Malta-Michwives Journal









Malta Midwives Association

Issue 12 July 2018

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The views expressed in the Journal are those of individual contributors and are not necessarily those of the Midwives' Association.

Front cover: Midwives Day 5th May 2018

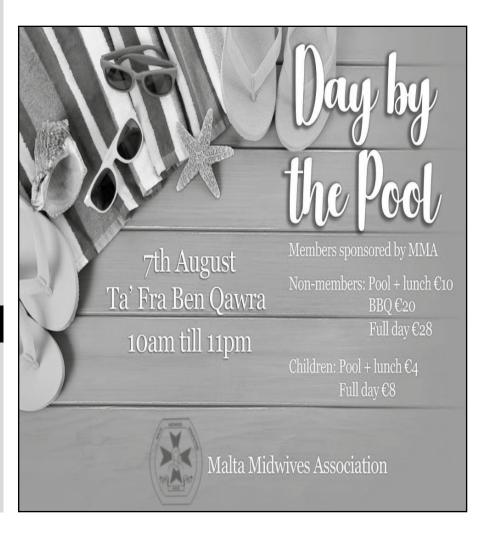
Editorial

Dear Members,

I hope you are enjoying reading this journal in the sun by the sea, and for those reading during their break at work I hope you have a nice cup of tea or coffee next you. We are now at the 12th issue of the Malta Midwives Journal. This issue is one of the lengthiest to date and all contributors are midwives or student midwives. The journal hopes to widen the knowledge and interest of its readers in line with the ICM's strategic directions of quality, equity & leadership, discussed further by Prof. Borg Xuereb on page 10. This 12th issue also highlights the vast role of the midwife by covering the extended role of the midwife, such as the use of ultrasound, aquanatal classes and Chinese medicine.

Helping to put together this journal has been just one of the many roles I've taken during my time on the association committee. You can read more about the work of the committee and what being on the committee involves on page 8 of this issue. On behalf of the association we hope to see many of you at the annual Day by the Pool & BBQ and the upcoming public speaking course which will be held once again at the association premises following this courses' great success in previous years. I would like to take the opportunity to thank all midwives who have contributed to this issue of the Malta Midwives Journal and to ask all midwives with any material they wish to publish to come forward and share their ideas and knowledge with their colleagues through this bi-annual journal.

Rebecca Mizzi
Co-Editor



Malta Midwives Association



Message from the President

Dear Members.

I wish to start off this message by congratulating Prof Rita Borg Xuereb who was promoted to Associate Professor in Midwifery. This promotion is proof of her continuous committment to midwifery education and her passion to midwifery care, our profession. This achievement is a great honour for her personally and also for the midwifery profession in Malta. Prof Borg Xuereb is the first Maltese midwife to obtain this prestigous qualification. On behalf of the Assoication, I wish Prof Borg Xuereb the best of good health and many more years in academia. Her expertise and professional contribution are very valuable to the midwifery profession both locally and internationally.

A second piece of good news is the endorsment of intravenous cannulation by the Nursing and Midwifery Council as a reserved act in the Scope of Practice. Midwives can perform this skill upon receiving the necessary training and proof of competence.

Furthermore, the CPD unit on Perineal Care is being introduced by the Department of Midwifery, Faculty of Health Sciences, University of Malta. This is an opportunity for midwives to further their knowledge on perineal care and suturing. In this respect, I have to say that regretably one still encounters midwives who are antogonist to such initiatives. Over the years, I have strengthened my belief that education and knowledge are keys to improve practice. Only if members deepen their knowledge and intensify their training can the midwifery profession move forward and shape and formulate policies and practice. An American physician Charles Mayo (1865-1939) once said "the safest thing for a patient is to be in the hands of a man engaged in teaching medicine. In order to be a teacher of medicine the doctor must always be a student". This should be what drives a good midwife: to be a permanent student of science; because in the field of science the absolute truths of today are always relative truths of tomorrow.

