failure determine the underlying cause, as treatment will differ.	*Clinical reasoning* *Selectivity*	*Hypothesis* *Diagnosis*
2	In an older patient presenting with fatigue include heart failure in your differential diagnosis.	*Clinical reasoning* *Selectivity*	*Hypothesis*
3	In a patient with symptoms suggestive of heart failure and a normal ejection fraction do not exclude this diagnosis.	*Clinical reasoning* *Selectivity*	*Hypothesis* *Diagnosis*
4	In patients with heart failure periodically assess functional impairment using validated tools (e.g., New York Heart Association class, activities of daily living).	*Clinical reasoning*	*History* *Follow-up*
5	To guide your management of a patient with an exacerbation of heart failure: a) Identify possible triggers (e.g., infection, arrhythmia, adherence, diet, ischemia)	*Clinical reasoning*	*Hypothesis*
	b) Consider comorbid conditions (e.g., renal failure)	*Clinical reasoning* *Selectivity*	*Hypothesis*
6	When treating heart failure: a) Identify the type of heart failure (e.g., systolic, diastolic) because the treatment is different	*Clinical reasoning* *Selectivity*	*Diagnosis*
	b) Appropriately prescribe medications to reduce mortality as well as treat the symptoms of congestive failure (e.g., diuretics, beta-blockers, ACE inhibitors, digoxin)	*Clinical reasoning* *Selectivity*	*Treatment* *Follow-up*
7	For patients with heart failure ensure you offer patient education and self-monitoring, such as routine self-weighing, healthy diet, medication adherence, smoking cessation, and exercise, to minimize exacerbations.	*Clinical reasoning* *Patient-centred Approach*	*Treatment* *Follow-up*
8	In a patient with heart failure recognize non-sustained response to treatment as an indicator of worsening prognosis.	*Clinical reasoning* *Selectivity*	*Diagnosis* *Follow-up*
9	In a patient with heart failure and a progressively deteriorating clinical course: a) Provide a realistic prognosis to patients and families	*Clinical reasoning* *Communication*	*Treatment*
	b) Introduce palliative care principles when appropriate for the patient	*Clinical reasoning* *Patient-centred Approach*	*Treatment*

Hepatitis

	Key Feature	*Skill*	*Phase*
1	In a patient presenting with hepatitis symptoms and/or abnormal liver function tests, take a focused history to assist in establishing the etiology (e.g., new drugs, alcohol, blood or body fluid exposure, viral hepatitis).	*Clinical Reasoning*	*History* *Hypothesis generation*
2	In a patient with abnormal liver enzyme tests interpret the results to distinguish between obstructive and hepatocellular causes for hepatitis as the subsequent investigation differs.	*Clinical Reasoning*	*Diagnosis*
3	In a patient where an obstructive pattern has been identified, a) Promptly arrange for imaging,	*Clinical Reasoning Selectivity*	*Investigation*
	b) Refer for more definitive management in a timely manner.	*Clinical Reasoning Selectivity*	*Treatment* *Referral*
4	In patients positive for Hepatitis B and/or C, a) Assess their infectiousness,	*Clinical Reasoning*	*Hypothesis generation* *Investigation*
	b) Determine human immunodeficiency virus status.	*Clinical Reasoning*	*Hypothesis generation* *Investigation*
5	In patients who are Hepatitis C antibody positive determine those patients who are chronically infected with Hepatitis C, because they are at greater risk for cirrhosis and hepatocellular cancer.	*Clinical Reasoning*	*Hypothesis generation* *Investigation*
6	In patients who are chronically infected with Hepatitis C, refer for further assessment and possible treatment.	*Clinical Reasoning*	*Treatment* *Referral*
7	In patients who are at risk for Hepatitis B and/or Hepatitis C exposure, a) Counsel about harm reduction strategies, risk of other blood borne diseases,	*Patient-centred Approach* *Communication*	*Treatment*
	b) Vaccinate accordingly.	*Clinical Reasoning*	*Treatment*
8	Offer post-exposure prophylaxis to patients who are exposed or possibly exposed to Hepatitis A or B.	*Clinical Reasoning*	*Treatment* *Hypothesis generation*
9	Periodically look for complications (e.g., cirrhosis, hepatocellular cancer) in patients with chronic viral hepatitis, especially hepatitis C infection.	*Clinical Reasoning*	*Hypothesis generation* *Follow-up*

Hyperlipidemia

	Key Feature	*Skill*	*Phase*
1	Screen appropriate patients for hyperlipidemia.	*Clinical Reasoning*	*Hypothesis generation* *History*
2	In all patients whose cardiovascular risk is being evaluated, include the assessment of lipid status.	*Clinical Reasoning*	*Investigation*
3	When hyperlipidemia is present, take an appropriate history, and examine and test the patient for modifiable causes (e.g., alcohol abuse, thyroid disease).	*Clinical Reasoning*	*Hypothesis generation* *History*
4	Ensure that patients diagnosed with hyperlipidemia receive appropriate lifestyle and dietary advice. Periodically reassess compliance with this advice (especially in patients at overall low or moderate CV risk).	*Clinical Reasoning* *Patient-centred Approach*	*Treatment* *Follow-up*
5	In treating hyperlipidemic patients, establish target lipid levels based on overall CV risk.	*Clinical Reasoning*	*Diagnosis*
6	In patients receiving medication for hyperlipidemia, periodically assess compliance with and side effects of treatment.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment* *Follow-up*

Hypertension

	Key Feature	*Skill*	*Phase*
1	Screen for hypertension.	*Clinical Reasoning*	*Hypothesis generation* *Physical*
2	Use correct technique and equipment to measure blood pressure.	*Procedures Skills*	*Physical*
3	Make the diagnosis of hypertension only after multiple BP readings (i.e., at different times and during different visits).	*Clinical Reasoning*	*Diagnosis*
4	In patients with an established diagnosis of hypertension, assess and re-evaluate periodically the overall cardiovascular risk and end-organ complications: a) Take an appropriate history.	*Clinical Reasoning*	*History*
	b) Do the appropriate physical examination.	*Clinical Reasoning*	*Physical*
	c) Arrange appropriate laboratory investigations.	*Clinical Reasoning*	*Investigation*
5	In appropriate patients with hypertension (e.g., young patients requiring multiple medications, patients with an abdominal bruit, patients with hypokalemia in the absence of diuretics): a) Suspect secondary hypertension.	*Selectivity* *Clinical Reasoning*	*Hypothesis generation*
	b) Investigate appropriately.	*Clinical Reasoning Selectivity*	*Investigation* *Treatment*
6	Suggest individualized lifestyle modifications to patients with hypertension. (e.g., weight loss, exercise, limit alcohol consumption, dietary changes).	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
7	In a patient diagnosed with hypertension, treat the hypertension with appropriate pharmacologic therapy (e.g., consider the patient's age, concomitant disorders, other cardiovascular risk factors).	*Clinical Reasoning*	*Treatment*
8	Given a patient with the signs and symptoms of hypertensive urgency or crisis, make the diagnosis and treat promptly.	*Selectivity*	*Diagnosis* *Treatment*
9	In all patients diagnosed with hypertension, assess response to treatment, medication compliance, and side effects at follow-up visits.	*Clinical Reasoning*	*Follow-up*

Immigrants

	Key Feature	*Skill*	*Phase*
1	As part of the periodic health assessment of newly arrived immigrants: a) Assess vaccination status (as it may not be up to date).	*Clinical Reasoning*	*History*
	b) Provide the necessary vaccinations to update their status.	*Clinical Reasoning*	*Treatment*
2	As part of the ongoing care of immigrants, modify your approach (when possible) as required by their cultural context (e.g., history given only by husband, may refuse examination by a male physician, language barriers).	*Patient-centred Approach* *Communication*	*Treatment* *History*
3	When dealing with a language barrier, make an effort to obtain the history with the help of a medical interpreter and recognize the limitations of all interpreters (e.g., different agendas, lack of medical knowledge, something to hide).	*Communication*	*History*
4	As part of the ongoing care of all immigrants (particularly those who appear not to be coping): a) Screen for depression (i.e., because they are at higher risk and frequently isolated).	*Clinical Reasoning*	*History*
	b) Inquire about a past history of abuse or torture.	*Clinical Reasoning*	*History*
	c) Assess patients for availability of resources for support (e.g., family, community organizations).	*Clinical Reasoning* *Patient-centred Approach*	*History*
5	In immigrants presenting with a new or ongoing medical condition, consider in the differential diagnosis infectious diseases acquired before immigration (e.g., malaria, parasitic disease, tuberculosis).	*Clinical Reasoning Selectivity*	*Hypothesis generation*
6	As part of the ongoing care of all immigrants, inquire about the use of alternative healers, practices, and/or medications (e.g., "natural" or herbal medicines, spiritual healers, medications from different countries, moxibustion).	*Clinical Reasoning*	*History*

Immunization

	Key Feature	*Skill*	*Phase*
1	Do not delay immunizations unnecessarily (e.g., vaccinate a child even if he or she has a runny nose).	*Clinical Reasoning*	*Treatment*
2	With parents who are hesitant to vaccinate their children, explore the reasons, and counsel them about the risks of deciding against routine immunization of their children.	*Patient-centred Approach* *Communication*	*Treatment* *History*
3	Identify patients who will specifically benefit from immunization (e.g., not just the elderly and children, but also the immunosuppressed, travellers, those with sickle cell anemia, and those at special risk for pneumonia and hepatitis A and B), and ensure it is offered.	*Clinical Reasoning*	*Treatment* *Hypothesis generation*
4	Clearly document immunizations given to your patients.	*Clinical Reasoning* *Professionalism*	*Treatment*
5	In patients presenting with a suspected infectious disease, assess immunization status, as the differential diagnosis and consequent treatment in unvaccinated patients is different.	*Clinical Reasoning*	*History* *Hypothesis generation*
6	In patients presenting with a suspected infectious disease, do not assume that a history of vaccination has provided protection against disease (e.g., pertussis, rubella, diseases acquired while travelling).	*Clinical Reasoning Selectivity*	*Hypothesis generation*

In Children

	Key Feature	*Skill*	*Phase*
1	When evaluating children, generate a differential diagnosis that accounts for common medical problems, which may present differently in children (e.g., urinary tract infections, pneumonia, appendicitis, depression).	*Clinical Reasoning*	*Hypothesis generation*
2	As children, especially adolescents, generally present infrequently for medical care, take advantage of visits to ask about: • unverbalized problems (e.g., school performance) • social well-being (e.g., relationships, home, friends) • modifiable risk factors (e.g., exercise, diet) • risk behaviours (e.g., use of bike helmets and seatbelts).	*Clinical Reasoning* *Patient-centred Approach*	*History* *Treatment*
3	At every opportunity, directly ask questions about risk behaviours (e.g., drug use, sex, smoking, driving) to promote harm reduction.	*Clinical Reasoning* *Communication*	*History* *Treatment*
4	In adolescents, ensure the confidentiality of the visit, and, when appropriate, encourage open discussion with their caregivers about specific problems (e.g., pregnancy, depression and suicide, bullying, drug abuse).	*Communication* *Patient-centred Approach*	*Treatment*
5	In assessing and treating children, use age-appropriate language.	*Communication* *Patient-centred Approach*	*Treatment* *History*
6	In assessing and treating children, obtain and share information with them directly (i.e., don't just talk to the parents).	*Communication* *Patient-centred Approach*	*History* *Treatment*
7	When investigation is appropriate, do not limit it because it may be unpleasant for those involved (the child, parents, or health care providers).	*Clinical Reasoning Selectivity*	*Treatment* *Investigation*

Infections

	Key Feature	*Skill*	*Phase*
1	In patients with a suspected infection, a) Determine the correct tools (e.g., swabs, culture/transport medium), techniques, and protocols for cultures,	*Clinical Reasoning*	*Investigation*
	b) Culture when appropriate (e.g., throat swabs/sore throat guidelines).	*Clinical Reasoning Selectivity*	*Investigation*
2	When considering treatment of an infection with an antibiotic, do so a) Judiciously (e.g., delayed treatment in otitis media with comorbid illness in acute bronchitis),	*Clinical Reasoning Selectivity*	*Treatment*
	b) Rationally (e.g., cost, guidelines, comorbidity, local resistance patterns).	*Clinical Reasoning Selectivity*	*Treatment*
3	Treat infections empirically when appropriate (e.g., in life threatening sepsis without culture report or confirmed diagnosis, candida vaginitis post-antibiotic use).	*Clinical Reasoning Selectivity*	*Treatment*
4	Look for infection as a possible cause in a patient with an ill-defined problem (e.g., confusion in the elderly, failure to thrive, unexplained pain [necrotizing fasciitis, abdominal pain in children with pneumonia]).	*Clinical Reasoning*	*Hypothesis generation*
5	When a patient returns after an original diagnosis of a simple infection and is deteriorating or not responding to treatment, think about and look for more complex infection. (i.e., When a patient returns complaining they are not getting better, don't assume the infection is just slow to resolve).	*Clinical Reasoning*	*Hypothesis generation*
6	When treating infections with antibiotics use other therapies when appropriate (e.g., aggressive fluid resuscitation in septic shock, incision and drainage abscess, pain relief).	*Clinical Reasoning*	*Treatment*

Infertility

	Key Feature	*Skill*	*Phase*
1	When a patient consults you with concerns about difficulties becoming pregnant: a) Take an appropriate history (e.g., ask how long they have been trying, assess menstrual history, determine coital frequency and timing) before providing reassurance or investigating further.	*Clinical Reasoning*	*History*
	b) Ensure follow-up at an appropriate time (e.g., after one to two years of trying; in general, do not investigate infertility too early).	*Clinical Reasoning*	*Treatment*
2	In patients with fertility concerns, provide advice that accurately describes the likelihood of fertility.	*Clinical Reasoning*	*Treatment*
3	With older couples who have fertility concerns, refer earlier for investigation and treatment, as their likelihood of infertility is higher.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Referral*
4	When choosing to investigate primary or secondary infertility, ensure that both partners are assessed.	*Clinical Reasoning*	*Hypothesis generation*
5	In couples who are likely infertile, discuss adoption when the time is right. (Remember that adoption often takes a long time.)	*Patient-centred Approach* *Clinical Reasoning*	*Treatment*
6	In evaluating female patients with fertility concerns and menstrual abnormalities, look for specific signs and symptoms of certain conditions (e.g., polycystic ovarian syndrome, hyperprolactinemia, thyroid disease) to direct further investigations (e.g., prolactin, thyroid-stimulating hormone, and luteal phase progesterone testing).	*Clinical Reasoning*	*Hypothesis generation* *History*

Insomnia

	Key Feature	*Skill*	*Phase*
1	In patients presenting with sleep complaints take a careful history to distinguish insomnia from specific psychiatric diagnoses or other sleep-related diagnoses (e.g., sleep apnea, periodic limb movements, restless legs syndrome, sleepwalking, sleep talking).	*Clinical reasoning*	*History* *Hypothesis generation*
2	When assessing patients with sleep complaints:		
	a) Obtain a collateral history from the bed partner or parents, if possible and appropriate	*Clinical reasoning*	*History*
	b) Assess the contribution of drugs (prescription, over-the-counter, recreational), caffeine, and alcohol	*Clinical reasoning*	*History* *Hypothesis generation*
3	In all patients with insomnia:		
	a) Provide appropriate advice about sleep hygiene (e.g., limiting caffeine, naps, and screen time, following regular sleep schedule, limiting bedroom activities to sleep and sex)	*Clinical reasoning* *Patient-centred Approach*	*Treatment*
	b) Offer other non-pharmacological options, such as cognitive behavioural therapy	*Clinical reasoning*	*Treatment*
4	When initiating sleep medications:		
	a) Educate the patient about risks and discuss these medications' time-limited effects	*Clinical reasoning* *Communication*	*Treatment*
	b) Use hypnotic medications judiciously (e.g., prescribe only when disordered sleep has a severe impact on function, and only with a clear indication)	*Clinical reasoning* *Selectivity*	*Treatment*
	c) Negotiate a reduction and cessation plan with the patient	*Patient-centred Approach* *Communication*	*Treatment*
5	When a patient with a long-term history of using sleep medication presents for renewal of their prescription reassess, educate, and discuss tapering and alternative therapies.	*Patient-centred Approach* *Professionalism*	*Hypothesis generation* *Treatment*

Ischemic Heart Disease

	Key Feature	*Skill*	*Phase*
1	Given a specific clinical scenario in the office or emergency setting, diagnose presentations of ischemic heart disease (IHD) that are: • Classic • atypical (e.g., in women, those with diabetes, the young, those at no risk).	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Diagnosis*
2	In a patient with modifiable risk factors for ischemic heart disease (e.g., smoking, diabetes control, obesity), develop a plan in collaboration with the patient to reduce her or his risk of developing the disease.	*Clinical Reasoning*	*Treatment*
3	In a patient presenting with symptoms suggestive of ischemic heart disease but in whom the diagnosis may not be obvious, do not eliminate the diagnosis solely because of tests with limited specificity and sensitivity (e.g., electrocardiography, exercise stress testing, normal enzyme results).	*Selectivity* *Clinical Reasoning*	*Diagnosis* *Investigation*
4	In a patient with stable ischemic heart disease manage changes in symptoms with self-initiated adjustment of medication (e.g., nitroglycerin) and appropriate physician contact (e.g., office visits, phone calls, emergency department visits), depending on the nature an severity of symptoms.	*Clinical Reasoning*	*Treatment*
5	In the regular follow-up care of patients with established ischemic heart disease, specifically verify the following to detect complications and suboptimal control: • symptom control. • medication adherence. • impact on daily activities. • lifestyle modification • clinical screening (i.e., symptoms and signs of complications)	*Clinical Reasoning* *Patient-centred Approach*	*History* *Diagnosis*
6	In a person with diagnosed acute coronary syndrome (e.g., cardiogenic shock, arrhythmia, pulmonary edema, acute myocardial infarction, unstable angina), manage the condition in an appropriate and timely manner.	*Selectivity*	*Treatment*

Joint Disorder

	Key Feature	*Skill*	*Phase*
1	In a patient presenting with joint pain, distinguish benign from serious pathology (e.g., sarcoma, septic joint): a) By taking pertinent history	*Selectivity* *Clinical Reasoning*	*Hypothesis generation* *History*
	b) By investigating in a timely and appropriate manner (e.g., aspirate, blood work, an X-ray examination).	*Clinical Reasoning Selectivity*	*Investigation* *Diagnosis*
2	In a patient presenting with non-specific musculoskeletal pain, make a specific rheumatologic diagnosis when one is evident through history, physical examination, and investigations. (e.g., gout, fibromyalgia, monoarthropathy vs. polyarthropathy).	*Clinical Reasoning*	*Diagnosis*
3	In a patient presenting with a monoarthropathy, rule out infectious causes. (e.g., sexually transmitted diseases).	*Selectivity* *Clinical Reasoning*	*Diagnosis* *Hypothesis generation*
4	In patients presenting with musculoskeletal pain, include referred and visceral sources of pain in the differential diagnosis. (e.g., angina, slipped capital epiphysis presenting as knee pain, neuropathic pain).	*Clinical Reasoning*	*Hypothesis generation*
5	Clinically diagnose ligamentous injuries. Do NOT do an X-ray examination.	*Clinical Reasoning* *Procedures Skills*	*Physical* *Diagnosis*
6	In a patient presenting with joint pain, include systemic conditions in the differential diagnosis (e.g., Wegener's granulomatosis, lupus, ulcerative colitis).	*Clinical Reasoning*	*Hypothesis generation*
7	In patients with a diagnosed rheumatologic condition: a) Actively inquire about pre-existing co-morbid conditions that may modify the treatment plan.	*Clinical Reasoning*	*History*
	b) Choose the appropriate treatment plan (e.g., no nonsteroidal anti-inflammatory drugs in patients with renal failure or peptic ulcer disease).	*Clinical Reasoning*	*Treatment*
8	In assessing patients with a diagnosed rheumatologic condition, search for disease-related complications (e.g., iritis).	*Clinical Reasoning*	*Hypothesis generation*
9	In patients experiencing musculoskeletal pain: a) Actively inquire about the impact of the pain on daily life.	*Patient-centred Approach*	*History*
	b) Treat with appropriate doses of analgesics.	*Clinical Reasoning*	*Treatment*
	c) Arrange for community resources and aids (e.g., splints, cane), if necessary.	*Clinical Reasoning*	*Treatment* *Referral*
10	In patients with rheumatoid arthritis, start treatment with disease-modifying agents within an appropriate time interval.	*Clinical Reasoning*	*Treatment*

Lacerations

	Key Feature	*Skill*	*Phase*
1	When managing a laceration, identify those that are more complicated and may require special skills for repair (e.g., a second- versus third-degree perineal tear, lip or eyelid lacerations involving margins, arterial lacerations).	*Clinical Reasoning Selectivity*	*Diagnosis Physical*
2	When managing a laceration, look for complications (e.g., flexor tendon lacerations, open fractures, bites to hands or face, neurovascular injury, foreign bodies) requiring more than simple suturing.	*Clinical Reasoning*	*Diagnosis Physical*
3	Given a deep or contaminated laceration, thoroughly clean with copious irrigation and debride when appropriate, before closing.	*Clinical Reasoning*	*Treatment*
4	Identify wounds at high risk of infection (e.g., puncture wounds, some bites, some contaminated wounds), and do not close them.	*Clinical Reasoning Selectivity*	*Hypothesis generation Treatment*
5	When repairing lacerations in children, ensure appropriate analgesia (e.g., topical anesthesia) and/or sedation (e.g., procedural sedation) to avoid physical restraints.	*Clinical Reasoning*	*Treatment*
6	When repairing a laceration, allow for and take adequate time to use techniques that will achieve good cosmetic results (e.g., layer closure, revision if necessary, use of regional rather than local anesthesia).	*Clinical Reasoning*	*Treatment*
7	In treating a patient with a laceration: a) Ask about immunization status for tetanus.	*Clinical Reasoning*	*History*
	b) Immunize the patient appropriately.	*Clinical Reasoning*	*Treatment*

Learning (Patients/Self)

Patients

	Key Feature	*Skill*	*Phase*
1	As part of the ongoing care of children, ask parents about their children's functioning in school to identify learning difficulties.	*Clinical Reasoning*	*History*
2	In children with school problems, take a thorough history to assist in making a specific diagnosis of the problem (e.g., mental health problem, learning disability, hearing).	*Clinical Reasoning*	*History* *Hypothesis generation*
3	When caring for a child with a learning disability, regularly assess the impact of the learning disability on the child and the family.	*Patient-centred Approach* *Communication*	*Hypothesis generation* *Follow-up*
4	When caring for a child with a learning disability, ensure the patient and family have access to available community resources to assist them.	*Patient-centred Approach* *Clinical Reasoning*	*Treatment* *Referral*
5	To maximize the patient's understanding and management of their condition,		
	a) Determine their willingness to receive information,	*Patient-centred Approach* *Communication*	*Diagnosis* *History*
	b) Match the complexity and amount of information provided with the patient's ability to understand.	*Communication Patient-centred Approach*	*Treatment*

Self Learning

	Key Feature	*Skill*	*Phase*
6	Continuously assess your learning needs.	*Professionalism*	*NA*
7	Effectively address your learning needs.	*Professionalism* *Selectivity*	*NA*
8	Incorporate your new knowledge into your practice.	*Professionalism*	*NA*

Lifestyle

	Key Feature	*Skill*	*Phase*
1	In the ongoing care of patients, ask about behaviours that, if changed, can improve health (e.g., diet, exercise, alcohol use, substance use, safer sex, injury prevention (e.g., seatbelts and helmets).	*Patient-centred Approach* *Communication*	*History*
2	Before making recommendations about lifestyle modification, explore a patient's readiness to change, as it may alter advice.	*Patient-centred Approach*	*Treatment* *History*
3	Explore a person's context (e.g., poverty) before making recommendations about lifestyle modification (e.g., healthy eating choices, exercise suggestions) so as to avoid making recommendations incompatible with the patient's context.	*Patient-centred Approach*	*Treatment* *History*
4	In the ongoing care of patients, periodically review their behaviours, recognizing that these may change.	*Clinical Reasoning*	*Hypothesis generation* *Follow-up*
5	In the ongoing care of a patient, regularly reinforce advice about lifestyle modification, whether or not the patient has instituted a change in behaviour.	*Clinical Reasoning*	*Treatment* *Follow-up*

Loss of Consciousness

	Key Feature	*Skill*	*Phase*
1	In an unconscious patient, assess ABC's and resuscitate as needed.	*Clinical Reasoning Selectivity*	*Diagnosis Treatment*
2	As part of the assessment of a patient who has lost consciousness, obtain focused history from the patient or witnesses that would include duration, trauma, preexisting conditions, drugs, toxins, medications and seizure activity.	*Clinical Reasoning*	*Hypothesis generation History*
3	Examine unconscious patients for localizing and diagnostic signs (e.g., ketone smell, liver flap, focal neurologic signs).	*Clinical Reasoning*	*Hypothesis generation Physical*
4	In patients with a loss of consciousness and a history of head trauma, rule out intracranial bleeding.	*Clinical Reasoning*	*Hypothesis generation Investigation*
5	In patients with a loss of consciousness who are anticoagulated, rule out intracranial bleeding.	*Clinical Reasoning*	*Hypothesis generation Investigation*
6	Assess and treat unconscious patients urgently for reversible conditions (e.g., shock, hypoxia, hypoglycemia, hyperglycemia, and narcotic overdose).	*Clinical Reasoning Selectivity*	*Hypothesis generation Treatment*
7	When following up patients who have lost consciousness, assess and advise regarding return to work, sporting, driving and recreational activities to minimize the possibility of injury to self or others in the event of a recurrence.	*Clinical Reasoning Communication*	*Hypothesis generation Treatment*
8	In patients who have had a loss of consciousness without a clear diagnosis, pursue investigations (e.g., rule out transient arythmia, seizure).	*Clinical Reasoning*	*Hypothesis generation Investigation*
9	When following up patients who have lost consciousness and where there is potential for recurrent episodes, discuss specific preventive and protective measures (e.g., position changes with orthostatic pressure changes).	*Clinical Reasoning*	*Treatment Hypothesis generation*
10	In patients with loss of consciousness following head trauma, treat and follow up according to current concussion guidelines.	*Clinical Reasoning Professionalism*	*Treatment Follow-up*
11	Advise authorities about appropriate patients with loss of consciousness (e.g., regarding driving status).	*Clinical Reasoning Professionalism*	*Treatment*

Loss of Weight

	Key Feature	*Skill*	*Phase*
1	Pursue an underlying cause in a patient with unexplained weight loss through history, physical examination (including weight) and appropriate investigations.	*Clinical Reasoning*	*Hypothesis generation*
2	Maintain an ongoing record of patients' weights so as to accurately determine when true weight loss has occurred.	*Professionalism*	*Physical*
3	In patients with persistent weight loss of undiagnosed cause, follow-up and reevaluate in a timely manner in order to decide whether anything needs to be done.	*Clinical Reasoning*	*Follow-up*

Low-back Pain

	Key Feature	*Skill*	*Phase*
1	In a patient with undefined acute low-back pain (LBP): a) Rule out serious causes (e.g., cauda equina syndrome, pyelonephritis, ruptured abdominal aortic aneurysm, cancer) through appropriate history and physical examination.	*Selectivity*	*Hypothesis generation* *Diagnosis*
	b) Make a positive diagnosis of musculoskeletal pain (not a diagnosis of exclusion) through an appropriate history and physical examination.	*Clinical Reasoning*	*Diagnosis*
2	In a patient with confirmed mechanical low back pain: a) Do not over-investigate in the acute phase.	*Clinical Reasoning Selectivity*	*Investigation* *Treatment*
	b) Advise the patient: • that symptoms can evolve, and ensure adequate follow-up care • that the prognosis is positive (i.e., the overwhelming majority of cases will get better)	*Clinical Reasoning*	*Treatment*
3	In a patient with mechanical low back pain, whether it is acute or chronic, give appropriate analgesia and titrate it to the patient's pain.	*Clinical Reasoning*	*Treatment*
4	Advise the patient with mechanical low back pain to return if new or progressive neurologic symptoms develop.	*Clinical Reasoning*	*Follow-up* *Treatment*
5	In all patients with mechanical low back pain, discuss exercises and posture strategies to prevent recurrences.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*

Meningitis

	Key Feature	*Skill*	*Phase*
1	In the patient with a non-specific febrile illness, look for meningitis, especially in patients at higher risk (e.g., immuno-compromised individuals, alcoholism, recent neurosurgery, head injury, recent abdominal surgery, neonates, aboriginal groups, students living in residence).	*Clinical Reasoning Selectivity*	*Hypothesis generation*
2	When meningitis is suspected ensure a timely lumbar puncture.	*Selectivity*	*Investigation*
3	In the differentiation between viral and bacterial meningitis, adjust the interpretation of the data in light of recent antibiotic use.	*Clinical Reasoning*	*Diagnosis*
4	For suspected bacterial meningitis, initiate urgent empiric IV antibiotic therapy (i.e., even before investigations are complete).	*Selectivity* *Clinical Reasoning*	*Treatment*
5	Contact public health to ensure appropriate prophylaxis for family, friends and other contacts of each person with meningitis.	*Clinical Reasoning* *Professionalism*	*Treatment*

Menopause

	Key Feature	*Skill*	*Phase*
1	In any woman of menopausal age, screen for symptoms of menopause and (e.g., hot flashes, changes in libido, vaginal dryness, incontinence, and psychological changes).	*Clinical Reasoning* *Patient-centred Approach*	*History* *Hypothesis generation*
2	In a patient with typical symptoms suggestive of menopause, make the diagnosis without ordering any tests. (This diagnosis is clinical and tests are not required.)	*Clinical Reasoning*	*Diagnosis*
3	In a patient with atypical symptoms of menopause (e.g., weight loss, blood in stools), rule out serious pathology through the history and selective use of tests, before diagnosing menopause.	*Selectivity*	*Hypothesis generation* *History*
4	In a patient who presents with symptoms of menopause but whose test results may not support the diagnosis, do not eliminate the possibility of menopause solely because of these results.	*Clinical Reasoning*	*Diagnosis*
5	When a patient has contraindications to hormone-replacement therapy (HRT), or chooses not to take HRT: Explore other therapeutic options and recommend some appropriate choices	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
6	In menopausal or perimenopausal women: a) Specifically inquire about the use of natural or herbal products.	*Clinical Reasoning Selectivity*	*History*
	b) Advise about potential effects and dangers (i.e., benefits and problems) of natural or herbal products and interactions.	*Clinical Reasoning*	*Treatment*
7	In a menopausal or perimenopausal women, provide counselling about preventive health measures (e.g., osteoporosis testing, mammography).	*Clinical Reasoning*	*Treatment*
8	Establish by history a patient's hormone-replacement therapy risk/benefit status.	*Clinical Reasoning Selectivity*	*History*

Mental Competency

	Key Feature	Skill	Phase
1	In a patient with a diagnosis that may increase the likelihood of cognitive and/or functional impairment (e.g., dementia, stroke, severe mental illness, head injury):		
	a) Assess the patient's level of competence in the context of the decision(s) that the patient needs to make, recognizing that higher-risk decisions require higher cognitive capacity	*Clinical reasoning* *Selectivity*	*History* *Diagnosis*
	b) Explain the purpose of the assessment and attempt to gain permission before you begin the assessment	*Communication* *Professionalism*	*History* *Investigation*
	c) Include other professionals when appropriate	*Clinical reasoning* *Professionalism*	*Treatment* *Referral*
2	In an otherwise well patient with subtle changes in function (e.g., family concerns, medication errors, repetitive questions, decline in personal hygiene):		
	a) Perform an appropriate assessment of cognitive and functional abilities	*Clinical reasoning* *Communication*	*Physical* *Investigation*
	b) Refer for further assessment when necessary	*Clinical reasoning* *Selectivity*	*Referral*
3	When a patient is making high-stakes care decisions (e.g., surgery/no surgery, resuscitation status) think about the need to assess their decision-making ability.	*Clinical reasoning*	*Hypothesis generation* *Treatment*
4	When capacity assessment is required, actively assess the patient's ability to understand, appreciate, reason, and express a choice.	*Clinical reasoning*	*Diagnosis* *Investigation*
5	When impaired decision-making ability is identified, attempt to establish severity, reversibility, and duration in order to plan treatment and regular reassessment.	*Clinical reasoning*	*History* *Diagnosis*
6	When a patient refuses to participate in capacity assessment:		
	a) Document their refusal	*Communication*	*Treatment*
	b) Continue to engage in the provision of safe care that is acceptable to the patient	*Professionalism*	*Treatment*
	c) Revisit the assessment when indicated	*Clinical reasoning* *Selectivity*	*Hypothesis generation* *Follow-up*
	d) Pursue the need for a substitute decision maker when necessary	*Clinical reasoning* *Selectivity*	*Follow-up* *Treatment*

7 When involuntary treatment is indicated:		
a) Initiate the certification process	*Communication* *Professionalism*	*Treatment*
b) Collaborate with colleagues/family regarding the procedures required	*Communication* *Patient-centred Approach*	*Treatment*
c) Document and communicate according to legal requirements	*Communication* *Professionalism*	*Treatment*
d) Help the patient and family understand why this is necessary	*Communication* *Patient-centred Approach*	*Treatment*
e) Clarify your continuing role in the care of the patient	*Communication* *Professionalism*	*Follow-up*
8 When involuntary interventions that impact autonomy are required (e.g., loss of driver's licence) include management of the emotional impact on the patient and possible effects on the physician-patient relationship as parts of the treatment plan.	*Patient-centred Approach*	*Treatment*

Multiple Medical Problems

	Key Feature	*Skill*	*Phase*
1	In all patients presenting with multiple medical concerns (e.g., complaints, problems, diagnoses), take an appropriate history to determine the primary reason for the consultation.	*Selectivity* *Clinical Reasoning*	*History*
2	In all patients presenting with multiple medical concerns, prioritize problems appropriately to develop an agenda that both you and the patient can agree upon (i.e., determine common ground).	*Patient-centred Approach*	*Treatment*
3	In a patient with multiple medical complaints (and/or visits), consider underlying depression, anxiety, or abuse (e.g., physical, medication, or drug abuse) as the cause of the symptoms, while continuing to search for other organic pathology.	*Clinical Reasoning*	*Hypothesis generation*
4	Given a patient with multiple defined medical conditions, periodically assess for secondary depression, as they are particularly at risk for it.	*Clinical Reasoning*	*Hypothesis generation* *History*
5	Periodically re-address and re-evaluate the management of patients with multiple medical problems in order to: • simplify their management (pharmacologic and other) • limit polypharmacy • minimize possible drug interactions • update therapeutic choices (e.g., because of changing guidelines or the patient's situation)	*Clinical Reasoning*	*Treatment* *Follow-up*
6	In patients with multiple medical problems and recurrent visits for unchanging symptoms, set limits for consultations when appropriate (e.g., limit the duration and frequency of visits).	*Patient-centred Approach* *Professionalism*	*Treatment* *Follow-up*

Neck Pain

	Key Feature	*Skill*	*Phase*
1	In patients with non-traumatic neck pain, use a focused history, physical examination and appropriate investigations to distinguish serious, non-musculoskeletal causes (e.g., lymphoma, carotid dissection), including those referred to the neck (e.g., myocardial infarction, pseudotumour cerebri) from other non-serious causes.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Diagnosis*
2	In patients with non-traumatic neck pain, distinguish by history and physical examination, those attributable to nerve or spinal cord compression from those due to other mechanical causes (e.g., muscular).	*Clinical Reasoning*	*History* *Physical*
3	Use a multi-modal (e.g., physiotherapy, chiropractic, acupuncture, massage) approach to treatment of patients with chronic neck pain (e.g., degenerative disc disease +/- soft neuro signs).	*Clinical Reasoning*	*Treatment*
4	In patients with neck pain following injury, distinguish by history and physical examination, those requiring an X-ray to rule out a fracture from those who do not require an X-ray (e.g., current guideline/C-spine rules).	*Clinical Reasoning Selectivity*	*Diagnosis* *Investigation*
5	When reviewing neck X-rays of patients with traumatic neck pain, be sure all vertebrae are visualized adequately.	*Clinical Reasoning*	*Diagnosis* *Investigation*

Newborn

	Key Feature	*Skill*	*Phase*
1	When examining a newborn, systematically look for subtle congenital anomalies (e.g., ear abnormalities, sacral dimple) as they may be associated with other anomalies and genetic syndromes.	*Clinical Reasoning*	*Hypothesis generation* *Physical*
2	In a newborn, where a concern has been raised by a caregiver (parent, nurse), a) Think about sepsis, and	*Clinical Reasoning*	*Hypothesis generation*
	b) Look for signs of sepsis, as the presentation can be subtle (i.e. not the same as in adults, non-specific, feeding difficulties, respiratory changes)	*Clinical Reasoning Selectivity*	*Physical* *History*
	c) Make a provisional diagnosis of sepsis.	*Clinical Reasoning*	*Diagnosis*
3	Resuscitate newborns according to current guidelines.	*Clinical Reasoning* *Procedures Skills*	*Treatment*
4	Maintain neonatal resuscitation skills if appropriate for your practice.	*Professionalism*	*Treatment*
5	When a parent elects to bottle feed, support their decision in a non-judgemental manner.	*Professionalism* *Patient-centred Approach*	*Treatment*
6	In caring for a newborn ensure repeat evaluations for abnormalities that may become apparent over time (e.g., hips, heart, hearing).	*Clinical Reasoning*	*Follow-up* *Physical*
7	When discharging a newborn from hospital, a) Advise parent(s) of warning signs of serious or impending illness, and	*Clinical Reasoning* *Communication*	*Treatment* *Follow-up*
	b) Develop a plan with them to access appropriate care should a concern arise.	*Clinical Reasoning* *Patient-centred Approach*	*Follow-up*

Obesity

	Key Feature	*Skill*	*Phase*
1	In patients who appear to be obese, make the diagnosis of obesity using a clear definition (i.e., currently body mass index) and inform them of the diagnosis.	*Clinical Reasoning*	*Diagnosis*
2	In all obese patients, assess for treatable co-morbidities such as hypertension, diabetes, coronary artery disease, sleep apnea, and osteoarthritis, as these are more likely to be present.	*Clinical Reasoning*	*Hypothesis generation*
3	In patients diagnosed with obesity who have confirmed normal thyroid function, avoid repeated thyroid-stimulating hormone testing.	*Clinical Reasoning Selectivity*	*Investigation* *Treatment*
4	In obese patients, inquire about the effect of obesity on the patient's personal and social life to better understand its impact on the patient.	*Patient-centred Approach*	*History*
5	In a patient diagnosed with obesity, establish the patient's readiness to make changes necessary to lose weight, as advice will differ, and reassess this readiness periodically.	*Patient-centred Approach*	*History* *Follow-up*
6	Advise the obese patient seeking treatment that effective management will require appropriate diet, adequate exercise, and support (independent of any medical or surgical treatment), and facilitate the patient's access to these as needed and as possible.	*Clinical Reasoning*	*Treatment*
7	As part of preventing childhood obesity, advise parents of healthy activity levels for their children.	*Clinical Reasoning*	*Treatment*
8	In managing childhood obesity, challenge parents to make appropriate family-wide changes in diet and exercise, and to avoid counterproductive interventions (e.g., berating or singling out the obese child).	*Clinical Reasoning* *Communication*	*Treatment*

Osteoporosis

	Key Feature	*Skill*	*Phase*
1	Assess osteoporosis risk of all adult patients as part of their periodic health examination.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
2	Use bone mineral density testing judiciously (e.g., don't test everybody, follow a guideline).	*Selectivity* *Professionalism*	*Investigation* *Follow-up*
3	Counsel all patients about primary prevention of osteoporosis (i.e., dietary calcium, physical activity, smoking cessation), especially those at higher risk (e.g., young female athletes, patients with eating disorders).	*Clinical Reasoning* *Communication*	*Treatment*
4	In menopausal or peri-menopausal women, provide advice about fracture prevention that includes improving their physical fitness, reducing alcohol, smoking cessation, risks of physical abuse, and environmental factors that may contribute to falls (e.g., don't stop at suggesting calcium and vitamin D).	*Clinical Reasoning* *Communication*	*Treatment* *Hypothesis generation*
5	In patients with osteoporosis, avoid prescribing medications that may increase the risk of falls.	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
6	Provide advice and counseling about fracture prevention to older men, as they too are at risk for osteoporosis.	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
7	Treat patients with established osteoporosis regardless of their gender (e.g., use bisphosphonates in men).	*Clinical Reasoning*	*Hypothesis generation* *Treatment*

Pain

	Key Feature	*Skill*	*Phase*
1	In a patient presenting with acute pain provide analgesia while seeking a diagnosis.	*Selectivity*	*Treatment*
2	When assessing a patient with pain take a detailed history to recognize clinical patterns (diagnostic discerning characteristics) to inform diagnosis (e.g., neuropathic, vascular, muscular, visceral pain).	*Clinical reasoning*	*History* *Hypothesis*
3	In a patient presenting with pain without a clear diagnosis: a) Include life-threatening conditions in your differential diagnosis b) Investigate appropriately and in a timely manner	*Selectivity* *Clinical reasoning* *Selectivity* *Clinical reasoning*	*Hypothesis* *Investigation*
4	When there is a concern about drug-seeking behaviour in a patient with pain: a) Maintain your therapeutic relationship (e.g., be empathic, avoid stereotyping, manage frustration) b) Do not attribute the presentation to drug-seeking without first considering an appropriately broad differential diagnosis	*Patient-centred Approach* *Professionalism* *Clinical reasoning* *Selectivity*	*Treatment* *Follow-up* *Hypothesis*
5	When treating pain with narcotics: a) Dose appropriately considering narcotic naïveté and renal function b) Consider addiction risk c) Consider variable and potentially dangerous metabolic responses (e.g., codeine, especially in pregnant and breastfeeding women; sudden removal of a painful stimulus)	*Clinical reasoning* *Clinical reasoning* *Clinical reasoning*	*Treatment* *Hypothesis* *Treatment* *Hypothesis* *Treatment*
6	In a patient whose pain is not resolving or following the anticipated course, regularly re-evaluate (e.g., diagnosis, complications, medication choices, drug diversion).	*Clinical reasoning*	*Hypothesis* *Follow-up*
7	When prescribing medication for pain inform the patient not to use over-the-counter products that contain the same drug or drugs from the same class (e.g., acetaminophen, NSAIDs)	*Clinical reasoning*	*Treatment*
8	When treating a patient with pain appropriately use non-pharmacologic treatments and self-management strategies to control pain and optimize function.	*Patient-centred Approach* *Clinical reasoning*	*Treatment*
9	In a patient where acute pain has become chronic: a) Recognize the transition b) Readdress the treatment plan and your patient's expectations appropriately	*Clinical reasoning* *Patient-centred Approach* *Communication*	*Diagnosis* *Treatment*

Palliative Care

	Key Feature	*Skill*	*Phase*
1	In all patients with terminal illnesses (e.g., end-stage congestive heart failure or renal disease), use the principles of palliative care to address symptoms (i.e.., do not limit the use of palliative care to cancer patients).	*Patient-centred Approach* *Clinical Reasoning*	*Treatment*
2	In patients requiring palliative care, provide support through self, other related disciplines, or community agencies, depending on patient needs (i.e.., use a team approach when necessary).	*Patient-centred Approach*	*Treatment*
3	In patients approaching the end of life: a) Identify the individual issues important to the patient, including physical issues (e.g., dyspnea, pain, constipation, nausea), emotional issues, social issues (e.g., guardianship, wills, finances), and spiritual issues.	*Patient-centred Approach* *Clinical Reasoning*	*History*
	b) Attempt to address the issues identified as important to the patient.	*Patient-centred Approach* *Clinical Reasoning*	*Treatment*
4	In patients with pain, manage it (e.g., adjust dosages, change analgesics) proactively through: • frequent reassessments • monitoring of drug side effects (e.g., nausea, constipation, cognitive impairment)	*Clinical Reasoning*	*Treatment* *Follow-up*
5	In patients diagnosed with a terminal illness, identify and repeatedly clarify wishes about end-of-life issues (e.g., wishes for treatment of infections, intubation, dying at home)	*Patient-centred Approach* *Clinical Reasoning*	*History* *Hypothesis generation*

Parkinsonism

	Key Feature	*Skill*	*Phase*
1	In patients with suspected Parkinson's disease, accurately distinguish idiopathic Parkinson's disease from atypical Parkinson's disease (e.g., disease at a young age, drug-related disease), as treatment differs.	*Clinical Reasoning*	*Diagnosis*
2	In the care of all patients with Parkinson's disease, involve other health care professionals to enhance the patient's functional status.	*Clinical Reasoning* *Professionalism*	*Treatment* *Referral*
3	In an elderly patient with a deterioration in functional status, look for and recognize Parkinson's disease when it is present, as it is a potentially reversible contribution to the deterioration.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
4	In a patient with a tremor, do an appropriate physical examination (e.g., observation, use of techniques to enhance the tremor) to distinguish the resting tremor of parkinsonism from other (e.g., essential) tremors.	*Clinical Reasoning*	*Physical*
5	As part of the management of patients with Parkinson's disease, identify anticipated side effects of medications, especially those with which you are unfamiliar.	*Clinical Reasoning* *Professionalism*	*Treatment*
6	As part of the ongoing follow-up care of patients with Parkinson's disease: • Assess functional status • Monitor them for medication side effects • Look for other problems (e.g., depression, dementia, falls, constipation), as they are more common	*Clinical Reasoning*	*Hypothesis generation* *Follow-up*