As you might have heard by now, the Association has started a new service - Postnatal Support Group. As midwives we know that the postnatal period is a crucial time for the well-being of the mother, her baby and the family. The Association is providing the space for postnatal mothers to come and socialize with other mothers going through the same experiences, or having similar concerns. All this in the presence of qualified midwives. The Association beliefs that this service may ease the way for some mothers to transition to motherhood. I would like to urge the midwives who work with postnatal mothers, to encourage mothers to attend such sessions. The service is free of charge and is held, 10.00 am to noon, every Wednesday. Those midwives who would like to participate in this service are to contact Ms Francesca Cachia Galvagno, co-ordinator for this service.

The latest data (2015–2017) from the WHO Childhood Obesity Surveillance Initiative (COSI) shows that southern European countries have the highest rate of child obesity. In Cyprus, Greece, Italy, Malta, San Marino and Spain, approximately 1 in 5 boys (range from 18% to 21%) are obese. Denmark, France, Ireland, Latvia and

Norway are among the countries with the lowest rates, ranging from 5% to 9% for either sex.

According to the NOIS 2016, Malta's breastfeeding rates show a decline. We know that women decide to breastfeed in an environment of physical, social, economical, psycholocigal, cultural, ethnic context amongst other aspects. However, the support a breastfeeding mother gets from family and health professionals, or the lack of it, determines the success or failure of her breastfeeding experience. As midwives we have the responsibility to advocate the philosophy for healthy nutrition from birth. How are we going to reverse the trend of a bottlefeeding culture? In my opinion, there is no simple answer. However, the first step is to move towards getting Mater Dei Hospital and Gozo Hospital accredited as Baby Friendly Hospitals. The implementation of the Ten Steps for Breastfeeding awgur well in the re-adoption of a breastfeeding culture. This requires a strong committment from the different stakeholders, together with a national political agenda to implement the necessary guidelines that targets infant nutrition from birth.

Investing in health is an investment in the future of human development. Good health adds value to the human resources that are present in Malta. And for a small country like Malta, every person's input to our society counts. The values set down in the Alma-Ata Declaration on primary health care of 1978 – equity and the right to health – remain today as relevant as ever. The Association welcomes the decision of the Department of Health to assign more midwives at the Health Centres. The midwife is trained to offer care to women from pre-conception to the post-natal period and it is appropriate and beneficial to have midwifery care in primary healthcare settings. The question that stems up, is how to revitalize primary midwifery health care to make it relevant today and for future generations?

This question has to be answered in light of the popular mantra 'what women want'. And rightly so. As consumers of Malta's health system, women's human rights are to be respected. It is a woman's right and a human right for a woman to have access to a midwife throughout the childbirth continuum. The new WHO guidelines on Antenatal care (2016) and the recent document on Intrapartum care (2018) are a welcome opportunity to guide midwifery leaders in the implementation of midwifery guidelines. Adopting interventions and harnessing innovations to meet women's needs may enable the scaling up of the public midwifery services in the primary health sector.

My earnest hope is that the above serves as food for thought and a stimulus for more midwives to come forward and join the Association in providing it's services. Concurrently I cannot but thank all those midwives who on a regular basis are involved in the Association in various ways to organise seminars and activities, who attend and participate in events and those who write and share information. The contribution of every midwife is highly appreciated.

Treasurer's Message

Dear Colleagues

Summer is fast approaching and it's that time of year again when midwives and their families spend a day relaxing by the pool and enjoying some mouth-watering barbeque. This year's event is scheduled for 7 August and is being held, once again, at *Fra Ben*, Qawra.

This is another activity that is wholly sponsored by the Association in recognition and thanks for all your input throughout the year.

Thanks to you, the services on offer at the Association premises are on the increase. Indeed, we are now also reaching out to the Italian community residing in Malta, a community whose numbers are on the increase. Thanks to the input and promotion of our colleagues who hail from Italy, a second group of 15 couples are undergoing our courses in their native tongue. This number is quite encouraging. And it also ensures that the parents feel more comfortable and at home.