Periodic Health Assessment/Screening

	Key Feature	*Skill*	*Phase*
1	Do a periodic health assessment in a proactive or opportunistic manner (i.e., address health maintenance even when patients present with unrelated concerns).	*Clinical Reasoning*	*Treatment*
2	In any given patient, selectively adapt the periodic health examination to that patient's specific circumstances (i.e., adhere to inclusion and exclusion criteria of each manoeuvre/intervention, such as the criteria for mammography and prostate-specific antigen [PSA] testing).	*Selectivity* *Patient-centred Approach*	*Investigation* *Hypothesis generation*
3	In a patient requesting a test (e.g., PSA testing, mammography) that may or may not be recommended: a) Inform the patient about limitations of the screening test (i.e., sensitivity and specificity).	*Clinical Reasoning*	*Treatment* *Investigation*
	b) Counsel the patient about the implications of proceeding with the test.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment Investigation*
4	Keep up to date with new recommendations for the periodic health examination, and critically evaluate their usefulness and application to your practice.	*Professionalism*	*Treatment* *Diagnosis*

Personality Disorder

	Key Feature	*Skill*	*Phase*
1	When assessing a patient with personality traits or behaviours that impair interactions and/or function:		
	a) Distinguish between isolated or intermittent manifestations and established, habitual patterns of behaviour	*Clinical reasoning* *Patient-centred Approach*	*History*
	b) Rule out pharmacologic or underlying medical causes (e.g., substance use, brain tumour)	*Clinical reasoning* *Selectivity*	*Hypothesis generation*
	c) Do not label the patient with a personality disorder prematurely or without clear justification (i.e., personality traits are not a disorder)	*Clinical reasoning*	*Diagnosis*
2	For any patient with a personality disorder or personality traits that impair interpersonal interaction:		
	a) Adapt your communication style to optimize the development of a therapeutic relationship to provide effective care	*Communication* *Patient-centred Approach*	*Treatment*
	b) Determine the impact of the patient's personality disorder on their ability to access health care	*Patient-centred Approach* *Communication*	*Treatment*
3	When providing care for a patient with a personality disorder reflect on, acknowledge, and manage your own emotional responses in order to provide empathetic and patient-centred care.	*Professionalism* *Patient-centred Approach*	*Treatment*
4	When caring for a patient with a personality disorder or with difficult behaviours or requests:		
	a) Address the behaviour in a direct but non-threatening manner	*Communication* *Professionalism*	*Treatment*
	b) Co-create realistic goals and expectations with the patient	*Communication* *Patient-centred Approach*	*Treatment* *Follow-up*
	c) Establish and maintain clear boundaries and limits (e.g., appointment length, drug prescribing, accessibility) and communicate these to your team	*Communication* *Professionalism*	*Treatment* *Follow-up*
	d) Continue the therapeutic relationship with the patient unless there is risk to you or others	*Professionalism* *Patient-centred Approach*	*Treatment* *Follow-up*
5	In a patient already diagnosed with personality disorder look for medical and other psychiatric diagnoses when the patient presents for assessment of new or changed symptoms. (Patients with personality disorders develop medical and psychiatric conditions, too.)	*Clinical reasoning*	*Hypothesis generation*
6	When seeing a patient whom others have previously identified as having a personality disorder evaluate the patient yourself because the diagnosis may be wrong, and the label has significant repercussions.	*Clinical reasoning* *Patient-centred Approach*	*Diagnosis*

Pneumonia

	Key Feature	*Skill*	*Phase*
1	In a patient who presents without the classic respiratory signs and symptoms (e.g., deterioration, delirium, abdominal pain), include pneumonia in the differential diagnosis.	*Clinical Reasoning*	*Hypothesis generation*
2	In a patient with signs and symptoms of pneumonia, do not rule out the diagnosis on the basis of a normal chest X-ray film (e.g., consider dehydration, neutropenia, human immunodeficiency virus [HIV] infection).	*Clinical Reasoning Selectivity*	*Diagnosis* *Hypothesis generation*
3	In a patient with a diagnosis of pneumonia, assess the risks for unusual pathogens (e.g., a history of tuberculosis, exposure to birds, travel, HIV infection, aspiration).	*Clinical Reasoning*	*History* *Hypothesis generation*
4	In patients with pre-existing medical problems (e.g., asthma, diabetes, congestive heart failure) and a new diagnosis of pneumonia: a) Treat both problems concurrently (e.g., with prednisone plus antibiotics).	*Clinical Reasoning Selectivity*	*Treatment*
	b) Adjust the treatment plan for pneumonia, taking into account the concomitant medical problems (e.g., be aware of any drug interactions, such as that between warfarin [Coumadin] and antibiotics).	*Clinical Reasoning Selectivity*	*Treatment* *Hypothesis generation*
5	Identify patients, through history-taking, physical examination, and testing, who are at high risk for a complicated course of pneumonia and would benefit from hospitalization, even though clinically they may appear stable.	*Selectivity*	*History* *Diagnosis*
6	In the patient with pneumonia and early signs of respiratory distress, assess, and reassess periodically, the need for respiratory support (bilevel positive airway pressure, continuous positive airway pressure, intubation) (i.e., look for the need before decompensation occurs).	*Clinical Reasoning Selectivity*	*Treatment*
7	For a patient with a confirmed diagnosis of pneumonia, make rational antibiotic choices (e.g., outpatient + healthy = first-line antibiotics; avoid the routine use of "big guns").	*Clinical Reasoning* *Professionalism*	*Treatment*

8	In a patient who is receiving treatment for pneumonia and is not responding: a) Revise the diagnosis (e.g., identify other or contributing causes, such as cancer, chronic obstructive pulmonary disease, or bronchospasm), consider atypical pathogens (e.g., *Pneumocystis carinii*, TB, and diagnose complications (e.g., empyema, pneumothorax).	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	b) Modify the therapy appropriately (e.g., change antibiotics).	*Clinical Reasoning*	*Treatment* *Diagnosis*
9	Identify patients (e.g., the elderly, nursing home residents, debilitated patients) who would benefit from immunization or other treatments (e.g., flu vaccine, Pneumovax, ribavarine) to reduce the incidence of pneumonia.	*Clinical Reasoning Selectivity*	*Treatment*
10	In patients with a diagnosis of pneumonia, ensure appropriate follow-up care (e.g., patient education, repeat chest X-ray examination, instructions to return if the condition worsens).	*Clinical Reasoning*	*Follow-up*
11	In patients with a confirmed diagnosis of pneumonia, arrange contact tracing when appropriate (e.g., in those with TB, nursing home residents, those with legionnaires' disease).	*Clinical Reasoning*	*Follow-up* *Referral*

Poisoning

	Key Feature	*Skill*	*Phase*
1	As part of well-child care, discuss preventing and treating poisoning with parents (e.g., "child-proofing", poison control number).	*Communication* *Clinical Reasoning*	*Treatment*
2	In intentional poisonings (overdose) think about multi-toxin ingestion.	*Clinical Reasoning*	*Hypothesis generation*
3	When assessing a patient with a potentially toxic ingestion, take a careful history about the timing and nature of the ingestion.	*Clinical Reasoning*	*History*
4	When assessing a patient with a potential poisoning, do a focused physical examination to look for the signs of toxidromes.	*Clinical Reasoning*	*Physical*
5	When assessing a patient exposed (contact or ingestion) to a substance, clarify the consequences of the exposure (e.g., don't assume it is non-toxic, call poison control).	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
6	When managing a toxic ingestion, utilize poison control protocols that are current.	*Clinical Reasoning* *Professionalism*	*Treatment*
7	When managing a patient with a poisoning, a) Assess ABC's,	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	b) Manage ABC's,	*Clinical Reasoning*	*Treatment*
	c) Regularly reassess the patient's ABC's (i.e., do not focus on antidotes and decontamination while ignoring the effect of the poisoning on the patient).	*Clinical Reasoning*	*Hypothesis generation* *Treatment*

Pregnancy

	Key Feature	*Skill*	*Phase*
1	In a patient who is considering pregnancy: a) Identify risk factors for complications.	*Clinical Reasoning* *Patient-centred Approach*	*Hypothesis generation* *Diagnosis*
	b) Recommend appropriate changes (e.g., folic acid intake, smoking cessation, medication changes).	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
2	In a female or male patient who is sexually active, who is considering sexual activity, or who has the potential to conceive or engender a pregnancy, use available encounters to educate about fertility.	*Communication* *Patient-centred Approach*	*Treatment*
3	In a patient with suspected or confirmed pregnancy, establish the desirability of the pregnancy.	*Clinical Reasoning* *Patient-centred Approach*	*History* *Treatment*
4	In a patient presenting with a confirmed pregnancy for the first encounter: a) Assess maternal risk factors (medical and social).	*Clinical Reasoning* *Patient-centred Approach*	*Hypothesis generation* *History*
	b) Establish accurate dates.	*Clinical Reasoning*	*Diagnosis*
	c) Advise the patient about ongoing care.	*Clinical Reasoning*	*Treatment*
5	In pregnant patients: a) Identify those at high risk (e.g., teens, domestic violence victims, single parents, drug abusers, impoverished women).	*Clinical Reasoning Selectivity*	*Hypothesis generation* *History*
	b) Refer these high-risk patients to appropriate resources throughout the antepartum and postpartum periods.	*Clinical Reasoning*	*Treatment* *Referral*
6	In at-risk pregnant patients (e.g., women with human immunodeficiency virus infection, intravenous drug users, and diabetic or epileptic women), modify antenatal care appropriately.	*Selectivity* *Clinical Reasoning*	*Treatment*
7	In a pregnant patient presenting with features of an antenatal complication (e.g., premature rupture of membranes, hypertension, bleeding): a) Establish the diagnosis.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Diagnosis*
	b) Manage the complication appropriately.	*Clinical Reasoning Selectivity*	*Treatment*
8	In a patient presenting with dystocia (prolonged dilatation, failure of descent): a) Diagnose the problem.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Diagnosis*
	b) Intervene appropriately.	*Clinical Reasoning Selectivity*	*Treatment*

9	In a patient with clinical evidence of complications in labour (e.g., abruption, uterine rupture, shoulder dystocia, non-reassuring fetal monitoring): a) Diagnose the complication.	*Clinical Reasoning Selectivity*	*Hypothesis generation Diagnosis*
	b) Manage the complication appropriately.	*Clinical Reasoning Selectivity*	*Treatment*
10	In the patient presenting with clinical evidence of a postpartum complication (e.g., delayed or immediate bleeding, infection): a) Diagnose the problem (e.g., unrecognized retained placenta, endometritis, cervical laceration).	*Clinical Reasoning Selectivity*	*Hypothesis generation Diagnosis*
	b) Manage the problem appropriately.	*Clinical Reasoning Selectivity*	*Treatment*
11	In pregnant or postpartum patients, identify postpartum depression by screening for risk factors, monitoring patients at risk, and distinguishing postpartum depression from the "blues."	*Selectivity Clinical Reasoning*	*Hypothesis generation Diagnosis*
12	In a breast-feeding woman, screen for and characterize dysfunctional breast-feeding (e.g., poor latch, poor production, poor letdown).	*Clinical Reasoning Patient-centred Approach*	*Hypothesis generation History*

Prostate

	Key Feature	*Skill*	*Phase*
1	Appropriately identify patients requiring prostate cancer screening.	*Selectivity*	*Diagnosis* *History*
2	In a patient suitable for prostate cancer screening, use and interpret tests (e.g., prostate-specific antigen testing, digital rectal examination [DRE], ultrasonography) in an individualized/sequential manner to identify potential cases.	*Selectivity* *Patient-centred Approach*	*Investigation* *Diagnosis*
3	In patients with prostate cancer, actively search out the psychological impact of the diagnosis and treatment modality.	*Patient-centred Approach* *Communication*	*History*
4	In patients with prostate cancer, considering a specific treatment option (e.g., surgery, radiotherapy, chemotherapy, hormonal treatment, no treatment): a) Advise about the risks and benefits of treatment.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
	b) Monitor patients for complications following treatment.	*Clinical Reasoning*	*Hypothesis generation* *Follow-up*
5	In patients with prostate cancer, actively ask about symptoms of local recurrence or distant spread.	*Clinical Reasoning*	*History* *Hypothesis generation*
6	Given a suspicion of benign prostatic hypertrophy, diagnose it using appropriate history, physical examination, and investigations.	*Clinical Reasoning*	*Diagnosis*
7	In patients presenting with specific or non-specific urinary symptoms: a) Identify the possibility of prostatitis.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	b) Interpret investigations (e.g., urinalysis, urine culture-and-sensitivity testing, Digital Rectal Exam, swab testing, reverse transcription-polymerase chain reaction assay) appropriately.	*Clinical Reasoning*	*Diagnosis* *Investigation*

Rape/Sexual Assault

	Key Feature	*Skill*	*Phase*
1	Provide comprehensive care to all patients who have been sexually assaulted, regardless of their decision to proceed with evidence collection or not.	*Clinical Reasoning* *Professionalism*	*Treatment*
2	Apply the same principles of managing sexual assault in the acute setting to other ambulatory settings (i.e. medical assessment, pregnancy prevention, STI screening/treatment/prophylaxis, counselling).	*Clinical Reasoning*	*Treatment*
3	Limit documentation in sexual assault patients to observations and other necessary medical information (i.e., avoid recording hearsay information).	*Clinical Reasoning* *Professionalism*	*History*
4	In addition to other post-exposure prophylactic measures taken, assess the need for human immunodeficiency virus and hepatitis B prophylaxis in patients who have been sexually assaulted.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
5	Offer counselling to all patients affected by sexual assault, whether they are victims, family members, friends, or partners; do not discount the impact of sexual assault on all of these people.	*Clinical Reasoning*	*Treatment*
6	Revisit the need for counselling in patients affected by sexual assault.	*Clinical Reasoning*	*Treatment* *Follow-up*
7	Enquire about undisclosed sexual assault when seeing patients who have symptoms such as depression, anxiety, and somatization.	*Clinical Reasoning*	*Hypothesis generation* *History*

Rash

	Key Feature	*Skill*	*Phase*
1	In a patient with a new rash: a) Take a focused history and do an appropriate skin examination	*Clinical reasoning* *Selectivity*	*History* *Physical*
	b) If the diagnosis remains unclear obtain a more detailed history and examination, including the entire mucocutaneous system and other body systems as indicated	*Clinical reasoning* *Selectivity*	*History* *Physical*
2	When assessing a patient with a rash look for and recognize common patterns to aid diagnosis.	*Clinical reasoning*	*Diagnosis*
3	Use appropriate terminology with respect to lesion type, shape, arrangement, and distribution to facilitate communication and documentation	*Communication*	*Physical* *Follow-up*
4	In an unwell patient presenting with a rash: a) Identify potential life-threatening systemic conditions (e.g., meningococcal septicemia, necrotizing fasciitis, toxic shock, Stevens-Johnson syndrome)	*Clinical reasoning* *Selectivity*	*Hypothesis* *Diagnosis*
	b) Initiate treatment and/or urgent/emergent referral	*Selectivity*	*Treatment* *Referral*
5	In a patient with a persisting undiagnosed rash: a) Consider a systemic disorder (e.g., systemic lupus erythematosus, diabetes, celiac)	*Clinical reasoning*	*Hypothesis*
	b) Investigate appropriately (e.g., scraping, culture, biopsy, lab work)	*Clinical reasoning* *Procedure skills*	*Investigation*
	c) Pursue further investigations and/or refer as indicated regardless of negative results	*Clinical reasoning*	*Hypothesis* *Follow-up*
6	In all patients with a persistent or recurrent rash explore the functional and emotional aspects of that disorder, recognizing that what looks like a minor condition may have a profound impact.	*Patient-centred Approach*	*History* *Follow-up*
7	7 In a patient with a persistent or recurrent rash explore issues of: • Exposure to skin irritants or allergens • Adherence to the treatment plan • Use of confounding medications and treatments (e.g., topical anesthetics, topical steroids, home remedies)	*Clinical reasoning* *Patient-centred Approach*	*Hypothesis*
8	In a patient with an infectious rash: a) Manage contagion risk	*Clinical reasoning* *Selectivity*	*Treatment*
	b) Ensure that public health bodies are informed when indicated	*Clinical reasoning* *Professionalism*	*Follow-up*

Red Eye

	Key Feature	*Skill*	*Phase*
1	In addressing eye complaints, always assess visual acuity using history, physical examination, or the Snellen chart, as appropriate.	*Clinical Reasoning*	*History* *Physical*
2	In a patient with a red eye, distinguish between serious causes (e.g., keratitis, glaucoma, perforation, temporal arteritis) and non-serious causes (i.e., do not assume all red eyes are caused by conjunctivitis): a) Take an appropriate history (e.g., photophobia, changes in vision, history of trauma).	*Clinical Reasoning*	*History*
	b) Do a focused physical examination (e.g., pupil size, and visual acuity, slit lamp, fluorescein).	*Clinical Reasoning*	*Physical*
	c) Do appropriate investigations (e.g., erythrocyte sedimentation rate measurement, tonometry).	*Clinical Reasoning*	*Investigation*
	d) Refer the patient appropriately (if unsure of the diagnosis or if further work-up is needed).	*Clinical Reasoning*	*Referral*
3	In patients presenting with an ocular foreign body sensation, correctly diagnose an intraocular foreign body by clarifying the mechanism of injury (e.g., high speed, metal on metal, no glasses) and investigating (e.g., with computed tomography, X-ray examination) when necessary.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
4	In patients presenting with an ocular foreign body sensation, evert the eyelids to rule out the presence of a conjunctival foreign body.	*Clinical Reasoning* *Procedures Skills*	*Hypothesis generation* *Physical*
5	In neonates with conjunctivitis (not just blocked lacrimal glands or "gunky" eyes), look for a systemic cause and treat it appropriately (i.e., with antibiotics).	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
6	In patients with conjunctivitis, distinguish by history and physical examination between allergic and infectious causes (viral or bacterial).	*Clinical Reasoning*	*Diagnosis* *History*
7	In patients who have bacterial conjunctivitis and use contact lenses, provide treatment with antibiotics that cover for *Pseudomonas*.	*Clinical Reasoning*	*Treatment*
8	Use steroid treatment only when indicated (e.g., to treat iritis; avoid with keratitis and conjunctivitis).	*Clinical Reasoning*	*Treatment*
9	In patients with iritis, consider and look for underlying systemic causes (e.g., Crohn's disease, lupus, ankylosing spondylitis).	*Clinical Reasoning*	*Hypothesis generation*

Renal Failure

	Key Feature	*Skill*	*Phase*
1	In patients with chronic renal failure ensure they are aware of their diagnosis and its implications.	*Communication* *Patient-centred Approach*	*Treatment*
2	In any patient mitigate the risks of precipitating renal failure when investigation and treatment combinations are likely to be harmful (e.g., metformin and contrast dye, bowel preparation).	*Clinical reasoning*	*Hypothesis* *Treatment*
3	When prescribing drugs to a patient in renal failure: a) Determine drug safety (e.g., interactions, dose adjustments, metabolic considerations)	*Clinical r3easoning*	*Treatment*
	b) Adjust doses when appropriate (e.g., ACE inhibitors, angiotensin II receptor blockers, metformin, allopurinol, antibiotics, low molecular weight heparin, direct oral anticoagulants)	*Clinical reasoning*	*Treatment*
	c) Monitor the impact of the drug on the renal function more frequently	*Clinical reasoning* *Selectivity*	*Follow-up*
4	Advise patients with existing moderate or severe renal failure to pay close attention to hydration (e.g., when travelling, elderly patients in hot weather, when ill) to avoid exacerbating their condition.	*Clinical reasoning*	*Treatment*
5	Advise patients with existing renal failure to avoid certain over-the-counter treatments (e.g., NSAIDS, herbals, supplements) as they may worsen their condition.	*Clinical reasoning*	*Treatment*
6	In patients with moderate or severe renal failure provide anticipatory guidance that if they become ill and cannot maintain fluid intake they should: • Stop certain medications promptly (e.g., ACE inhibitors, diuretics) • Seek prompt reassessment	*Clinical reasoning* *Selectivity*	*Treatment*
7	In a patient with an exacerbation of their renal failure (acute on chronic renal failure): a) Correct factors (e.g., hydration, pneumonia, congestive heart failure, urinary retention)	*Clinical reasoning*	*Treatment*
	b) Stop drugs that might be aggravating the situation (e.g., ACE inhibitors, metformin)	*Clinical reasoning* *Selectivity*	*Treatment*
	c) Determine the appropriateness of restarting medications, once renal function has stabilized	*Clinical reasoning* *Selectivity*	*Treatment*
8	Monitor patients with renal failure periodically, as some patients will worsen over time.	*Clinical reasoning*	*Follow-up*
9	For patients with renal failure determine, based on patient factors and local resources, if and when consultation is required (e.g., progressive renal failure, bone disease, refractory anemia, mild renal failure in a young person).	*Clinical reasoning* *Selectivity*	*Treatment* *Follow-up*
10	Ensure those involved in consultant care of patients with renal failure are aware of other important health considerations that may affect decision making around treatment (e.g., patient preferences, frailty, malignancy, consideration of dialysis in patients with cognitive impairment).	*Communication*	*Follow-up* *Referral*

Schizophrenia

	Key Feature	*Skill*	*Phase*
1	In adolescents and young adults presenting with problem behaviours: a) Consider schizophrenia in the differential diagnosis b) Reassess the diagnosis as the situation evolves	*Clinical reasoning* *Clinical reasoning*	*Hypothesis generation* *Diagnosis* *Hypothesis generation* *Diagnosis*
2	In apparently stable patients with schizophrenia (e.g., those who are not floridly psychotic) assess periodically in a structured fashion (ideally seeking collateral information from family members and other caregivers): • Positive and negative symptoms • Performance of activities of daily living and their level of social functioning • Ideation of harm to themslves or others, including the risk for violence • Medication compliance and side effects • Substance use • Capacity to accept or refuse treatement	*Clinical reasoning*	*History*
3	When caring for patients with psychosis clearly communicate limits of confidentiality to the patient and the family	*Professionalism* *Communication*	*Treatment*
4	In all patients presenting with psychotic symptoms inquire about substance use and abuse.	*Clinical reasoning*	*History*
5	In patients with schizophrenia ensure early treatment and follow-up, including referral and collaborative care, because this may improve prognosis.	*Clinical reasoning* *Communication*	*Treatment* *Referral*
6	In decompensating patients with schizophrenia determine if substance use is a contributor, whether there are medication compliance and side-effect problems, and if psychosocial supports have changed.	*Clinical reasoning*	*Hypothesis generation* *Diagnosis*
7	In a decompensating patient with schizophrenia, a) Determine whether they meet the criteria for involuntary treatment b) Help the patient understand why this is necessary c) Clarify your continuing role in care	*Clinical Reasoning* *Professionalism* *Communication* *Patient Centred Communication*	*Diagnosis* *Treatment* *Referral* *Follow-up*
8	Diagnose and manage serious complications/side effects of antipsychotic medications (e.g., neuroleptic malignant syndrome, tardive dyskinesia, cardiometabolic risks).	*Clinical reasoning*	*Treatment* *Diagnosis*
9	Include psychosocial supports (e.g., social determinants of health, family support, disability issues, vocational rehabilitation) as part of the treatment plan for patients with schizophrenia.	*Patient-centred Approach* *Selectivity*	*Treatment* *Referral*

Seizures

	Key Feature	*Skill*	*Phase*
1	In a patient having a seizure: a) Ensure proper airway control (e.g., oropharyngeal airway or nasal trumpet, lateral decubitus to prevent aspiration).	*Clinical Reasoning*	*Treatment*
	b) Use drugs (e.g., benzodiazepines, phenytoin) promptly to stop the seizure, even before the etiology is confirmed.	*Clinical Reasoning*	*Treatment*
	c) Rule out reversible metabolic causes in a timely fashion (e.g., hypoglycemia, hypoxia, heat stroke, electrolytes abnormalities).	*Clinical Reasoning Selectivity*	*Diagnosis* *Hypothesis generation*
2	In a patient presenting with an ill-defined episode (e.g., fits, spells, turns), take a history to distinguish a seizure from other events.	*Clinical Reasoning*	*History*
3	In a patient presenting with a seizure, take an appropriate history to direct the investigation (e.g., do not overinvestigate; a stable known disorder may require only a drug-level measurement, while new or changing seizures may require an extensive work-up).	*Clinical Reasoning*	*History*
4	In all patients presenting with a seizure, examine carefully for focal neurologic findings.	*Clinical Reasoning*	*Physical*
5	In a patient with a previously known seizure disorder, who presents with a seizure or a change in the pattern of seizures: a) Assess by history the factors that may affect the primary seizure disorder (e.g., medication compliance, alcohol use, lifestyle, recent changes in medications [not just antiepileptic medications], other illnesses).	*Clinical Reasoning*	*History*
	b) Include other causes of seizure in the differential diagnosis. (Not all seizures are caused by epilepsy.)	*Clinical Reasoning*	*Hypothesis generation*
6	In the ongoing care of a patient with a stable seizure disorder: a) Regularly inquire about compliance (with medication and lifestyle measures). side effects of anticonvulsant medication, and the impact of the disorder and its treatment on the patient's life (e.g., on driving, when seizures occur at work or with friends).	*Clinical Reasoning* *Patient-centred Approach*	*Treatment* *History*
	b) Monitor for complications of the anticonvulsant medication (e.g., hematologic complications, osteoporosis).	*Clinical Reasoning*	*Hypothesis generation*
	c) Modify management of other health issues taking into account the anticonvulsant medication (e.g., in prescribing antibiotics, pregnancy).	*Clinical Reasoning*	*Treatment*

Sex

	Key Feature	*Skill*	*Phase*
1	Ask about sexual health and function, in a sensitive manner, when appropriate, e.g.: • In conditions with higher risk for sexual dysfunction (e.g., post-MI, diabetes, use of certain medications) • Throughout life cycle transitions (e.g., adolescence, pregnancy, menopause, andropause) • Not assuming sexual inactivity within specific populations (e.g., people with disabilities, seniors, singles)	*Clinical reasoning*	*History*
2	Educate patients about sexual health, consent, and safety, especially patients at risk (e.g., for stigmatization, exploitation), using plain language appropriate to the age, developmental stage, and culture of the patient.	*Clinical reasoning* *Communication*	*Treatment*
3	With a patient (especially adolescents or those in vulnerable situations) presenting with a concern about sex or sexuality explicitly discuss confidentiality.	*Communication* *Professionalism*	*Treatment*
4	In a patient presenting with sexual dysfunction, perform a thorough assessment (including specific systems; mental health; alcohol and substance use; relationship factors and impacts; medication; and sexual history, including positive and negative experiences) to make an accurate diagnosis.	*Clinical reasoning*	*History* *Hypothesis generation*
5	When caring for a patient with gender or sexuality-related concerns:		
	a) Take opportunities to destigmatize gender and sexuality-related concerns (e.g., using the person's preferred pronoun, using terms such as partner instead of boyfriend)	*Communication* *Patient-centred Approach*	*History* *Treatment*
	b) Identify and recognize your own biases, manage them, and ensure the patient receives appropriate care	*Professionalism*	*History* *Treatment*
	c) Differentiate between sexual orientation, gender identity, and sexual function	*Clinical reasoning* *Selectivity*	*History*
	d) Refer the patient to appropriate specialty care when indicated	*Clinical reasoning*	*Referral*
	e) Inform the patient about available community resources	*Communication*	*Treatment*
6	When performing a physical examination that triggers an unexpected response:		
	a) Acknowledge the response	*Professionalism* *Communication*	*Physical* *Treatment*
	b) Stop the examination	*Professionalism*	*Physical*
	c) Discuss the response in a sensitive manner, respecting the dignity of the patient	*Communication* *Professionalism*	*Treatment*
	d) Decide on next steps together with the patient	*Patient-centred Approach* *Communication*	*Treatment*

Sexually Transmitted Infections

	Key Feature	*Skill*	*Phase*
1	In a patient who is sexually active or considering sexual activity, take advantage of opportunities to advise her or him about prevention, screening, and complications of sexually transmitted diseases (STIs).	*Patient-centred Approach* *Clinical Reasoning*	*Treatment*
2	In a patient with symptoms that are atypical or non-specific for STIs (e.g., dysuria, recurrent vaginal infections): a) Consider STIs in the differential diagnosis.	*Selectivity* *Clinical Reasoning*	*Hypothesis generation*
	b) Investigate appropriately.	*Clinical Reasoning Selectivity*	*Investigation*
3	In high-risk patients who are asymptomatic for STIs, screen and advise them about preventive measures.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment* *Investigation*
4	In high-risk patients who are symptomatic for STIs, provide treatment before confirmation by laboratory results.	*Clinical Reasoning Selectivity*	*Treatment*
5	In a patient requesting STI testing: a) Identify the reason(s) for requesting testing.	*Clinical Reasoning* *Patient-centred Approach*	*Hypothesis generation* *Treatment*
	b) Assess the patient's risk.	*Clinical Reasoning* *Patient-centred Approach*	*History* *Diagnosis*
	c) Provide counselling appropriate to the risk (i.e., human immunodeficiency virus [HIV] infection risk, non-HIV risk).	*Clinical Reasoning* *Patient-centred Approach*	*Diagnosis* *Treatment*
6	In a patient with a confirmed STI, initiate: • treatment of partner(s). • contact tracing through a public health or community agency.	*Clinical Reasoning*	*Treatment* *Follow-up*
7	Use appropriate techniques for collecting specimens.	*Procedures Skills Clinical Reasoning*	*Investigation* *Physical*
8	Given a clinical scenario that is strongly suspicious for an STI and a negative test result, do not exclude the diagnosis of an STI (i.e., because of sensitivity and specificity problems or other test limitations).	*Selectivity* *Clinical Reasoning*	*Diagnosis* *Investigation*

Shortness of Breath

	Key Feature	*Skill*	*Phase*
1	In a patient with a new presentation of shortness of breath take a sufficient history to avoid inappropriately or prematurely limiting the diagnosis to respiratory and cardiac causes (i.e., consider causes such as hematologic, environmental, psychogenic, deconditioning, gastrointestinal).	*Clinical reasoning*	*Hypothesis* *History*
2	Regardless of where you assess the patient who presents with shortness of breath (e.g., office, home visit) consider life-threatening conditions (e.g., pulmonary embolus, foreign body aspiration in a child, anaphylaxis, myocardial infarction).	*Selectivity*	*Hypothesis*
3	When a patient with a diagnosed cause of dyspnea presents with worsening symptoms or treatment failure:		
	a) Ask about other factors that might have exacerbated their symptoms (e.g., new pets, environmental factors, medication technique/adherence, dietary changes)	*Clinical reasoning*	*Hypothesis* *History*
	b) Re-evaluate your primary diagnosis (i.e., the original diagnosis may have been incorrect)	*Clinical reasoning*	*Hypothesis*
	c) Consider co-existing diagnoses (e.g., a patient with asthma who has pneumonia)	*Clinical reasoning*	*Hypothesis*
4	In an anxious patient with shortness of breath don't assume anxiety is the cause of their symptoms.	*Clinical reasoning* *Selectivity*	*Hypothesis*

Skin Disorder

	Key Feature	*Skill*	*Phase*
1	In dealing with a persistent skin problem that is not responding to treatment as expected: a) Reconsider the diagnosis (e.g., "eczema" may really be a fungal infection).	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	b) Investigate or modify treatment (e.g., for acne).	*Clinical Reasoning*	*Treatment* *Investigation*
2	In a patient presenting with a skin lesion, distinguish benign from serious pathology (e.g., melanoma, pemphigus, cutaneous T-cell lymphoma) by physical examination and appropriate investigations (e.g., biopsy or excision).	*Selectivity* *Clinical Reasoning*	*Physical* *Investigation*
3	In a patient presenting with a cutaneous manifestation of a systemic disease or condition (e.g., Wegener's granulomatosis, lupus, a drug reaction), consider the diagnosis of systemic disease and confirm it through history, physical examination, and appropriate investigations.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
4	When prompted by a patient with a concern about a localized skin lesion or when screening for mucocutaneous lesions, inspect all areas of the skin (e.g., nails, scalp, oral cavity, perineum, soles of the feet, back of the neck).	*Clinical Reasoning*	*Physical*
5	Diagnose and promptly treat suspected life-threatening dermatologic emergencies (e.g., Stevens-Johnson syndrome, invasive cellulitis, chemical or non-chemical burns).	*Selectivity*	*Diagnosis* *Hypothesis generation*
6	In high-risk patients (diabetics, bed or chair bound, peripheral vascular disease): a) Examine the skin even when no specific skin complaint is present.	*Clinical Reasoning Selectivity*	*Physical*
	b) Treat apparently minor skin lesions aggressively.	*Clinical Reasoning Selectivity*	*Treatment*
7	In a patient being treated for a new or persistent skin condition (e.g., acne, psoriasis), determine the impact on the patient's personal and social life.	*Patient-centred Approach*	*Treatment* *History*

Smoking Cessation

	Key Feature	*Skill*	*Phase*
1	In all patients, regularly evaluate and document smoking status, recognizing that people may stop or start at any time.	*Clinical Reasoning*	*Hypothesis generation* *Follow-up*
2	In smokers: a) Discuss the benefits of quitting or reducing smoking.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
	b) Regularly assess interest in quitting or reducing smoking.	*Clinical Reasoning*	*History* *Follow-up*
3	In smokers motivated to quit, advise the use of a multi-strategy approach to smoking cessation.	*Clinical Reasoning* *Communication*	*Treatment* *Follow-up*

Somatization

	Key Feature	*Skill*	*Phase*
1	In patients with recurrent unexplained or confusing symptoms: a) Do not attribute symptoms to somatization unless an adequate workup rules out any medical or psychiatric condition (e.g., depression)	*Clinical reasoning* *Patient-centred Approach*	*Hypothesis generation* *Diagnosis*
	b) Reassess the symptoms periodically as they may evolve into diagnosable medical conditions/mental health diagnoses or remain unexplained	*Clinical reasoning* *Selectivity*	*Follow-up*
2	When a patient presents with symptoms that may be somatoform (e.g., caused by emotional distress) clearly distinguish between the stressed individual with somatoform traits and somatic symptom disorder by using established diagnostic criteria.	*Clinical reasoning* *Selectivity*	*Diagnosis*
3	In patients with a previously diagnosed somatic symptom disorder do not assume that somatization is the cause of new or ongoing symptoms.	*Clinical reasoning* *Patient-centred Approach*	*Hypothesis generation*
4	In patients who somatize acknowledge the illness experience and strive to find common ground with them concerning their diagnosis and management, including investigations.	*Patient-centred Approach* *Communication*	*Diagnosis* *Treatment*
5	When a patient presents frequently with medically inconsistent or confusing symptoms that are not worrisome: a) Order investigations judiciously	*Clinical reasoning* *Selectivity*	*Investigation*
	b) Educate the patient about the connection between physical symptoms and psychological distress	*Patient-centred Approach* *Communication*	*Treatment*
6	In a patient with existing mental health conditions do not dismiss new physical symptoms as somatization without appropriate assessment.	*Clinical reasoning* *Selectivity*	*Treatment* *Follow-up*
7	When caring for a patient with somatization identify and manage your own emotional responses.	*Professionalism* *Patient-centred Approach*	*Treatment* *Follow-up*
8	When somatic symptom disorder has been established as the most likely diagnosis recommend and discuss evidence-informed psychotherapy and refer when appropriate, ensuring appropriate ongoing care and follow-up.	*Patient-centred Approach* *Clinical reasoning*	*Treatment* *Referral*
9	In patients who have somatic symptoms inquire about the use of and suggest therapies that may provide symptomatic relief and/or help them cope with their symptoms.	*Professionalism* *Patient-centred Approach*	*History* *Treatment*

Stress

	Key Feature	*Skill*	*Phase*
1	In a patient presenting with a symptom that could be attributed to stress (e.g., headache, fatigue, pain) consider and ask about stress as a cause or contributing factor.	*Clinical Reasoning* *Communication*	*Hypothesis generation* *History*
2	In a patient in whom stress is identified, assess the impact of the stress on their function (i.e., coping vs. not coping, stress vs. distress).	*Patient-centred Approach*	*History* *Diagnosis*
3	In patients not coping with stress, look for and diagnose, if present, mental illness (e.g., depression, anxiety disorder).	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
4	In patients not coping with the stress in their lives, a) Clarify and acknowledge the factors contributing to the stress,	*Patient-centred Approach* *Clinical Reasoning*	*History*
	b) Explore their resources and possible solutions for improving the situation.	*Patient-centred Approach*	*History* *Treatment*
5	In patients experiencing stress, look for inappropriate coping mechanisms (e.g., drugs, alcohol, eating, violence).	*Clinical Reasoning* *Communication*	*Hypothesis generation* *History*

Stroke

	Key Feature	*Skill*	*Phase*
1	In patients presenting with symptoms and/or signs suggestive of stroke, include other diagnoses in the differential diagnosis (e.g., transient ischemic attack [TIA], brain tumour, hypoglycemia, subdural hematoma, subarachnoid bleed).	*Clinical Reasoning*	*Hypothesis generation*
2	In a patient presenting with a stroke, differentiate, if possible, hemorrhagic from embolic/thrombotic stroke (e.g., through the history, physical examination, and ancillary testing, such as scanning and electrocardiography), as treatment differs.	*Clinical Reasoning*	*Diagnosis*
3	Assess patients presenting with neurologic deficits in a timely fashion, to determine their eligibility for thrombolysis.	*Selectivity*	*Treatment*
4	In a patient diagnosed with stroke, involve other professionals as needed (e.g., a physical therapist, an occupational therapist, social service personnel, a physiatrist, a neurologist) to ensure the best outcome for the patient.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment* *Referral*
5	When caring for a stroke patient with severe/serious deficits, involve the patient and her or his family in decisions about intervention (e.g., resuscitation, use of a feeding tube, treatment of pneumonia).	*Patient-centred Approach* *Communication*	*Treatment*
6	In patients who have suffered stroke, diagnose "silent" cognitive deficits (not associated with sensory or motor symptoms or signs, such as inattention and impulsivity) when they are present.	*Clinical Reasoning*	*Diagnosis*
7	Provide realistic prognostic advice about their disabilities to stroke patients and their families.	*Patient-centred Approach*	*Treatment*
8	In stroke patients with disabilities, evaluate the resources and supports needed to improve function (e.g., a cane, a walker, home care).	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
9	In the continuing care of stroke patients with deficits (e.g., dysphagia, being bedridden), include the prevention of certain complications (e.g., aspiration pneumonia, decubitus ulcer) in the treatment plan, as they are more common.	*Clinical Reasoning*	*Treatment* *Hypothesis generation*
10	In patients at risk of stroke, treat modifiable risk factors (e.g., atrial fibrillation, diabetes, hyperlipidemia, and hypertension).	*Clinical Reasoning*	*Treatment*
11	In all patients with a history of TIA or completed stroke, and in asymptomatic patients at high risk for stroke, offer antithrombotic treatment (e.g., acetylsalicylic acid, clopidogrel) to appropriate patients to lower stroke risk.	*Clinical Reasoning*	*Treatment*

Substance use and addiction

	Key Feature	*Skill*	*Phase*
1	In all patients, and especially in high-risk groups (e.g., those with mental health issues, chronic disability), opportunistically ask about substance use (tobacco, alcohol, other substances).	*Patient-centred Approach* *Selectivity*	*History* *Hypothesis generation*
2	For a patient using alcohol or substances (including those who use them only occasionally): a) Discuss the possible impact of their use on themselves and others (e.g., risk to children, sexual indiscretion)	*Patient-centred Approach* *Professionalism*	*Treatment*
	b) Discuss harm-reduction strategies in detail (e.g., needle exchange, not drinking and driving, immunizations)	*Clinical reasoning* *Patient-centred Approach*	*Treatment*
3	For any patient presenting with a functional decline, confusion, or delirium, assess for alcohol/substance use and withdrawal, even when other causes may seem more apparent.	*Clinical reasoning*	*Hypothesis generation* *Diagnosis*
4	Discuss substance use with adolescents and their caregivers when warning signs are present (e.g., school failure, behaviour change).	*Clinical reasoning* *Patient-centred Approach*	*Hypothesis generation* *Treatment*
5	Consider and look for substance use as a possible factor in problems not responding to appropriate intervention (e.g., alcohol use in patients with hypertriglyceridemia, inhalational drug use in asthmatic patients).	*Clinical reasoning* *Patient-centred Approach*	*Hypothesis generation* *Treatment*
6	For a patient with a medical problem being treated with opioids, stimulants, sedatives, or hypnotics: a) Episodically reassess their clinical problem to affirm the ongoing need for the medication	*Clinical reasoning* *Selectivity*	*History* *Follow-up*
	b) Discuss tapering and cessation planning when appropriate	*Clinical reasoning* *Patient-centred Approach*	*Treatment* *Follow-up*
	c) Discuss safety and security of medication (e.g. storing, risk to children, diversion, misuse)	*Patient-centred Approach*	*Treatment*
7	For a patient requesting or requiring a new prescription for opioids, stimulants, or tranquillizers: a) Assess alcohol and substance use	*Clinical reasoning*	*History* *Hypothesis generation*
	b) Explain clearly the benefits and risks, and do not prescribe before the risks of misuse have been assessed and mitigated	*Clinical reasoning* *Professionalism*	*Treatment*
8	In patients who use substances or those with a substance use disorder, regularly determine their readiness to change their patterns of use.	*Clinical reasoning* *Patient-centred Approach*	*Diagnosis* *Follow-up*

9	For a patient with an alcohol or substance use disorder, assess their level of motivation and engage them in the development of an individualized plan for withdrawal and ongoing treatment that involves: • Appropriate use of pharmacotherapy (e.g., methadone, acamprosate) • Use of community resources and other health professionals • Appropriate follow-up with you	*Patient-centred Approach* *Clinical reasoning*	*Treatment*
10	In patients with a substance use disorder take advantage of opportunities to screen for comorbidities (e.g., poverty, crime, sexually transmitted infections, mental health issues) and long-term complications (e.g., cirrhosis).	*Clinical reasoning* *Patient-centred Approach*	*History* *Physical*
11	Offer support to patients and family members affected by substance use disorder. (The user may not be your patient.)	*Patient-centred Approach*	*Treatment*

Suicide

	Key Feature	*Skill*	*Phase*
1	Actively inquire about suicidal and homicidal ideation (e.g., ideas, thoughts, a specific plan), particularly when caring for patients with chronic illness, mental illness, or substance use problems; recent loss or emotional distress; impulsivity; or repeated suicidal ideation or attempts.	*Clinical reasoning* *Selectivity*	*History*
2	Given a suicidal patient, assess the degree of risk (e.g., thoughts, specific plans, access to means, impulsivity) to determine an appropriate intervention and follow-up plan.	*Clinical reasoning*	*Diagnosis*
3	In patients who present with self-injury (e.g., cutting): a) Assess the risk of suicide, but do not assume that this is a suicidal gesture (not all people who cut are suicidal, but some are)	*Clinical reasoning*	*History*
	b) Explore the underlying emotional distress	*Patient-centred Approach*	*History*
	c) Discuss alternative adaptive coping strategies	*Clinical reasoning* *Patient-centred Approach*	*Treatment*
4	In patients at low risk of suicide whom you are managing in the community: a) Provide specific instructions for follow-up	*Communication*	*Follow-up*
	b) Develop an appropriate contingency plan with the patient should their suicidal ideation progress/worsen	*Patient-centred Approach*	*Treatment* *Follow-up*
5	When assessing and managing a patient at risk of harm to themselves or others that has been reported by proxy, balance the patient's and the informant's rights to confidentiality with the risk of harm to the patient, the informant, or others.	*Clinical reasoning* *Professionalism*	*Diagnosis* *Treatment*
6	In suicidal patients presenting at the emergency department with a suspected drug overdose always screen for acetylsalicylic acid and acetaminophen overdoses as these are common, dangerous, and frequently overlooked.	*Clinical reasoning*	*Hypothesis generation* *Investigation*
7	In trauma patients consider attempted suicide as the precipitating cause.	*Clinical reasoning*	*History* *Hypothesis generation*

Thyroid

	Key Feature	*Skill*	*Phase*
1	Limit testing for thyroid disease to appropriate patients, namely those with a significant pre-test probability of abnormal results, such as: • those with classic signs or symptoms of thyroid disease • those whose symptoms or signs are not classic, but who are at a higher risk for disease (e.g., the elderly, postpartum women, those with a history of atrial fibrillation, those with other endocrine disorders)	*Clinical Reasoning Selectivity*	*Investigation*
2	In patients with established thyroid disease, do not check thyroid-stimulating hormone levels too often, but rather test at the appropriate times, such as: • after changing medical doses • when following patients with mild disease before initiating treatment • periodically in stable patients receiving treatment	*Clinical Reasoning Selectivity*	*Investigation*
3	When examining the thyroid gland, use proper technique (i.e., from behind the patient, ask the patient to swallow), especially to find nodules (which may require further investigation).	*Procedures Skills*	*Physical*
	Note: The investigation of thyroid nodules is not covered here.		

Trauma

	Key Feature	*Skill*	*Phase*
1	Assess and stabilize trauma patients with an organized approach, anticipating complications in a timely fashion, using the primary and secondary surveys.	*Clinical Reasoning*	*Treatment* *Physical*
2	Suspect, identify, and immediately begin treating life-threatening complications (e.g., tension pneumothorax, tamponade).	*Selectivity*	*Treatment* *Diagnosis*
3	When faced with several trauma patients, triage according to resources and treatment priorities.	*Selectivity*	*Treatment*
4	In trauma patients, secure the airway appropriately (e.g., assume cervical spine injury, use conscious sedation, recognize a difficult airway, plan for back-up methods/cricothyrotomy).	*Clinical Reasoning Selectivity*	*Treatment* *Hypothesis generation*
5	In a patient with signs and symptoms of shock: a) Recognize the shock.	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Diagnosis*
	b) Define the severity and type (neurogenic, hypovolemic, septic).	*Clinical Reasoning Selectivity*	*Physical* *Diagnosis*
	c) Treat the shock.	*Clinical Reasoning Selectivity*	*Treatment*
6	In trauma patients, rule out hypothermia on arrival and subsequently (as it may develop during treatment).	*Clinical Reasoning*	*Hypothesis generation* *Physical*
7	Suspect certain medical problems (e.g., seizure, drug intoxication, hypoglycemia, attempted suicide) as the precipitant of the trauma.	*Clinical Reasoning*	*Hypothesis generation*
8	Do not move potentially unstable patients from treatment areas for investigations (e.g., computed tomography, X-ray examination).	*Clinical Reasoning*	*Treatment Investigation*
9	Determine when patient transfer is necessary (e.g., central nervous system bleeds, when no specialty support is available).	*Selectivity* *Clinical Reasoning*	*Treatment* *Referral*
10	Transfer patients in an appropriate manner (i.e., stabilize them before transfer and choose the method, such as ambulance or flight).	*Clinical Reasoning*	*Treatment* *Referral*
11	Find opportunities to offer advice to prevent or minimize trauma (e.g., do not drive drunk, use seatbelts and helmets).	*Clinical Reasoning*	*Treatment*
12	In children with traumatic injury, rule out abuse. (Carefully assess the reported mechanism of injury to ensure it corresponds with the actual injury.)	*Clinical Reasoning Selectivity*	*Diagnosis* *Hypothesis generation*

Travel Medicine

	Key Feature	*Skill*	*Phase*
1	Make sure travelers get up to date, timely, itinerary-specific advice from a reliable source (e.g., travel clinic, travel website).	*Clinical Reasoning*	*History* *Hypothesis generation*
2	When seeing patients planning travel, discuss the common, non-infectious perils of travel (e.g., accidents, safer sex, alcohol, safe travel for women).	*Clinical Reasoning*	*History* *Hypothesis generation*
3	In patients presenting with symptoms of infection without an obvious cause, especially those with a fever, enquire about recent travel history to identify potential sources (especially, but not exclusively, malaria).	*Patient-centred Approach* *Communication*	*Hypothesis generation* *Follow-up*
4	Provide prevention and treatment advice and prescribe medications for common conditions associated with travel (e.g., traveler's diarrhea, altitude sickness).	*Patient-centred Approach* *Clinical Reasoning*	*Treatment* *Referral*
5	Ensure patients understand how to manage their chronic disease while traveling (e.g., diabetes, asthma, international normalized ratios [INRs]).	*Clinical Reasoning*	*Treatment*
6	Use patient visits for travel advice as an opportunity to update routine vaccinations.	*Clinical Reasoning Selectivity*	*Treatment* *Hypothesis generation*
7	Advise patients to check insurance coverage issues especially in regard to recent changes in chronic disease and any recent treatment changes.	*Professionalism*	*Treatment* *Hypothesis generation*
8	Advise patients traveling with medications to have an adequate supply, documentation of need for use, and to transport them securely (e.g., carry-on bag).	*Clinical Reasoning*	*Treatment* *Hypothesis generation*

Upper Respiratory Tract Infection

	Key Feature	*Skill*	*Phase*
1	Given an appropriate history and/or physical examination: a) Differentiate life-threatening conditions (epiglottitis, retropharyngeal abscess) from benign conditions.	*Selectivity*	*Diagnosis*
	b) Manage the condition appropriately.	*Clinical Reasoning*	*Treatment*
2	Make the diagnosis of bacterial sinusitis by taking an adequate history and performing an appropriate physical examination, and prescribe appropriate antibiotics for the appropriate duration of therapy.	*Clinical Reasoning*	*History* *Treatment*
3	In a patient presenting with upper respiratory symptoms: a) Differentiate viral from bacterial infection (through history and physical examination).	*Clinical Reasoning*	*History* *Diagnosis*
	b) Diagnose a viral upper respiratory tract infection (URTI) (through the history and a physical examination).	*Clinical Reasoning*	*Diagnosis*
	c) Manage the condition appropriately (e.g., do not give antibiotics without a clear indication for their use).	*Clinical Reasoning* *Communication*	*Treatment*
4	Given a history compatible with otitis media, differentiate it from otitis externa and mastoiditis, according to the characteristic physical findings.	*Clinical Reasoning*	*Diagnosis* *Physical*
5	In high-risk patients (e.g., those who have human immunodeficiency virus infection, chronic obstructive pulmonary disease, or cancer) with upper respiratory infections: Lood for complications more aggressively, and follow up more closely.	*Clinical Reasoning*	*Hypothesis generation* *Follow-up*
6	In a presentation of pharyngitis, look for mononucleosis.	*Clinical Reasoning*	*Hypothesis generation* *Physical*
7	In high-risk groups: a) Take preventive measures (e.g., use flu and pneumococcal vaccines).	*Selectivity Patient-centred Approach*	*Treatment*
	b) Treat early to decrease individual and population impact (e.g., with oseltamivir phosphate [Tamiflu], amantadine).	*Clinical Reasoning* *Professionalism*	*Treatment*

Urinary Tract Infection

	Key Feature	*Skill*	*Phase*
1	Take an appropriate history and do the required testing to exclude serious complications of urinary tract infection (UTI) (e.g., sepsis, pyelonephritis, impacted infected stones).	*Clinical Reasoning*	*Hypothesis generation* *Investigation*
2	Appropriately investigate all boys with urinary tract infections, and young girls with recurrences(e.g., ultrasound).	*Clinical Reasoning*	*Investigation*
3	In diagnosing urinary tract infections, search for and/or recognize high-risk factors on history (e.g., pregnancy; immune compromise, neonate, a young male, or an elderly male with prostatic hypertrophy).	*Clinical Reasoning*	*Hypothesis generation* *History*
4	In a patient with a diagnosed urinary tract infection, modify the choice and duration of treatment according to risk factors (e.g., pregnancy, immunocompromise, male extremes of age); and treat before confirmation of culture results in some cases (e.g.,pregnancy, sepsis, pyelonephritis).	*Selectivity*	*Treatment*
5	Given a non-specific history (e.g., abdominal pain, fever, delirium) in elderly or very young patients, suspect the diagnosis and do an appropriate work-up.	*Clinical Reasoning*	*Hypothesis generation* *Investigation*
6	In a patient with dysuria, exclude other causes (e.g., sexually transmitted diseases, vaginitis, stones, interstitial cystitis, prostatitis) through an appropriate history, physical examination, and investigation before diagnosing a urinary tract infection.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*

Vaginal Bleeding

	Key Feature	*Skill*	*Phase*
1	In any woman with vaginal bleeding, rule out pregnancy.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
2	In pregnant patients with vaginal bleeding a) Consider worrisome causes (e.g., ectopic pregnancy, abruption, abortion), and confirm or exclude the diagnosis through appropriate interpretation of test results.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	b) Do not forget blood typing and screening, and offer rH immunoglobulin treatment, if appropriate.	*Clinical Reasoning*	*Treatment* *Hypothesis generation*
	c) Diagnose (and treat) hemodynamic instability.	*Selectivity* *Clinical Reasoning*	*Diagnosis* *Treatment*
3	In a non-pregnant patient with vaginal bleeding: a) Do an appropriate work-up and testing to diagnose worrisome causes (e.g., cancer), using an age-appropriate approach.	*Clinical Reasoning*	*Investigation* *Diagnosis*
	b) Diagnose (and treat) hemodynamic instability.	*Clinical Reasoning* *Selectivity*	*Diagnosis* *Treatment*
	c) Manage hemodynamically stable but significant vaginal bleeding (e.g., with medical versus surgical treatment).	*Clinical Reasoning*	*Treatment*
4	In a post-menopausal woman with vaginal bleeding, investigate any new or changed vaginal bleeding in a timely manner (e.g., with endometrial biopsy testing, ultrasonography, computed tomography, a Pap test, and with a pelvic examination).	*Clinical Reasoning*	*Investigation*

Vaginitis

	Key Feature	*Skill*	*Phase*
1	In patients with recurrent symptoms of vaginal discharge and/or perineal itching, have a broad differential diagnosis (e.g., lichen sclerosus et atrophicus, vulvar cancer, contact dermatitis, colovaginal fistula), take a detailed history, and perform a careful physical examination to ensure appropriate investigation or treatment. (Do not assume that the symptoms indicate just a yeast infection.)	*Clinical Reasoning*	*Hypothesis generation* *Physical*
2	In patients with recurrent vaginal discharge, no worrisome features on history or physical examination, and negative tests, make a positive diagnosis of physiologic discharge and communicate it to the patient to avoid recurrent consultation, inappropriate trreatment, and investigation in the future.	*Clinical Reasoning*	*Diagnosis*
3	When bacterial vaginosis and candidal infections are identified through routine vaginal swab or Pap testing, ask about symptoms and provide treatment only when it is appropriate.	*Clinical Reasoning Selectivity*	*History* *Treatment*
4	In a child with a vaginal discharge, rule out sexually transmitted infections and foreign bodies. (Do not assume that the child has a yeast infection.)	*Clinical Reasoning Selectivity*	*Hypothesis generation* *Diagnosis*
5	In a child with a candidal infection, look for underlying illness (e.g., immunocompromise, diabetes).	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*

Violent/Aggressive Patient

	Key Feature	*Skill*	*Phase*
1	In certain patient populations (e.g., intoxicated patients, psychiatric patients, patients with a history of violent behaviour):		
	a) Anticipate possible violent or aggressive behaviour.	*Clinical Reasoning*	*Hypothesis generation*
	b) Recognize warning signs of violent/aggressive behaviour.	*Clinical Reasoning*	*Diagnosis*
	c) Have a plan of action before assessing the patient (e.g., stay near the door, be accompanied by security or other personnel, prepare physical and/or chemical restraints if necessary).	*Clinical Reasoning*	*Treatment*
2	In all violent or aggressive patients, including those who are intoxicated, rule out underlying medical or psychiatric conditions (e.g., hypoxemia, neurologic disorder, schizophrenia) in a timely fashion (i.e., don`t wait for them to sober up, and realize that their calming down with or without sedation does not necessariy mean they are better).	*Clinical Reasoning Selectivity*	*Hypothesis generation*
3	In a violent or aggressive patient, ensure the safety (including appropriate restraints) of the patient and staff before assessing the patient.	*Clinical Reasoning Professionalism*	*Treatment*
4	In managing your practice environment (e.g., office, emergency department), draw up a plan to deal with patients who are verbally or physically aggressive, and ensure your staff is aware of this plan and able to apply it.	*Professionalism*	*Treatment*

Well-baby Care

	Key Feature	*Skill*	*Phase*
1	Measure and chart growth parameters, including head circumference, at each assessment; examine appropriate systems at appropriate ages, with the use of an evidence-based pediatric flow sheet such as the Rourke Baby Record.	*Clinical Reasoning* *Procedures Skills*	*Physical*
2	Modify the routine immunization schedule in those patients who require it (e.g., those who are immunocompromised, those who have allergies).	*Clinical Reasoning Selectivity*	*Treatment*
3	Anticipate and advise on breast-feeding issues (e.g., weaning, returning to work, sleep patterns) beyond the newborn period to promote breast-feeding for as long as it is desired.	*Clinical Reasoning* *Patient-centred Approach*	*Hypothesis generation* *Treatment*
4	At each assessment, provide parents with anticipatory advice on pertinent issues (e.g., feeding patterns, development, immunization, parenting tips, antipyretic dosing, safety issues).	*Clinical Reasoning*	*Treatment*
5	Ask about family adjustment to the child (e.g., sibling interaction, changing roles of both parents, involvement of extended family).	*Patient-centred Approach*	*History*
6	With parents reluctant to vaccinate their children, address the following issues so that they can make an informed decision: • their understanding of vaccinations. • the consequences of not vaccinating (e.g., congenital rubella, death). • the safety of unvaccinated children (e.g., no Third World travel).	*Patient-centred Approach* *Clinical Reasoning*	*Treatment* *History*
7	When recent innovations (e.g., new vaccines) and recommendations (e.g., infant feeding, circumcision) have conflicting, or lack defined, guidelines, discuss this information with parents in an unbiased way to help them arrive at an informed decision.	*Professionalism* *Patient-centred Approach*	*Treatment*
8	Even when children are growing and developing appropriately, evaluate their nutritional intake (e.g., type, quality, and quantity of foods) to prevent future problems (e.g., anemia, tooth decay), especially in at-risk populations (e.g., the socioeconomicaly disadvantaged, those with voluntarily restricted diets, those with cultural variations)	*Clinical Reasoning*	*History* *Treatment*

Appendices

Priority Topics and Key Features for Rural and Remote Family Medicine

Priority Topics and Key Features for Intrapartum and Perinatal Care

Priority Topics and Key Features for Mental Health (other than those that overlap with the existing priority topics for family medicine)

2010 List of Core Procedures in Family Medicine

Priority Topics and Key Features for Rural and Remote Family Medicine[20]

Priority Topics

1. Trauma
2. Patient transfer
3. Septicemia
4. Pediatric emergencies
5. Acute cardiac presentations
6. Psychiatric emergencies
7. Diabetic emergencies
8. Active airway management
9. Urgent respiratory presentation
10. Fracture and dislocation management
11. Intrapartum care
12. Altered level of consciousness
13. Procedural sedation
14. Chronic pain
15. Indigenous health
16. Clinical courage
17. Adapting to rural life
18. Cultural safety and sensitivity

[20] Suggested citation: Blau E, Cambell G, Chase C, Dhillon P, Miller K, Geller B, et al. *Priority Topics and Key Features for the Assessment of Competence in Rural and Remote Family Medicine*. Mississauga, ON: College of Family Physicians of Canada; 2018

Trauma

	Key Feature	*Skill*	*Phase*
1	When a patient presents with trauma: a) Assess and stabilize life-threatening conditions using a standardized approach before addressing non-life-threatening distracting injuries.	*Clinical Reasoning* *Selectivity*	*Diagnosis* *Treatment*
	b) Reassess thoroughly while considering mechanisms of injury, possible underlying causes (e.g., intoxication, seizure, physical abuse), and patient as a whole.	*Clinical Reasoning* *Selectivity*	*Diagnosis* *Follow-up*
	c) Have a high index of suspicion for significant injuries, and differentiate between multi-organ and single-system trauma	*Clinical Reasoning* *Selectivity*	*Hypothesis generation* *Diagnosis*
2	When a need for transfer is suspected, initiate transfer process early. (*see also* Patient transfer)	*Selectivity* *Communication*	*Treatment* *Referral*
3	In a complex trauma situation (e.g., multi-patient), assume the leadership role by: • Communicating clearly • Multitasking and triaging appropriately • Assigning roles to your team members • Mobilizing your community's resources (e.g., off-service doctors, firefighters, police, clergy) early	*Professionalism*	*Treatment*
4	When treating patients with trauma, a) Reassess regularly for change in patient condition	*Clinical Reasoning*	*Hypothesis generation* *Follow-up*
	b) Maintain communication with the team, as well as the family, and inform them of any changes	*Communication*	*Treatment* *Follow-up*

See also: Trauma and Loss of Consciousness

Patient transfer

	Key Feature	*Skill*	*Phase*
1	With any patient potentially requiring transfer, consider the following factors: • Patient stability • Own and resources' limitations • Weather conditions and geographic factors • Prolonged transfer delays • Socio-cultural aspects, and patient's and family wishes	*Clinical Reasoning* *Selectivity*	*Hypothesis generation* *Treatment*
2	For all patients, assess and recognize those needing immediate transfer and do not delay the transfer for paperwork or further investigation unless it will change immediate management.	*Clinical Reasoning* *Selectivity*	*Treatment* *Referral*
3	When a transfer has been decided: a) Stabilize the patient and continue to reassess the conditions for transfer (e.g., weather) and patient's status	*Clinical Reasoning* *Selectivity*	*Treatment* *Follow-up*
	b) Initiate communication with the receiving team, clearly and assertively articulating needs and reasons for transfer	*Clinical Reasoning* *Communication*	*Treatment* *Referral*
	c) Assess for the best method(s) of transportation based on the patient's condition, and weather and geographic factors	*Selectivity*	*Hypothesis generation* *Referral*
	d) Anticipate possible transfer complications (e.g., barometric trauma, pressure sores) and prepare the patient accordingly (e.g., ensure IV lines and airway are secured, ensure adequate warming)	*Clinical Reasoning* *Procedure*	*Hypothesis generation* *Treatment*
	e) Identify the need for accompanying health professionals and consider the implications on the remaining health team and community	*Professionalism* *Selectivity*	*Hypothesis generation* *Treatment*
	f) Ensure ongoing communication with the family, the receiving hospital, and the team	*Communication*	*Referral* *Follow-up*
	g) Ensure adequate documentation	*Communication*	*Referral* *Follow-up*
4	1. During the transfer: a) Ensure regular reassessment of the patient's status, including body temperature and pressure points	*Clinical Reasoning*	*Treatment* *Follow-up*
	b) Maintain communication with the receiving hospital	*Communication*	*Referral* *Follow-up*
	a) Remain engaged and intervene as necessary until the safe handover to the receiving physician	*Communication* *Professionalism*	*Referral* *Follow-up*

See also: Trauma

Septicemia

	Key Feature	*Skill*	*Phase*
1	For a patient presenting with an infection: a) Recognize early symptoms and signs of sepsis, based on currently accepted guidelines	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	b) Be alert to presentations that can be subtle and atypical (e.g., in newborns, children, the elderly)	*Clinical Reasoning* *Selectivity*	*Hypothesis generation*
	c) Consider patients at risk (e.g., patients on biologic agents, patients with addiction)	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
2	For a patient presenting with signs and symptoms of sepsis: a) Manage with antibiotics immediately; do not delay treatment if there is difficulty in obtaining investigations (e.g., collecting culture, imaging)	*Clinical Reasoning* *Selectivity*	*Treatment*
	b) Be aware of the local antibiotic resistance patterns and institute therapy as indicated	*Clinical Reasoning* *Selectivity*	*Hypothesis generation* *Treatment*
	c) Consider antiviral and/or antifungal therapy	*Clinical Reasoning*	*Diagnosis* *Treatment*
3	Monitor septic patients closely and manage without delay as these patients decompensate quickly: • Recognize septic shock • Recognize the need for vasopressors • Proactively consider patient transfer, based on local treatment norms and capacity	*Selectivity*	*Treatment* *Follow-up*
4	When treating a septic patient, contact Public Health where applicable to ensure contacts are treated appropriately.	*Communication* *Professionalism*	*Treatment* *Follow-up*

See also: Infection

Pediatric emergencies

	Key Feature	*Skill*	*Phase*
1	When a child presents in distress: a) Anticipate rapid deterioration regardless of the setting, and identify life-threatening situations; do not underestimate the seriousness of symptoms if the child presents at the office and not the emergency department	*Clinical Reasoning* *Selectivity*	*History* *Hypothesis generation*
	b) Do not delay treatment and/or transfer when appropriate	*Clinical Reasoning* *Selectivity*	*Hypothesis generation* *Treatment*
	c) Mobilize appropriate resources	*Clinical Reasoning* *Communication*	*Treatment*
2	When assessing a child in distress: a) Check vital signs and measure height, weight, and glucose	*Clinical Reasoning* *Procedures Skills*	*Physical*
	b) Perform a comprehensive physical examination, recognizing that the history might be incomplete and considering that certain illnesses may present differently in children	*Clinical Reasoning* *Procedures Skills*	*Physical*
	c) Consider child abuse as an etiology and take appropriate action	*Clinical Reasoning*	*Hypothesis generation*
3	When developing a management plan for a child in distress: a) Prepare available pediatric equipment and supplies (e.g., intraosseous access, Broselow-pediatric emergency tape)	*Procedures Skills*	*Hypothesis generation* *Treatment*
	b) Base dosage on estimated weight, not age	*Clinical Reasoning* *Procedures Skills*	*Treatment*
4	When managing a child in distress: a) Be prepared for rapid decompensation	*Clinical Reasoning* *Selectivity*	*Hypothesis generation* *Treatment*
	b) Monitor constantly following a systematic approach, and be prepared to resuscitate	*Clinical Reasoning* *Selectivity*	*Treatment* *Follow-up*
5	After managing a pediatric emergency and especially after a negative outcome: a) Recognize the emotional impact on family, staff, the community, and yourself,	*Patient-centred Approach* *Professionalism*	*Follow-up*
	b) Debrief and address consequences appropriately	*Communication* *Professionalism*	*Follow-up*

See also: Advanced Cardiac Life Support and Trauma

Acute cardiac presentations

	Key Feature	*Skill*	*Phase*
1	For a patient with an acute cardiac presentation: a) Recognize the potentially unstable patient and the need for immediate intervention, consultation, and/ or transfer	*Clinical Reasoning*	*Diagnosis* *Treatment*
	b) Maintain a high index of suspicion and recognize variable presentations according to gender, age, and lifestyle	*Clinical Reasoning*	*Hypothesis generation*
2	For a patient presenting with symptoms indicative of a myocardial infarction: a) Order and interpret the ECG and available laboratory results in a timely fashion	*Clinical Reasoning* *Selectivity*	*Diagnosis* *Investigation*
	b) Initiate treatment based on patient presentation and ECG findings, in an environment where cardiac serology is not available	*Clinical Reasoning*	*Diagnosis* *Treatment*
	c) Identify patients requiring thrombolysis, considering absolute and relative contraindications, and manage any complications that arise	*Clinical Reasoning*	*Diagnosis* *Treatment*
	d) Assess the need for telephone consultation versus immediate or delayed transfer	*Clinical Reasoning* *Selectivity*	*Treatment* *Referral*

See also: Ischemic Heart Disease and Chest Pain

Psychiatric emergencies

	Key Feature	*Skill*	*Phase*
1	When developing a differential diagnosis for a patient presenting in a psychiatric crisis, consider cultural differences and potential underlying causes.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
2	For a patient with a diagnosed psychiatric crisis, identify safe disposition, taking into account: • Cultural and geographic setting • Local resources • Caregiver fatigue	*Clinical Reasoning*	*Treatment*
3	When considering admitting or transferring a patient in psychiatric crisis: a) Follow the provincial or territorial Mental Health Act, and be aware of the limitations of your local facility to admit and care for psychiatric emergencies	*Clinical Reasoning* *Professionalism*	*Treatment*
	b) Ensure safety for the patient, family, and staff	*Professionalism*	*Treatment*
	c) Advocate strongly for the patient's admission to the appropriate level of care	*Communication* *Professionalism*	*Treatment* *Referral*
4	When transferring a patient in psychiatric crisis, consider their need for sedation.	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
5	If faced with a co-worker, friend, or family member in a psychiatric crisis, recognize the possibility of your own discomfort, consult early, and hand over care as soon as possible.	*Professionalism*	*Treatment* *Referral*

See also: Schizophrenia, Depression and Suicide

Diabetic emergencies

	Key Feature	*Skill*	*Phase*
1	For a patient presenting with symptoms indicative of a blood sugar related emergency: a) Consider and identify hypo- and hyperglycemia even with atypical presentations (e.g., young patients with other symptoms, patients on newer classes of diabetic medications)	*Clinical Reasoning* *Selectivity*	*Hypothesis generation* *Diagnosis*
	b) Assess for underlying causes (e.g., infection, acute coronary syndrome)	*Clinical Reasoning*	*History* *Diagnosis*
	c) Evaluate the need for transfer	*Clinical Reasoning* *Selectivity*	*Treatment* *Referral*
2	For a patient presenting with a hyperglycemic emergency; a) Differentiate diabetic ketoacidosis (DKA) from hyperosmolar hyperglycemic state (HHS)	*Clinical Reasoning*	*Treatment*
	b) Assess the severity of the metabolic derangement	*Clinical Reasoning*	*Investigation* *Diagnosis*
3	For a patient with diagnosed DKA or HHS, follow a systematic approach to management, including using: • Point of care tools • Laboratory resources • Local, tertiary, and online resources • Currently accepted guidelines	*Clinical Reasoning*	*Treatment*
4	Following an acute diabetic emergency, educate the patient and the family about the prevention (including use of local resources) and early recognition of future, similar episodes.	*Clinical Reasoning* *Communication*	*Treatment* *Follow-up*

See also: Diabetes

Active airway management

	Key Feature	*Skill*	*Phase*
1	When considering active airway management, use a systematic approach to assessment and identify: • Urgency of the situation • Indications and contraindications to the interventions being considered • Available resources (human, equipment, and medications) Possibility of prolonged ventilation support requirements	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
2	Before securing the airway: a) Prepare all necessary equipment	*Procedures Skills*	*Hypothesis generation* *Treatment*
	b) Always anticipate a difficult airway and be prepared to use alternative strategies (e.g., laryngeal mask, surgical airways)	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
3	After securing the airway: a) Clinically confirm airway placement	*Clinical Reasoning*	*Physical*
	b) Continue to reassess and be prepared for rapid changes in the patient's status	*Selectivity*	*Follow-up*
	c) Ensure eye care, naso-gastric drainage, and urinary catheter	*Procedures Skills*	*Treatment*
	d) Consider capnography and chest X-ray to confirm placement	*Clinical Reasoning*	*Investigation*
4	When transferring an intubated patient: a) Confirm the correct placement of endotracheal tube at each patient transfer point	*Clinical Reasoning*	*Physical* *Follow-up*
	b) Consider specialized transfer requirements (e.g., saline in the cuff, pressure point padding)	*Clinical Reasoning*	*Treatment*

See also: Advanced Cardiac Life Support and Trauma

Urgent respiratory presentations

	Key Feature	*Skill*	*Phase*
1	When a patient presents in respiratory distress: a) Manage the distress immediately	*Selectivity*	*Treatment*
	b) Develop a differential diagnosis relying on clinical skills, augmenting with imaging when available	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	c) Differentiate between upper and lower airway etiologies	*Clinical Reasoning*	*Diagnosis*
2	When managing a patient in respiratory distress: a) Consider early active airway management (e.g., inhalation injury, pulmonary contusion), based on the patient's condition and the available resources	*Clinical Reasoning* *Selectivity*	*Hypothesis generation* *Diagnosis*
	b) Re-evaluate regularly as symptoms evolve and as more information becomes available, bearing in mind that decompensation can occur quickly	*Clinical Reasoning*	*Follow-up*
	c) Consider transfer before the patient's needs exceed local capabilities	*Clinical Reasoning* *Professionalism*	*Referral*
3	For a patient with upper airway compromise, act promptly to relieve the obstruction (e.g., peritonsillar abscess, epistaxis, foreign object, epiglottitis).	*Procedures Skills* *Selectivity*	*Treatment*

See also: Active airway management, Upper Respiratory Tract Infection, Pneumonia and Chest Pain

Fracture and dislocation management

	Key Feature	*Skill*	*Phase*
1	For a patient presenting with a fracture or dislocation, assess for vascular compromise and neurologic deficit and document.	*Clinical Reasoning* *Communication*	*Physical Diagnosis*
2	For a patient with vascular compromise, promptly reduce the fracture and/or dislocation without waiting for imaging.	*Procedures Skills* *Selectivity*	*Treatment*
3	For a patient presenting with a suspected fracture: a) Splint and immobilize as appropriate and consider analgesia	*Clinical Reasoning* *Procedures Skills*	*Treatment*
	b) Order appropriate imaging (e.g., specific view, joint above and below), based on the urgency of the situation and the available resources	*Clinical Reasoning* *Selectivity*	*Investigation*
	c) Maintain a high index of suspicion for an undisplaced fracture even if the initial X-ray is negative	*Clinical Reasoning*	*Hypothesis generation* *Investigation*
4	For patients with significant fractures, anticipate complications (e.g., thrombo-embolism, compartment syndrome, occult hemorrhage) and manage accordingly.	*Clinical Reasoning* *Selectivity*	*Hypothesis generation* *Treatment*
5	Consider appropriate consultation for certain cases, such as: • An intra-articular fracture • A fracture involving the growth plate • An open fracture	*Clinical Reasoning* *Selectivity*	*Referral*
6	When managing a patient with a fracture or dislocation, communicate clearly with the patient and the family (especially when the patient is a child) regarding the procedure, possible complications, and recovery timelines.	*Communication*	*Treatment*
7	When preparing a patient with a fracture for transfer: a) Adequately immobilize the fracture and regularly reassess neurovascular status, including at transfer points	*Clinical Reasoning* *Procedures Skills*	*Treatment*
	b) Provide adequate analgesia	*Clinical Reasoning*	*Treatment*
	c) Minimize the risk of pressure sores	*Clinical Reasoning*	*Treatment*

See also: Procedural sedation, Fractures

Intrapartum care

	Key Feature	*Skill*	*Phase*
1	During prenatal care, communicate early the benefits and risks of delivering locally versus at a distance.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
2	When deciding on the location for delivery before or during labour, review important existing and evolving factors, such as: • Cultural preferences regarding birthing • Local resources • Weather • Patient's condition	*Patient-centred Approach* *Selectivity*	*Treatment*
3	For any woman in late pregnancy or in labour, have a high index of suspicion for non-cephalic presentations and manage appropriately.	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
4	When a fetus is in distress: a) Perform intrapartum resuscitative interventions	*Clinical Reasoning*	*Treatment*
	b) Anticipate assisted vaginal delivery or surgical delivery	*Clinical Reasoning*	*Treatment*
5	For a pregnant or postpartum woman, assess for and manage eclampsia if present.	*Clinical Reasoning*	*Diagnosis* *Treatment*
6	After every delivery: a) Be prepared to manage postpartum hemorrhage	*Clinical Reasoning*	*Treatment*
	b) Assess for the presence of lacerations, including a rectal exam when indicated	*Clinical Reasoning*	*Diagnosis* *Treatment*
	c) Manage appropriately and identify those lacerations that require consultation	*Clinical Reasoning* *Procedures Skills*	*Treatment* *Referral*
7	For all stable women and neonates, encourage and support breastfeeding, especially in regions with poor water quality.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*

See also: Pregnancy and Priority Topics and Key Features for the Assessment of Competence in Intrapartum and Perinatal Care

Altered level of consciousness

	Key Feature	*Skill*	*Phase*
1	For a patient presenting with an altered level of consciousness: a) Obtain a comprehensive history and perform a detailed clinical assessment	*Clinical Reasoning*	*History* *Physical*
	b) Quickly identify and manage common reversible causes (e.g., hypoglycemia, opioid overdose, sepsis, hypothermia)	*Clinical Reasoning* *Selectivity*	*Diagnosis* *Treatment*
	c) Identify the need for additional tests that may require patient transfer to another facility	*Clinical Reasoning* *Selectivity*	*Investigation* *Referral*
	d) Reassess frequently for any change in status	*Clinical Reasoning* *Selectivity*	*Treatment* *Follow-up*
2	When a patient with an altered level of consciousness presents in an agitated or aggressive state, optimize the safety of the patient and the staff.	*Professionalism*	*Treatment*

See also: Loss of Consciousness and Dementia

Procedural sedation

	Key Feature	*Skill*	*Phase*
1	When considering procedural sedation, recognize the difference between elective and emergent situations and obtain consent accordingly.	*Clinical Reasoning* *Selectivity*	*Diagnosis* *Treatment*
2	When preparing for procedural sedation: a) Ensure adequate support and equipment, including a rapid sequence intubation protocol	*Clinical Reasoning*	*Treatment*
	b) Select medications and equipment appropriate to the clinical presentation, considering personal knowledge and skill	*Clinical Reasoning* *Selectivity*	*Treatment*
	c) Always check the doses according to patient's weight, especially for children	*Clinical Reasoning*	*Treatment*
	d) Consider airway protection for compromised patients	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
3	When performing procedural sedation, anticipate, monitor for, and respond to potential complications (e.g., laryngospasm, hypoventilation, hypotension).	*Clinical Reasoning*	*Treatment*
4	For a patient who has undergone procedural sedation, a) Ensure an adequate recovery observation period	*Clinical Reasoning*	*Treatment*
	b) Ensure the patient is accompanied by a responsible person if they are being discharged	*Clinical Reasoning* *Professionalism*	*Treatment*

See also: Fractures and Lacerations

Chronic pain in rural and remote settings

	Key Feature	*Skill*	*Phase*
1	For a patient presenting with chronic pain, recognize that social determinants of health and previous conditions (e.g., trauma, abuse, addiction) may contribute to the pain syndrome.	*Clinical Reasoning*	*History* *Hypothesis generation*
2	When treating patients with chronic pain, optimize non-opioid medications and strive to provide non- pharmacological management (e.g., trauma-informed counselling, physiotherapy, splinting/bracing, joint and trigger point injections).	*Clinical Reasoning* *Selectivity*	*Treatment*
3	When caring for a patient who has been prescribed opioids for chronic pain, use all resources available in the community (including the local pharmacy) to develop an effective local approach to prescribing that minimizes addiction potential, enhances treatment, and promotes safety.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
4	When caring for patients with chronic pain in a rural or remote environment with difficult access to other resources, actively advocate for patients' access to services.	*Patient-centred Approach* *Professionalism*	*Treatment*

See also: Pain and Chronic Pain

Indigenous health

These key features may apply equally to other underserved rural and remote populations.

	Key Feature	*Skill*	*Phase*
1	When caring for Indigenous populations: a) Recognize personal prejudice, assumptions, and generalizations	*Professionalism*	*Hypothesis generation*
	b) Consider local cultural norms of different population groups	*Patient-centred Approach*	*Hypothesis generation* *Treatment*
	c) Recognize the systemic and individual effects of historical and ongoing government policies toward Indigenous populations and the impact these have on their health status	*Patient-centred Approach*	*History* *Treatment*
	d) Take the necessary time to establish trust and find common ground	*Patient-centred Approach* *Communication*	*History* *Treatment*
	e) Recognize the connection between poor health and social determinants of health, and actively advocate for patients' access to services	*Clinical Reasoning* *Professionalism*	*Hypothesis generation* *Treatment*
2	When assessing Indigenous patients, consider diseases that are prevalent in the local area (e.g., tuberculosis, water-related/environmental diseases, diseases related to traditional food sources).	*Clinical Reasoning*	*Hypothesis generation*
3	When caring for Indigenous populations, consider the impact of dental health, and educate patients and families about dental care.	*Clinical Reasoning* *Patient-centred Approach*	*Hypothesis generation* *Treatment*
4	When caring for Indigenous populations, consider the effect of the geographical location (e.g., amount of daylight, isolation, food access) on mental and physical health.	*Clinical Reasoning* *Patient-centred Approach*	*Hypothesis generation*
5	For Indigenous patients with suicidality, identify safe places and involve available supports.	*Clinical Reasoning* *Selectivity*	*Treatment*
6	When considering transfer for Indigenous patients, recognize the potential trauma related to leaving their community and treat locally when possible.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*

See also: Professionalism themes 3,6, and 9, Patient Centred Approach, Suicide and Periodic Health Assessment/Screening

Clinical courage

	Key Feature	*Skill*	*Phase*
1	When dealing with a clinical situation that might surpass your level of comfort:		
	a) Do not minimize the situation (e.g., underestimate the necessary level of skill, ignore the complexity of the situation to avoid dealing with it) and do not overreact (e.g., over transferring, over consulting)	*Professionalism* *Clinical Reasoning*	*Treatment*
	b) Assess comprehensively, considering the resources, presentation, indications, and contraindications of proposed interventions	*Clinical Reasoning* *Selectivity*	*Diagnosis* *Treatment*
	c) Develop a management plan	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
2	When considering an intervention that surpasses your level of comfort, be prepared to take a risk by: • Drawing on your parallel education or knowledge • Anticipating difficulties and consulting when appropriate, seeking local and external support • Following a patient-centred approach and maintaining communication with the patient or advocate, in order to ensure that you are acting in their best interest	*Clinical Reasoning* *Professionalism*	*Treatment*
3	After an encounter that was beyond your level of comfort, reflect, debrief with colleagues, and identify learning opportunities.	*Professionalism* *Clinical Reasoning*	*Follow-up*
4	When caring for a patient with an uncertain diagnosis in a rural or remote area where resources may be limited, recognize that repeated assessment over time will help provide reassurance that appropriate care is being provided.	*Clinical Reasoning* *Patient-centred Approach*	*Follow-up*

See also: Professionalism, themes #2,3,6 and 7

Adapting to rural life

Developing a sensitivity to local culture and social norms provides a foundation for becoming familiar with your local community. Some individuals may adapt seamlessly, while others may have difficulty making the transition.

When working in a rural or remote environment:

	Key Feature	*Skill*	*Phase*
1	Recognize your own needs and the needs of your family in order to develop a sustainable and satisfying lifestyle.	*Professionalism*	
2	Remain aware of personal visibility in the community and the overlap between personal and professional life.	*Professionalism*	
3	Ensure patients' privacy, keeping in mind that the community is connected in ways of which you may not be aware.	*Professionalism* *Patient-centred Approach*	*Treatment*
4	Be aware that creating and maintaining appropriate boundaries may be more challenging in rural environments.	*Professionalism* *Patient-centred Approach*	*Treatment*
5	Actively participate in community life.	*Professionalism* *Communication*	
6	Consider maintaining academic connections with a medical school as a preceptor.	*Professionalism*	
7	Be prepared to share the administrative responsibilities of health care in your community (e.g., chief of staff, leadership roles, committee participation).	*Professionalism*	
8	Recognize a strong emotional response and possible post-traumatic stress in yourself and staff after treating a co-worker, friend, or family member, or after a traumatic medical or community event, and address it appropriately.	*Professionalism* *Communication*	
9	Establish safe supportive relationships with other health care professionals (including those from other communities) where difficult medical and social issues may be discussed in an informal manner (e.g., Balint group, problem-based small group learning, Society of Rural Physicians of Canada).	*Professionalism* *Communication*	
10	Have your own family physician	*Professionalism*	

See also: Professionalism themes 8, 10 and 11

Cultural safety and sensitivity

	Key Feature	*Skill*	*Phase*
1	When providing health care in a rural or remote community, familiarize yourself with local traditions, beliefs, and habits, and recognize cultural differences in order to anticipate and prevent potential conflicts.	*Professionalism* *Patient-centred Approach*	*Treatment*
2	When caring for patients in a rural or remote setting, remain aware of the already limited choices and resources available to the patients and that your values may further affect health care services provided in your community (e.g., opioid prescribing, birth control).	*Professionalism* *Patient-centred Approach*	*Treatment*
3	When caring for patients in a rural or remote community: a) Identify their priorities, expectations, and preferences (e.g., patient transfer, birth, palliative care and dying)	*Patient-centred Approach* *Communication*	*Treatment*
	b) Demonstrate respect for important local practices (e.g., sweat lodge, smudge ceremony, cupping)	*Patient-centred Approach* *Professionalism*	*Treatment*
	c) Consider enlisting the assistance of people who are fluent in the patient's culture (e.g., minister, elder)	*Patient-centred Approach* *Professionalism*	*Treatment*
4	When working in a community with a predominant ethnic or religious group, avoid generalizing and assuming that all community members share the same beliefs and create a safe place for all individuals.	*Patient-centred Approach* *Professionalism*	*Treatment*

See also: Professionalism themes 3, 5, 6 and 10

Priority Topics and Key Features for Intrapartum and Perinatal Care[21]

Priority Topics

1 Normal labour and delivery
2 Fetal health surveillance during labour
3 Pain in labour
4 Labour dystocia
5 Vacuum assisted delivery
6 Vacuum assisted delivery—procedure skill
7 Shoulder dystocia
8 Shoulder dystocia—procedure skill
9 Postpartum hemorrhage
10 Perineal lacerations—procedure skill
11 Peripartum fever
12 Antepartum bleeding—after 20 weeks gestation
13 Non-cephalic fetal presentation
14 Pre-labour rupture of membranes
15 Preterm labour
16 Trial of labour after Caesarian
17 Induction of labour
18 Peripartum mental health
19 Gestational hypertension/preeclampsia
20 Gestational diabetes
21 Breastfeeding
22 First week of life
23 Working in teams
24 Limits—practising according to personal and facility limits

[21] Suggested citation: Biringer A, Ehman W, Fenton S, Gagnon A, Graves L, Miller K, Northorp S, et al. *Priority Topics and Key Features for the Assessment of Competence in Intrapartum and Perinatal Care*. Mississauga, ON: College of Family Physicians of Canada; 2017

Normal labour and delivery

	Key Feature	*Skill*	*Phase*
1	When a woman[22] presents in labour, a) Assess for risk factors that identify those women for whom vaginal birth is not appropriate	*Clinical Reasoning*	*History*
	b) Establish the preferred expectations for the delivery with the woman and her supports	*Clinical Reasoning* *Patient-centred Approach*	*Treatment* *History*
2	When a woman presents in labour, a) Diagnose the stage and the phase of labour based on history and abdominal and pelvic exam	*Clinical Reasoning*	*Diagnosis*
	b) Decide whether or not to admit based on appropriate medical, social, and personal factors in order to reduce premature admissions	*Clinical Reasoning* *Selectivity*	*Hypothesis generation*
3	Throughout labour: a) Provide support and pain management, using a patient-centred approach and multiple options (e.g., mobility, different positions)	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
	b) Monitor maternal and fetal well-being, in order to recognize any changes that would alter the management plan	*Clinical Reasoning*	*Treatment*
	c) Follow progress regularly	*Clinical Reasoning*	*Treatment*
	d) Avoid unnecessary or premature interventions (e.g., using uterotonics when not in active labour)	*Selectivity*	*Treatment*
4	During the second stage of labour: a) Initiate pushing at the appropriate time, respecting the woman's preferred position and expulsive efforts	*Clinical Reasoning*	*Treatment*
	b) Conduct a controlled delivery in order to minimize trauma	*Procedures Skills*	*Treatment*
5	Immediately following vaginal birth: a) Care for the well newborn with skin-to-skin care, assessment, delayed cord clamping, and early initiation of breastfeeding	*Clinical Reasoning*	*Treatment*
	b) Assess the need for resuscitation of the newborn and manage appropriately	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
	c) Assess uterine tone and bleeding, and administer prophylactic oxytocin in the third stage	*Clinical Reasoning*	*Treatment*

[22] We are cognizant and respectful that not all pregnant individuals will identify with traditional gender roles. Our choice of the word "woman" to refer to the pregnant individual was chosen for consistency and ease throughout the document and is not intended to exclude those for whom this is not their chosen term.

d) Deliver the placenta, avoiding unnecessary traction	*Procedures Skills*	*Treatment*
e) Assess and manage perineal injury	*Clinical Reasoning*	*Physical Exam* *Treatment*
6 Following a vaginal delivery: a) Debrief with the team, including the woman and her supports, and document appropriately	*Communication*	*Follow-up*
b) Reassess the woman and baby, and review ongoing management plans before leaving the birthing unit	*Clinical Reasoning*	*Follow-up*

Fetal health surveillance during labour

	Key Feature	*Skill*	*Phase*
1	Whenever a woman presents in labour, assess the risk factors and the overall context to select and initiate the appropriate method, frequency, and timing of fetal surveillance (intermittent auscultation (IA) versus electronic fetal monitoring (EFM)): • Assessment of risk factors and context must be current • In general, use IA for women without risk factors and EFM when risk factors are present • Ensure fetal surveillance is maintained as per a standard protocol	*Clinical Reasoning* *Selectivity*	*Hypothesis generation* *Treatment*
2	When reviewing the findings on fetal surveillance, always correlate fetal heart rate with uterine activity.	*Clinical Reasoning*	*Treatment* *Investigation*
3	When conducting fetal health surveillance during labour, classify and document the fetal surveillance as per standardized classification (i.e., normal, atypical, or abnormal).	*Clinical Reasoning* *Communication*	*Diagnosis*
4	When interpreting fetal surveillance, a) Look for and recognize the abnormalities, especially the subtle ones that require immediate action	*Clinical Reasoning*	*Hypothesis generation*
	b) Act promptly to resolve the situation.	*Selectivity*	*Treatment*
5	When abnormal or atypical fetal surveillance is observed: a) Interpret within the context of the whole pregnancy and labour (e.g., stage and progress of labour, maternal stability, maternal/fetal risk factors, duration of abnormalities)	*Clinical Reasoning*	*Diagnosis*
	b) Assess for etiology and contributing factors	*Clinical Reasoning*	*Hypothesis generation*
	c) Institute appropriate intrauterine resuscitation, and when abnormal fetal surveillance is not corrected by intrauterine resuscitation, institute a plan for delivery	*Clinical Reasoning*	*Treatment*

Pain in labour

	Key Feature	*Skill*	*Phase*
1	Prior to labour, discuss pain and pain relief with women, correcting misconceptions and providing education.	*Clinical Reasoning*	*Treatment*
2	For a woman in labour, use a patient-centred approach to clarify her pain experience and her emotional state, as well as her expectations and preferences for pain management.	*Patient-centred Approach*	*Treatment*
3	When managing pain for a woman in labour, optimize the use and effectiveness of support and other non-pharmacological measures (e.g., hydrotherapy, TENS, ambulation).	*Clinical Reasoning*	*Treatment*
4	When providing pharmacological pain relief in labour, use an appropriate method (e.g., opiates, nitrous oxide, epidural anesthesia), taking into account the woman's choices, the stage of labour, available resources and possible side-effects (e.g., fetal surveillance changes, newborn respiratory depression, labour prolongation).	*Clinical Reasoning*	*Treatment*
5	For a woman using analgesia in labour, look for and manage side effects (e.g., maternal fever, fetal surveillance changes).	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
6	When pain in labour is unusual or unresponsive to typically effective management, assess to rule out unusual or pathological causes (e.g., uterine rupture, pulmonary embolus, history of sexual abuse) that would require other interventions or approaches.	*Clinical Reasoning*	*Hypothesis generation*

Labour dystocia

	Key Feature	*Skill*	*Phase*
1	When a woman presents with possible labour, diagnose or rule out active labour, based on history and on abdominal and pelvic examination (i.e., avoid premature admission to labour and delivery).	*Clinical Reasoning*	*Diagnosis*
2	For a woman in labour: a) Assess and document progress of labour by following cervical dilation and fetal descent.	*Clinical Reasoning* *Communication*	*Diagnosis*
	b) Make a diagnosis of labour dystocia based on lack of progress in cervical dilation in the first stage of labour and fetal descent in the second stage, and in the context of maternal and environmental factors; avoid making the diagnosis too early or too late	*Clinical Reasoning* *Selectivity*	*Diagnosis*
3	When labour dystocia is suspected, or diagnosed: a) First consider and use non-pharmacological methods to treat (e.g., ambulation, continuous support, amniotomy)	*Clinical Reasoning*	*Treatment*
	b) Systematically look for and identify possible contributing factors (i.e., uterine contractility, fetal size and presentation, pelvic architecture, maternal pain and psychological state) in order to optimize management	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
4	For a woman with labour dystocia that has not responded to appropriate non-pharmacological intervention, use an appropriate uterotonic medication, while maintaining careful surveillance of maternal and fetal well-being.	*Clinical Reasoning*	*Treatment* *Follow-up*
5	For a woman with labour dystocia, look for and recognize the fetal and maternal indications for operative delivery.	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*

Vacuum assisted delivery

	Key Feature	*Skill*	*Phase*
1	For a woman in labour, look for signs that she may need an assisted delivery (e.g., labour dystocia, atypical or abnormal fetal surveillance, maternal fatigue) and, when these signs are present, start the appropriate preparations, including a backup plan with additional help as necessary.	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
2	When assisted delivery is contemplated, assess for contraindications (e.g., any presentation other than cephalic, cervix not fully dilated, unengaged head, < 34 weeks) and, when present, make appropriate alternative plans for delivery.	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
3	When an assisted delivery is indicated, discuss the options with the woman, obtain informed consent, and prepare the team.	*Communication* *Patient-centred Approach*	*Treatment*
4	When performing an assisted delivery, use a standardized approach (e.g., the A to J mnemonic from ALARM).	*Clinical Reasoning*	*Treatment*
5	When an assisted delivery is not progressing as expected, do not persist with excessive efforts, but abandon the procedure and initiate the alternative backup delivery plan.	*Selectivity*	*Treatment*
6	Following an assisted delivery, examine the woman and the newborn for signs of trauma (e.g., high vaginal laceration, third-degree tear, subgaleal bleeding) or need for further care.	*Clinical Reasoning*	*Physical Exam* *Follow-up*
7	At the appropriate time following an assisted delivery, debrief with the woman (and her supports), and with the team. Document thoroughly.	*Communication*	*Follow-up*

See also General Key Features of Procedure Skills for Family Medicine for technical aspects.

Vacuum assisted delivery—procedure skill

	Key Feature	*Skill*	*Phase*
1	When considering a vacuum assisted delivery, confirm full cervical dilatation and assess the station and position of the head to ensure that the procedure is safe and likely to succeed.	*Procedures Skills*	*Treatment*
2	Prior to placing the vacuum, optimize the chance of success by ensuring adequate analgesia, emptying the woman's bladder, and engaging the woman and her supports in the procedure. Check that the equipment is working and that a backup plan is in place.	*Procedures Skills* *Communication*	*Treatment*
3	When applying the vacuum cup, ensure that the position is correct, there is no entrapment of maternal tissue, and appropriate vacuum pressure is being applied.	*Procedures Skills*	*Treatment*
4	When performing a vacuum assisted delivery, apply traction during maternal pushing and pull firmly but not excessively, without pivoting. Apply traction in the direction of the pelvic curve, initially downward and finally upward.	*Procedures Skills*	*Treatment*
5	When applying traction, assess descent on each pull. Reassess the plan if there are indications that the procedure will not succeed: • No progress after two pulls with a properly positioned cup and good traction • Three pop-offs without obvious cause • Delivery not imminent after four contractions • Delivery not imminent after 20 minutes of vacuum application	*Procedures Skills*	*Hypothesis generation* *Treatment*

Note: See also General Key Features of Procedure Skills for Family Medicine for technical aspects.

Shoulder dystocia

	Key Feature	*Skill*	*Phase*
1	For all deliveries, assess risk factors for shoulder dystocia, develop a plan of management according to the risks, and adjust the preparations according to the evolving risks.	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
2	For all deliveries, anticipate and remain vigilant for the signs of impending shoulder dystocia and, when appropriate, prepare the woman and the team for the possibility of shoulder dystocia.	*Selectivity* *Communication*	*Hypothesis generation* *Treatment*
3	During the second stage of labour, recognize shoulder dystocia promptly when it occurs, communicate its presence clearly to the team, including the woman, and, working as a team, use appropriate manoeuvres to resolve it.	*Clinical Reasoning* *Communication*	*Diagnosis* *Treatment*
4	After the shoulder dystocia is resolved: a) Examine the mother and the newborn for signs of trauma	*Clinical Reasoning*	*Physical Exam* *Follow-up*
	b) Debrief with the team, including the woman and her supports	*Communication*	*Follow-up*
	c) Document the manoeuvres used and the timing of events (including head to shoulder time)	*Communication*	*Follow-up*

Note: See also General Key Features of Procedure Skills for Family Medicine for technical aspects.

Shoulder dystocia—procedure skill

	Key Feature	*Skill*	*Phase*
1	When a shoulder dystocia occurs, inform the team (including the woman), call for additional assistance, and immediately implement an accepted algorithm to resolve the dystocia.	*Procedures Skills* *Communication*	*Treatment*
2	When managing a shoulder dystocia, avoid actions that may increase the shoulder impaction (e.g., pressure on the fundus, maternal pushing when the shoulder remains impacted) or that may injure the baby (e.g., traction on the head, pivoting the head to rotate the shoulders). Coach the woman to push only when instructed.	*Procedures Skills*	*Treatment*
3	When managing a shoulder dystocia, use a systematic approach that includes: • External manoeuvres: hyperflexion of the hips (McRoberts), suprapubic pressure on the anterior shoulder, all fours position • Internal manoeuvres: shoulder rotations (Rubin, Woods, delivery of posterior arm • Episiotomy if required to perform internal manoeuvres	*Procedures Skills*	*Treatment*
4	When managing a shoulder dystocia, complete one manoeuver before encouraging more maternal pushing. Then, if it does not work, move rapidly to the next manoeuver before the next pushing effort.	*Procedures Skills*	*Treatment*
5	If initial manoeuvres are unsuccessful, repeat them, perfecting the technique, and focusing on the manoeuvres that are most likely to be successful (e.g., removal of posterior arm, changing maternal position). Call for additional assistance.	*Procedures Skills*	*Treatment*

Note: See also General Key Features of Procedure Skills for Family Medicine for technical aspects.

Postpartum hemorrhage

	Key Feature	*Skill*	*Phase*
1	For all pregnant women, identify risk factors for postpartum hemorrhage (PPH; e.g., grand multiparous, prolonged labour, anticoagulants) and prepare accordingly.	*Clinical Reasoning*	*Hypothesis generation* *Treatment*
2	Manage the third stage of labour with a prophylactic uterotonic, consideration of controlled cord traction, and assessment of uterine tone after placental delivery.	*Clinical Reasoning*	*Treatment*
3	Following all births, closely monitor for ongoing blood loss (both visible and occult) in order to accurately estimate the total blood loss, and to promptly recognize and diagnose a PPH.	*Clinical Reasoning*	*Follow-up*
4	When a diagnosis of PPH is made: a) Identify whether the woman is stable or unstable and adjust management accordingly	*Clinical Reasoning* *Selectivity*	*Diagnosis* *Treatment*
	b) Activate the team early to provide extra support	*Communication*	*Treatment*
	c) Look for correctible etiologies, in order to treat, specifically • Poor uterine tone (uterotonics) • Retained products of conception (remove) • Trauma (repair) • Distended bladder (urinary catheter) • Coagulation deficit (correct)	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
	d) Monitor closely to anticipate and recognize the need for further intervention	*Clinical Reasoning*	*Follow-up*
5	For a PPH that has stabilized, continue to monitor over an extended period until recurrence is unlikely.	*Clinical Reasoning*	*Follow-up*
6	For a woman who has had a PPH, provide counselling for subsequent pregnancies.	*Clinical Reasoning*	*Follow-up*

Perineal lacerations—procedure skill

	Key Feature	*Skill*	*Phase*
1	After every delivery, assess for the presence, location, and degree of perineal laceration, including a rectal exam when appropriate. Distinguish between those that need repair and those that do not.	*Procedures Skills*	*Treatment* *Diagnosis*
2	When a perineal laceration occurs: a) Ensure that optimal conditions (e.g., assistance, lighting, retraction, hemostasis, analgesia) are present for assessment and repair	*Procedures Skills*	*Treatment*
	Identify complicated perineal injury (e.g., third- or fourth-degree tear, high vaginal laceration) and consider the need for assistance or consultation for the repair	*Procedures Skills*	*Treatment* *Diagnosis*
	Repair lacerations using techniques that will reduce the risk of complications (e.g., bleeding, infection, incontinence, pain)	*Procedures Skills*	*Treatment*
3	In the presence of a second-degree perineal laceration, repair using a systematic approach that includes: • Identifying key anatomic structures—apex of laceration, hymenal ring, perineal muscles, intact anal sphincter • Securing the apex and aligning the hymen and the perineal body, then suturing the vaginal mucosa from apex to hymen • Suturing the perineal muscles • Suturing the skin or planning to let heal by secondary intention	*Procedures Skills*	*Treatment*
4	Following the repair of perineal laceration, re-examine for completeness of repair and hemostasis. This may include a rectal examination.	*Procedures Skills*	*Treatment*

Note: See also General Key Features of Procedure Skills for Family Medicine for technical aspects.

Peripartum fever

	Key Feature	*Skill*	*Phase*
1	When a labouring or postpartum woman has a fever, determine whether the cause is an infection (e.g., chorioamnionitis, endometritis, pyelonephritis) or not (e.g., epidural, work of labour), and re-evaluate the diagnosis regularly.	*Clinical Reasoning*	*Diagnosis*
2	When a labouring or postpartum woman has a suspected infection: a) Anticipate the possible impacts of the infection on the woman and the fetus/neonate	*Clinical Reasoning*	*Hypothesis generation*
	b) Conduct appropriate investigations, maternal monitoring, and fetal surveillance or newborn assessment	*Clinical Reasoning*	*Investigation*
	c) Initiate treatment without delay	*Selectivity*	*Treatment*
3	When chorioamnionitis is suspected, treat empirically and aggressively (e.g., IV broad-spectrum antibiotics), even for those who have received GBS antibiotic prophylaxis, and formulate a plan for delivery.	*Selectivity*	*Treatment*
4	For all postpartum women: a) Identify those at higher risk of infection (e.g., long labour, Caesarean section)	*Clinical Reasoning*	*Hypothesis generation*
	b) Recognize early signs of infection	*Clinical Reasoning*	*Diagnosis*
	c) Advise regarding symptoms and when to seek care	*Clinical Reasoning* *Communication*	*Treatment*

Antepartum bleeding—after 20 weeks gestation

	Key Feature	*Skill*	*Phase*
1	For a woman presenting with antepartum bleeding, first assess the stability of both the woman and the fetus, as urgent management must begin for unstable patients before the exact cause of the bleeding has been confirmed.	*Clinical Reasoning*	*Diagnosis*
2	If the woman with antepartum bleeding is unstable or if there is suspected fetal compromise a) Resuscitate immediately	*Selectivity*	*Treatment*
	b) Mobilize the necessary resources for urgent delivery	*Communication*	*Treatment*
	c) Monitor the situation	*Clinical Reasoning*	*Treatment*
	d) Identify the cause of the bleeding	*Clinical Reasoning*	*Diagnosis*
3	While managing a woman with antepartum bleeding, assess to diagnose the cause of the bleeding, using methods that minimize risks of harm, to recognize potentially life threatening causes: • Obtain history (e.g., onset, quantity of bleeding, presence of pain, trauma) • Determine placental location by ultrasound (previous or current) prior to vaginal exam (do not perform vaginal exam unless placenta previa is ruled out) • Assess the uterus (e.g., activity, tone, tenderness) and fetal well-being • Use other diagnostic techniques as indicated (e.g., speculum exam)	*Clinical Reasoning*	*Diagnosis*
4	For a woman with antepartum bleeding who is stable with normal fetal surveillance, provide ongoing assessment and management based on the diagnosis and the gestational age (e.g., manage Rh status, administer corticosteroids for fetal lung maturity). Decide whether hospitalization or transfer is indicated and the likely mode of delivery.	*Clinical Reasoning*	*Treatment* *Diagnosis*
5	Following a resolved episode of antepartum bleeding, inform the woman and her supports about the risks of antepartum bleeding in current and in subsequent pregnancies, and about strategies to minimize the risk.	*Clinical Reasoning*	*Follow-up*

Non-cephalic fetal presentation

	Key Feature	*Skill*	*Phase*
1	For any woman in the third trimester or in labour, determine the exact fetal presentation using appropriate techniques (e.g., Leopold's manoeuvers, vaginal exam if indicated, ultrasound).	*Clinical Reasoning*	*Diagnosis*
2	When a non-cephalic presentation has been identified pre-labour, discuss, with the woman and her supports, alternative plans or possibilities for delivery (e.g., external cephalic version, trial of labour, planned Caesarean section) according to the presentation. Inform the woman of possible complications (e.g., cord prolapse) and appropriate actions.	*Clinical Reasoning*	*Treatment* *Follow-up*
3	When a non-cephalic presentation is identified in labour, discuss the delivery options with the woman, while seeking consultation and team support as necessary, and while initiating preparations for a possible Caesarian section.	*Clinical Reasoning*	*Treatment* *Referral*
4	When facilitating an imminent unavoidable breech delivery, optimize the process by avoiding traction on the fetus, ensuring that the back remains up, and ensuring head flexion through delivery.	*Procedures Skills*	*Treatment*
5	After a vaginal breech delivery, anticipate that the newborn is more likely to require resuscitation.	*Clinical Reasoning*	*Hypothesis generation*

Pre-labour rupture of membranes

	Key Feature	*Skill*	*Phase*
1	For pregnant women presenting with vaginal fluid loss, look for and diagnose pre-labour rupture of membranes using history, abdominal exam to verify presentation, speculum exam (avoid doing vaginal examination unless indicated for management), and fluid inspection and analysis (e.g., nitrazine, ferning test).	*Clinical Reasoning*	*Hypothesis generation* *Diagnosis*
2	For a woman with signs and symptoms suggestive of pre-labour rupture of membranes (PROM) but negative confirmatory tests, do not exclude the possibility of PROM, and plan appropriate fetal/maternal surveillance for signs of fever and/or infection.	*Clinical Reasoning* *Selectivity*	*Hypothesis generation* *Treatment*
3	For all women with PROM at term, rule out contraindications to vaginal delivery, and, if there are no contraindications, offer induction of labour through an informed discussion within the context of risk factors (e.g., GBS status), patient preference, and system demands (e.g., staffing availability).	*Clinical Reasoning*	*History* *Treatment*
4	In a woman with PROM in whom labour has not been induced: a) Monitor for signs of infection (e.g., fever, fetal tachycardia, odour) even for those patients on prophylactic antibiotics	*Clinical Reasoning*	*Diagnosis*
	b) Treat suspected or confirmed chorioamnionitis aggressively and early (e.g., IV antibiotics), and do not rely on the previous prophylactic treatment	*Selectivity*	*Treatment*
5	In a woman with preterm PROM: a) Initiate treatment as per local protocol (e.g., admission, steroids, IV antibiotics, and monitoring)	*Clinical Reasoning*	*Treatment*
	Plan appropriate definitive treatment depending on gestational age and the capacity of the facility and team, and considering the indications for consultation or for transfer to another care facility	*Clinical Reasoning*	*Referral*
6	When a baby is born after pre-labour rupture of membranes, assess for signs of sepsis, and initiate treatment promptly if sepsis is suspected.	*Clinical Reasoning* *Selectivity*	*Treatment*

Preterm labour

	Key Feature	*Skill*	*Phase*
1	When assessing a pregnant woman who is not in labour, look for risk factors for premature labour, and manage the treatable factors to reduce risk whenever possible.	*Clinical Reasoning*	*History* *Treatment*
2	When caring for a pregnant woman who is not in labour, educate her and her supports about signs and symptoms of preterm labour and how to seek help.	*Clinical Reasoning* *Communication*	*Treatment*
3	For a woman presenting in suspected preterm labour, confirm the presence or absence of labour, using appropriate techniques (e.g., assessment of contractions, sterile speculum exam, fetal fibronectin, cervical assessment).	*Clinical Reasoning*	*Investigation*
4	For a woman in preterm labour, manage according to the gestational age and fetal surveillance to minimize neonatal morbidity and mortality by: • Mobilizing the team to ensure availability of resources, including early consultation, that may be needed for the mother and the infant • Administering appropriate medications (e.g., antenatal corticosteroids, tocolytics, antibiotics, magnesium sulphate) • Arranging for transfer if necessary, at the appropriate time	*Clinical Reasoning*	*Treatment*
5	Following the birth of a preterm infant, particularly one who requires intensive care, provide support and advocacy for the woman and family, in the context of an ongoing therapeutic relationship.	*Communication* *Patient-centered Approach*	*Treatment* *Follow-up*

Trial of labour after Caesarian

	Key Feature	*Skill*	*Phase*
1	In a woman who has had a Caesarean section, assess the risks and benefits of a trial of labour after Caesarian (TOLAC) and discuss in order to identify those who are good candidates, those who are not good candidates, or where it would be contraindicated. Document the discussion, including risks and benefits identified.	*Clinical Reasoning* *Communication*	*Diagnosis* *Treatment*
2	For a woman who is a candidate for TOLAC, offer TOLAC and help her make an informed decision by fully discussing the risks and advantages while showing flexibility and understanding of her preferences and concerns.	*Clinical Reasoning* *Patient-centered Approach*	*Treatment*
3	In a woman who has had a Caesarean section and who goes into labour, be flexible in the management approach and adapt it to the circumstances, while still respecting the plans and preferences of the woman as much as possible (e.g., manage a spontaneous precipitous labour in a woman who had planned a repeat Caesarean section, discuss conversion of a planned TOLAC to a Caesarean section).	*Clinical Reasoning* *Patient-centered Approach*	*Treatment*
4	Before planning or managing a TOLAC, ensure that the resources necessary for an unexpected immediate operative delivery are available and in place, ensure that the woman and her supports are well prepared for the complications that could necessitate this eventuality, and that all discussions and decisions about the TOLAC have been fully documented.	*Clinical Reasoning* *Communication*	*Hypothesis generation* *Treatment*
5	For a woman choosing a TOLAC, provide appropriate maternal and fetal surveillance, close monitoring of the progress of labour, and careful use of induction and uterotonics if indicated.	*Clinical Reasoning*	*Treatment*
6	When managing a TOLAC, carefully assess maternal and fetal well-being and recognize any signs of imminent or actual uterine rupture requiring maternal and fetal resuscitation and urgent conversion to Caesarean section if needed.	*Clinical Reasoning*	*Diagnosis*

Induction of labour

	Key Feature	*Skill*	*Phase*
1	When considering induction of labour, specifically assess the factors that will influence the decision (e.g., accurate expected date of delivery, indications, contraindications, cervical ripeness, maternal preference) and document the factors clearly to provide justification for decisions.	*Clinical Reasoning* *Communication*	*Diagnosis* *Treatment*
2	When planning induction of labour: a) Induce labour only when there is a compelling and convincing indication and no contraindication	*Clinical Reasoning*	*Treatment*
	b) Prioritize and schedule the induction based on indication and resources	*Selectivity*	*Treatment*
	c) Select the facility with appropriate resources to manage fetal and maternal needs	*Clinical Reasoning*	*Treatment*
3	When recommending induction of labour, obtain and document clear and detailed informed consent from the woman for accepting or declining the induction.	*Clinical Reasoning* *Communication*	*Treatment*
4	When inducing labour: a) Select the appropriate method of cervical ripening (e.g., balloon catheters, prostaglandins) and/or induction (e.g., prostaglandins, oxytocin), based on obstetrical and medical history, Bishop score, patient preference, and team considerations.	*Clinical Reasoning*	*Treatment*
	b) Assess the effect of the induction on maternal and fetal well-being.	*Clinical Reasoning*	*Treatment*
	c) Select women for whom the outpatient management of cervical ripening is appropriate.	*Clinical Reasoning*	*Treatment*
5	During induction of labour, look for and manage complications of induction (e.g., tachysystole, abnormal fetal surveillance).	*Clinical Reasoning*	*History* *Treatment*
6	When a selected method of induction is unsuccessful, modify the management plan accordingly.	*Clinical Reasoning*	*Treatment*

Peripartum mental health

	Key Feature	*Skill*	*Phase*
1	Enquire about the mental health of all women throughout the peripartum period, assessing to identify discrete signs or symptoms or factors leading to a higher risk (e.g., substance abuse, intimate partner violence, previous mental health disorder, history of sexual abuse), and add an appropriate mood assessment tool (e.g., Edinburgh Postnatal Depression Scale, Generalized Anxiety Disorder scale) when indicated.	*Clinical Reasoning*	*History*
2	When concerns are raised about mental health in the peripartum period, actively explore the situation with the woman and her supports, and provide education about normal and common psychological changes during pregnancy, as well as the signs that may suggest a mental health disorder.	*Clinical Reasoning*	*History* *Treatment*
3	For women in the peripartum period with an apparent mental health disorder, assess to rule out possible underlying causative or contributing medical conditions (e.g., anemia, thyroid dysfunction).	*Clinical Reasoning*	*Diagnosis*
4	For a woman with a mental health disorder in the peripartum period, determine the risk of harm to self, infant, or others. When this risk is present, ensure urgent management to reduce the risk of harm. Educate the woman and her supports regarding a possible rapid escalation of symptoms, and available resources.	*Clinical Reasoning*	*Diagnosis* *Treatment*
5	For a woman with a mental health disorder in the peripartum period: a) Maintain the therapeutic relationship, provide counselling, refer to the available resources, and advocate for rapid access when needed	*Communication*	*Treatment* *Referral*
	b) Use medication if indicated, balancing the risk of untreated mental health issues against the risk of medications to the fetus or newborn, and recognizing the benefits of continued breastfeeding if desired	*Clinical Reasoning*	*Treatment*

Gestational hypertension/preeclampsia

	Key Feature	*Skill*	*Phase*
1	At the beginning of all pregnancies, identify and assess the risk factors for gestational hypertension/preeclampsia and consider initiating preventive therapy for those at high risk.	*Clinical Reasoning*	*Diagnosis* *Treatment*
2	Consider the diagnosis of preeclampsia at prenatal visits, even if the blood pressure is not obviously elevated, and especially when the woman has new poorly-defined constitutional symptoms.	*Clinical Reasoning*	*Hypothesis generation*
3	When preeclampsia is suspected, look for confirmatory evidence (symptoms, signs, basic investigations) to establish or rule out the diagnosis. Classify according to current nomenclature and re-assess regularly for progression of disorder.	*Clinical Reasoning*	*Diagnosis* *Treatment*
4	For gestational hypertension or non-severe preeclampsia, follow closely and manage according to maternal and fetal well-being and gestational age.	*Clinical Reasoning*	*Treatment* *Follow-up*
5	For a woman with a diagnosis of preeclampsia with adverse conditions or severe preeclampsia, manage actively by: • Initiating MgSO4 in a timely fashion and other medications as appropriate (e.g., anti-hypertensives) • Assessing the need for prompt delivery, and arranging for delivery and/or consultation when indicated	*Clinical Reasoning*	*Treatment*
6	For any woman with gestational hypertension or preeclampsia who has delivered, continue management and monitor for progression or complications throughout the postpartum period.	*Clinical Reasoning*	*Follow-up*

Gestational diabetes

	Key Feature	*Skill*	*Phase*
1	In all pregnant women, screen for gestational diabetes using the appropriate test at the appropriate gestational age, and interpret the results according to guidelines for gestational diabetes (i.e., not regular diabetic guidelines).	*Clinical Reasoning*	*Diagnosis*
2	For a woman with gestational diabetes, plan for blood glucose control to avoid extremes of hyperglycemia and hypoglycemia, and do not confuse treatment targets and guidelines with those for non-gestational diabetes.	*Clinical Reasoning*	*Treatment*
3	For a pregnant woman who is receiving specific care for diabetes (gestational or pre-gestational) from other providers, maintain your planned antepartum care for the patient, and integrate the recommended diabetic care into the overall management plan.	*Clinical Reasoning*	*Treatment* *Follow-up*
4	When caring for a woman with gestational diabetes, closely monitor fetal growth and well-being (e.g., ultrasound, non-stress tests), as well as the maternal status, in order to recognize indications for induction.	*Clinical Reasoning*	*Follow-up*
5	When providing intrapartum care to a woman with gestational diabetes: a) Anticipate potential fetal macrosomia and if present, anticipate and plan for labour dystocia and shoulder dystocia	*Clinical Reasoning*	*Treatment*
	b) Manage blood sugars actively, using insulin when indicated for optimal care, continuing as necessary into the postpartum	*Clinical Reasoning*	*Treatment*
6	Following a gestational diabetic's delivery: a) Monitor the newborn closely for hypoglycemia, in the immediate postpartum period	*Clinical Reasoning*	*Treatment*
	b) Plan to include screening for diabetes in the postpartum care of the woman	*Clinical Reasoning*	*Follow-up*

Breastfeeding

	Key Feature	*Skill*	*Phase*
1	During prenatal care, enquire about newborn feeding plans. Promote exclusive breastfeeding, help establish reasonable expectations, and provide adequate information to develop a plan for feeding that respects the mother's preferences and informed choice.	*Clinical Reasoning* *Patient-centered Approach*	*History* *Treatment*
2	For a woman who is not breastfeeding her newborn, provide support for her decision, and provide information about feeding with human milk substitute.	*Clinical Reasoning* *Patient-centered Approach*	*Treatment*
3	For all pregnant women, assess and, when indicated, examine for issues that may affect breastfeeding (e.g., inverted nipples, previous surgery), and suggest interventions and resources.	*Clinical Reasoning*	*Diagnosis* *Treatment*
4	For all births, including Caesarean section, facilitate early skin-to skin contact and a comfortable and effective latch.	*Clinical Reasoning*	*Treatment*
5	When breastfeeding is challenging, first assess the latch and determine whether it is effective, and then look for other barriers to successful breastfeeding (e.g., lack of support, postpartum depression, breast pain, tongue tie, prematurity).	*Clinical Reasoning*	*History* *Physical exam*
6	When any concerns or difficulties with breastfeeding arise, especially in the immediate newborn period, facilitate early access to suitable professional support.	*Clinical Reasoning*	*Treatment* *Referral*
7	Facilitate the continuation of breastfeeding when conditions arise, such as: • The woman has a breast infection or a nipple lesion • The woman or newborn requires medications, investigations, or hospitalization	*Clinical Reasoning*	*Treatment*
8	When a newborn/infant is exclusively breastfed, educate the family regarding normal weight gain, stool and voiding patterns, and how to assess the adequacy of feeding.	*Clinical Reasoning*	*Treatment*

First week of life

Key feature	*Skill*	*Phase*
1. When caring for newborns: a) Look for and recognize the subtle signs that they may be unwell (e.g., respiratory status, colour, tone, feeding), assess for etiology (e.g., hypoglycemia, maternal drug effect, sepsis) and arrange for diagnostic tests and ongoing care.	*Clinical Reasoning*	*Diagnosis*
b) Identify those who appear well but may be at a higher risk of complications (e.g., infant of diabetic woman, intrapartum infection, operative birth, drug withdrawal, social stressors), in order to plan close observation and management.	*Clinical Reasoning*	*Hypothesis generation*
c) Perform a thorough physical examination (e.g., palate, pulses, heart sounds, hips, testes, anus) to detect congenital abnormalities.	*Clinical Reasoning*	*Physical exam*
2. Prior to discharging any newborn, ensure the following: o Adequate feeding plan has been established o Newborn screening (e.g., bilirubin, metabolic, hearing test) has been completed or arranged o Family has been educated regarding care of the newborn (e.g., car seat, infant sleeping, acceptable weight loss) respecting cultural differences o Follow-up has been planned with a health care professional within a few days of discharge, especially for firstborns, families with psychosocial stressors, or if there were any perinatal issues	*Clinical Reasoning*	*Treatment*
3. When the parents (or other caregivers, including health care professionals) of a newborn express concern that the baby is unwell, listen carefully, and fully assess the baby to detect any subtle indicators of serious illness (e.g., sepsis).	*Selectivity*	*Diagnosis*

Working in teams in intrapartum care

	Key Feature	*Skill*	*Phase*
1	Acknowledge all team members (including the patient and her supports) and as well as their roles and contributions, and respectfully listen to and respond to others' opinions, especially when they differ from your own.	*Communication* *Professionalism*	*Treatment*
2	Promote collaboration by accepting and giving help where required, contribute where most useful even when not in primary roles, and follow the leadership of others or assume the leadership for a defined period or situation.	*Professionalism*	*Treatment*
3	Respect the professional autonomy of the individual members of the team, while promoting collaborative decisions and actions for the benefit of the patient.	*Professionalism*	*Treatment*
4	When a team is working under difficult conditions, try to promote and maintain the effectiveness of the team by remaining calm, helping others in their roles and tasks whenever appropriate, resolving differences actively by considering the best interests of the patient, and by inspiring confidence whenever possible.	*Professionalism* *Clinical Reasoning*	*Treatment*
5	Maintain clear verbal and written communications (including documentation), confirm that the information has been received (closed loop), and facilitate the participation of all in debriefing sessions.	*Communication*	*Treatment*

Limits—practising according to personal and facility limits

	Key Feature	*Skill*	*Phase*
1	When a woman requires care that is beyond your personal or facility limits, advocate firmly to obtain this care in a timely fashion from an appropriate resource.	*Professionalism*	*Treatment*
2	Whenever the clinical course of a woman is not going as expected, review the provisional diagnosis and management plan, consider alternatives, and change if necessary (e.g., regularly reassess/re-evaluate potentially unstable patients, reflect on your clinical decisions).	*Clinical Reasoning*	*Treatment*
3	Whenever you recognize that a diagnosis or management plan needs to be modified:		
	a) Seek additional information or help without delay.	*Clinical Reasoning*	*Referral*
	b) Discuss the changes with the woman, her supports, and the team.	*Communication* *Clinical Reasoning*	*Treatment*
	c) Document the changes and the discussion.	*Communication*	*Treatment*
4	When caring for pregnant women, reflect on clinical experiences to identify gaps in clinical skills, and close those gaps with self- or group-learning.	*Professionalism*	*Diagnosis* *Treatment*
5	After an unexpected or unusual event, debrief effectively with appropriate team members, including the woman and her supports.	*Communication*	*Follow-up*

Priority Topics and Key Features for the Assessment of Competence in Mental Health

Out of the 24 priority topics developed by the Working Group on the Assessment of Competence in Mental Health, 16 overlapped with the existing topics for family medicine and were used to update their key features (see Part III).

The remaining topics are listed here as a resource.

1. Bipolar disorder
2. Comorbid illnesses in mental health context
3. Developmental disability and delay
4. Family and circle of support in mental health context
5. Screening and early detection of mental health problems
6. Teamwork in mental health
7. Trauma informed care
8. Using community mental health resources

Bipolar disorder

	Key Feature	*Skill*	*Phase*
1	In any patient with depression, consider the possibility of bipolar disorder. Ask about family history, past symptoms and episodes.	*Clinical Reasoning*	*History* *Hypothesis generation*
2	Recognize that standard antidepressant treatment in a person with possible bipolar disorder may trigger mania or rapid mood cycling. Monitor closely.	*Clinical Reasoning*	*Treatment* *Follow-up*
3	1When considering a diagnosis of bipolar disorder, a) Assess fully for other diagnostic possibilities such as substance use, post-traumatic stress disorder, situational duress or personality disorder	*Clinical Reasoning*	*History* *Hypothesis generation*
	b) Avoid applying the diagnostic label too early, especially in younger patients	*Clinical Reasoning*	*Diagnosis*
	c) Consider consultation if the diagnosis is uncertain	*Clinical Reasoning* *Communication*	*Referral*
4	When caring for a patient with bipolar disorder, a) Maintain a strong therapeutic relationship in order to negotiate adequate treatment during episodes of increasing symptoms	*Professionalism* *Patient-centred Approach*	*Follow-up*
	b) Look for and recognize the indicators of impending crisis and need for intervention, including involuntary treatment when appropriate	*Clinical Reasoning* *Selectivity*	*History* *Treatment*
	c) Negotiate and plan proactive care for relapse and recovery which may include involvement of others	*Communication* *Patient-centred Approach*	*Treatment* *Follow-up*
	d) Monitor response to and side effects of medication	*Clinical Reasoning*	*Treatment* *Follow-up*
	e) Monitor and manage self medicating with alcohol or substances	*Clinical Reasoning* *Patient-centred Approach*	*Treatment* *Follow-up*

See also: Depression

Comorbid illnesses in mental health context

	Key Feature	*Skill*	*Phase*
1	At every medical encounter inquire about both the patient's physical and mental health in order to provide proactive 'whole person' care.	*Patient-centred Approach*	*History*
2	When caring for a patient with mental health/alcohol or substance use problems consider medical co-morbidities and, a) Monitor the impact of the treatment on the person's overall health (e.g. medications for schizophrenia causing increased cardio-vascular risk).	*Clinical Reasoning*	*Follow-up*
	b) Ensure their access to preventive care and medical services	*Professionalism* *Patient-centred Approach*	*Treatment* *Referral*
	c) Pay attention to the effects of stress and adversity on cardio-metabolic risk	*Patient-centred Approach*	*Hypothesis generation* *Follow-up*
	d) Assess the impact of acute and chronic pain	*Patient Centre*	*History*
	e) Identify specific risk factors for illness (e.g. smoking, obesity, sleep apnea)	*Clinical Reasoning*	*History*
3	When a comorbid illness is diagnosed in a patient with mental health/alcohol or substance use problems: a) Clearly communicate the diagnosis, treatment plan and relevant information. Answer questions and involve the patient in their care.	*Communication* *Patient-centred Approach*	*Diagnosis* *Treatment*
	b) Recognize that they have the same interest in their medical problems as any other patient, but more time and support may be required to understand and process information	*Professionalism* *Patient-centred Approach*	*Diagnosis*
	c) Facilitate access to care and effectively coordinate treatment with other available services in order to mitigate system barriers and stigma	*Professionalism* *Communication*	*Treatment* *Referral*
	d) Monitor progress, maintain the therapeutic alliance and clarify your own role in their ongoing care	*Patient-centred Approach* *Professionalism*	*Follow-up*
	When caring for patients with a chronic illness routinely inquire about the impact of medical problems on their life, family, mood and anxiety level. Recognize that depressed mood and anxiety can be a consequence of medical problems.	*Clinical Reasoning* *Patient-centred Approach*	*History* *Follow-up*

Developmental disability and delay

	Key Feature	*Skill*	*Phase*
1	When caring for children, regularly and systematically assess physical and neuropsychological development, to facilitate the early detection and management of developmental problems.	*Clinical Reasoning*	*History* *Physical*
2	When parents are concerned about a child's development even after an assessment with no evidence of developmental delay, plan regular reviews to: • assess the child's development over time • pay special attention to the child's mental health • explore the impact on the family	*Clinical Reasoning* *Patient-centred Approach*	*History* *Follow-up*
3	For a child whose development shows variation from expectations, regularly reassess their physical and mental health. Look for possible causes with a particular emphasis on those that may be reversible or treatable.	*Clinical Reasoning* *Selectivity*	*History* *Hypothesis generation*
4	When concerns are raised about a child's development or behaviour, with parental consent, seek information from all those caring for the child (e.g. parents, daycare, school).	*Clinical Reasoning* *Communication*	*History*
5	When a developmental problem is suspected, or identified in a child, develop a management plan with the parents that includes appropriate: • use of community support services • consultation services or specialized treatment • follow-up to monitor progress and ongoing or new concerns • attention to puberty and adolescent transition	*Clinical Reasoning* *Patient-centred Approach*	*Treatment* *Follow-up*
6	When providing care for an adult with developmental disability, establish a means of communication that facilitates: • building a trusting relationship • assessment of behaviour changes • assessment of physical and mental health • personal care planning over the long term	*Patient-centred Approach* *Communication*	*Treatment* *Follow-up*

Family and circle of support in mental health context

	Key Feature	*Skill*	*Phase*
1	When providing care to a patient with mental health and addiction problems seek to understand who is "family" and/or the patient's "circle of support".	*Patient-centred Approach*	*History*
2	When a patient decides to exclude family from the circle of support, ascertain the reasons and address when appropriate.	*Patient-centred Approach*	*History*
3	When considering communication with the family or circle of support, obtain the consent of the patient or mandated substitute, respecting their rights to privacy and confidentiality.	*Communication* *Professionalism*	*History* *Treatment*
4	When providing care to a patient with mental health and alcohol and substance use problems: a) assess the impact of the patient's illness on the family,	*Patient-centred Approach*	*History*
	b) assess the impact of the family on the patient's illness	*Patient-centred Approach*	*History*
	c) assess the capacity of the family to contribute to the care, and the family's need for support	*Patient-centred Approach* *Clinical Reasoning*	*History* *Treatment*
	d) review the situation regularly	*Patient-centred Approach* *Clinical Reasoning*	*Follow-up*
5	When working with a family for the ongoing care and recovery of a patient, a) Set clear goals for meetings with family and remain flexible in order to gather unplanned or unexpected information	*Selectivity* *Patient-centred Approach*	*Treatment*
	b) Find a balance between collective and individual interventions and decisions	*Patient-centred Approach* *Professionalism*	*Treatment*
	c) Recognize family relationships are complex and members may respond differently	*Patient-centred Approach* *Communication*	*Treatment*
6	Identify needs for specific intervention or support for the family members of a patient. If appropriate, provide or arrange for this intervention in a timely fashion, while paying attention to privacy, boundary, and ethical issues.	*Professionalism* *Patient-centred Approach*	*History* *Treatment*
7	When family therapy is indicated, determine the optimal resource according to the goals of therapy, the level of expertise required, the resources available, boundary issues, and family preferences.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment* *Referral*
8	When concerns about a patient or a family member are raised by proxy, develop a management plan only after a full assessment of the situation, including: • the presence of safety issues, particularly for children and other vulnerable people • the family situation from the proxy's and the patient's point of view, • the presence of mental health problems, alcohol or	*Clinical Reasoning* *Professionalism*	*History* *Treatment*

	substance use and other health issues • the availability of appropriate community or referral resources • ethical considerations and individual rights		
9	When providing care for more than one family member, be alert to conflicting objectives and confidentiality issues. Consult a colleague, refer a patient or transfer care as needed.	Professionalism	Treatment

Screening and early detection of mental health problems

	Key Feature	*Skill*	*Phase*
1	When patients present for care, either during periodic health examinations or opportunistically, a) Assess mental health and alcohol and substance use, as these issues are prevalent and often undetected	*Clinical Reasoning*	*History*
	b) Identify patients who may be at higher risk of mental health issues	*Clinical Reasoning*	*Hypothesis generation*
	c) Screen those patients systematically, using validated tools as necessary	*Clinical Reasoning*	*Investigation*
2	In a patient presenting with new or ill-defined symptoms or a change in behaviour or level of functioning, assess mental health, and alcohol and substance use.	*Clinical Reasoning*	*History*
3	For patients with a history of mental health problems or disordered alcohol or substance use, look for relapse or reoccurrence, as these are chronic diseases.	*Clinical Reasoning*	*Hypothesis generation*
4	For all patients with mental health or alcohol or substance use concerns, use an empathetic and non-judgemental approach to facilitate open communication.	*Communication* *Patient-centred Approach*	*Treatment* *Follow-up*
5	When following patients with mental health, and alcohol and substance use problems, ensure appropriate screening for physical problems or illness.	*Clinical Reasoning*	*History* *Hypothesis generation*

Teamwork in mental health

Key Feature	*Skill*	*Phase*
1 When a team approach to care of a person with mental health or alcohol and substance use concerns is needed, a) Establish patient centred goals of care	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
b) Include the patient and /or the family in the creation and activities of the team	*Patient-centred Approach*	*Treatment*
c) Facilitate team membership and roles as situations evolve	*Professionalism* *Communication*	*Follow-up*
2 When sharing care of a person with mental health, alcohol or substance use concerns, a) Encourage a coordinated approach to management	*Professionalism* *Communication*	*Treatment*
b) Understand the roles and responsibilities of the team members	*Professionalism*	*Referral*
c) Establish clear and ethical communication	*Communication* *Professionalism*	*Treatment*
d) Ensure that the patient understands and agrees with these arrangements, including their own responsibilities	*Patient-centred Approach* *Communication*	*Treatment*
3 Anticipate the effect a team approach may have on your therapeutic alliance, and work with the patient to maintain the alliance in an appropriately modified fashion.	*Patient-centred Approach* *Professionalism*	*Follow-up*
4 When working within a team, a) Facilitate the contributions of others	*Professionalism* *Communication*	*Follow-up*
b) Use an open and respectful communication style	*Communication*	*Treatment*
c) Pay attention to careful and accurate record keeping	*Communication*	*Follow-up* *Treatment*
d) Support recovery focused care planning	*Clinical Reasoning*	*Treatment*

Trauma informed care

	Key Feature	*Skill*	*Phase*
1	In all patients, with or without mental health, alcohol or substance use issues, a) Consider the possibility of undisclosed trauma	*Clinical Reasoning*	*Hypothesis generation*
	b) Inquire in an empathic manner about experiences across the lifespan that may have been traumatic	*Communication*	*History*
2	For a patient with issues related to trauma, take the time to develop a trusting therapeutic relationship that will provide a safe space for disclosure.	*Patient-centred Approach* *Communication*	*Treatment* *Follow-up*
3	For patients with a known history of trauma, adapt routine clinical encounters to avoid re-traumatizing the patient.	*Patient-centred Approach*	*Follow-up*
4	For patients with a history of trauma, reinforce their sense of autonomy and control by developing, in partnership with the patient, coping strategies and a management plan that utilize their strengths and capacities.	*Patient-centred Approach* *Communication*	*Treatment*
5	For a patient who is at risk for ongoing trauma, support the patient to develop and implement a safety plan to reduce risk.	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
6	When caring for a patient with issues related to trauma, recognize and address your own emotional responses.	*Professionalism*	*Treatment*

Using community mental health resources

	Key Feature	*Skill*	*Phase*
1	When caring for a patient with mental health and/or alcohol or substance use problems: a) Identify your community resources and referral pathways	*Professionalism*	*Treatment*
	b) Identify those patients who could benefit from the community resources and services	*Clinical Reasoning*	*Diagnosis*
	c) Match the patient's preferences, abilities and needs to the appropriate and available resource	*Patient-centred Approach*	*Treatment*
	d) Advocate to address service gaps	*Professionalism*	*Treatment*
	e) Consider a full range of possible resources (e.g. recreational, occupational, spiritual etc.)	*Clinical Reasoning* *Patient-centred Approach*	*Treatment*
2	When referring to one or more community resources, a) Review with patient what they can expect	*Patient-centred Approach*	*Referral*
	b) Facilitate access to the resources by providing necessary information and documentation	*Communication* *Professionalism*	*Referral*
	c) Communicate directly with the resources when appropriate	*Communication* *Professionalism*	*Follow-up*
3	When a patient has been referred to or is being cared for by other community resources, follow up to maintain your ongoing therapeutic relationship. Ensure that the expected care is being provided.	*Professionalism*	*Follow-up*

Core Procedures

Integumentary Procedures
Abscess incision and drainage
Wound debridement
Insertion of sutures; simple, mattress, and subcuticular
Laceration repair; suture and gluing
Skin biopsy; shave, punch, and excisional
Excision of dermal lesions, e.g., papilloma, nevus, or cyst
Cryotherapy of skin lesions
Electrocautery of skin lesions
Skin scraping for fungus determination
Use of Wood's lamp
Release subungual hematoma
Drainage acute paronychia
Partial toenail removal
Wedge excision for ingrown toenail
Removal of foreign body, e.g., fish hook, splinter, or glass
Pare skin callus

Local Anesthetic Procedures
Infiltration of local anesthetic
Digital block in finger or toe

Eye Procedures
Instillation of fluorescein
Slit lamp examination
Removal of corneal or conjunctival foreign body
Application of eye patch

Ear Procedures
Removal of cerumen
Removal of foreign body

Nose Procedures
Removal of foreign body
Cautery for anterior epistaxis
Anterior nasal packing

Gastrointestinal Procedures
Nasogastric tube insertion
Fecal occult blood testing
Anoscopy/proctoscopy
Incise and drain thrombosed external hemorrhoid

Genitourinary and Women's Health Procedures
Placement of transurethral catheter
Cryotherapy or chemical therapy genital warts
Aspirate breast cyst
Pap smear
Diaphragm fitting and insertion
Insertion of intrauterine device
Endometrial aspiration biopsy

Obstetrical Procedures
Normal vaginal delivery
Episiotomy and repair
Artificial rupture of membranes

Musculoskeletal Procedures
Splinting of injured extremities
Application of sling—upper extremity
Reduction of dislocated finger
Reduce dislocated radial head (pulled elbow)
Reduce dislocated shoulder
Application of forearm cast
Application of ulnar gutter splint
Application of scaphoid cast
Application of below-knee cast
Aspiration and injection, knee joint
Aspiration and injection, shoulder joint
Injection of lateral epicondyle (tennis elbow)
Aspiration and injection of bursae, e.g., patellar, subacromial

Resuscitation Procedures
Oral airway insertion
Bag-and-mask ventilation
Endotracheal intubation
Cardiac defibrillation

Injections and Cannulations
Intramuscular injection
Subcutaneous injection
Intradermal injection
Venipuncture
Peripheral intravenous line; adult and child
Peripheral venous access—infant
Adult lumbar punctur