A new service has also been launched. Every Wednesday a Post-natal Support Group is being held. There are quite a number of midwives who are running this service.

The MMA is grateful to all those who are supporting us. Success breeds success and now more parents and grandparents, but particularly mothers, are using our services. And even the feedback we're having is quite positive.

This is not the result of input by one individual or by just the Committee members; rather this success is due to the efforts put in by several individuals. Thankfully, as time goes by, more midwives have come to acknowledge that the Association is providing valuable services to its clients whilst enhancing and developing the midwives' educational profile.

To date the courses on offer, all carried out by duly qualified personnel, are the following:

- Ante-natal educational classes, offered in Maltese, English or Italian;
- Ante-natal classes for second-time mothers;
- Personalized parent craft by appointment;
- 6 Pilates session every week on Tuesdays and Thursdays;
- First-Aid for babies and children (held twice a month);
- A four-session Baby-massage course (held monthly);
- Mother full or back massage, by appointment;
- 6-session Parental Skills (Rearing children from 0 to 6 years) twice a year;
- Acupuncture by appointment;
- Positive Birth movement monthly;
- Post-natal Support Group Wednesday mornings; and
- Family support service by appointment.

Currently the MMA is therefore offering 12 different courses. Meaning that there need for a number of midwives to cover this array of subjects.

Hence I end with the usual appeal on behalf of the Committee.

On the one hand, I once again thank all those who are already on board. Without your input, it would not be possible to sustain the current level of service. But I likewise appeal to more colleagues to join in. If numbers increase, we can share the burden more evenly whilst also possibly increasing the services on offer.

See you all at the August BBQ.

Doris Grima Treasurer

Upcoming Conferences

EPICC

September 26, 2018 University of Malta (Valletta Campus).
Theme: Enhancing Nurses' and Midwives' Competence in Providing
Spiritual Care through Innovation, Education and Compassionate
Care

(EPICC 2016 - 2019)

https://www.um.edu.mt/events/epicc2018

9th International Conference on Alternative and Traditional Medicine

August 13 – 14, 2018. London, United Kingdom https://alternativetraditionalmedicine.wordpress.com

5th World Congress on Midwifery & Womens Health September 13 – 14, 2018 Frankfurt, Germany Theme: Excelling Innovations in Midwifery and Nursing for Women's Health

https://midwifery.conferenceseries.com/europe/

Cost Action Birth Conference September 17 – 18, 2018: From Birth to Health, Towards Sustainable Childbirth Lisbon, Portugal

28th World Congress on Neonatal Research & Diagnosis
September 27 – 28, 2018:
Exploring New Dimensions in Neonatal Advancements
Amsterdam, Netherlands

Women's Voices Conference Inspiring Future Maternity
Services

October 14, 2018; London https://womens voicesconference.wordpress.com

Midwifery Today Conference
October 17 – 21, 2018: Bad Wildbad, Germany —
"Birthing in Love Changes the World"
https://: midwiferytoday.com

Baby Loss Study Day
October 18: Essex, United Kingdom
louise.brodrick@bhrhospitals.nhs.uk

World Congress on Midwifery & Women's Health October 25 – 27, 2018: London, United Kingdom https://:www.unicef.org.uk

Unicef UK's Baby Friendly Initiative conferences November 15 – 16, 2018, Liverpool, UK

MCA Platform – Birth: Clinical Challenges in Labour & Delivery

November 14 – 17, 2018 : Venice, Italy https://: www.mcascientificevents.eu/birth2018/

Annual congress on Women's Health & Reproductive Medicine

December 4 – 5, 2018: Lisbon, Portugal

Care 4 – International Scientific Nursing & Midwifery
Congress

February 4 – 6, 2019. Leuven, Belgium

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Who are the Malta Midwives Association?

The Malta Midwives Association was founded in 1974 by the late Miss Mary Vella Bondin, herself a midwife and principal lecturer. The association is a registered voluntary organisation and the association statute emphasises the aims of the association being to promote and advance the art and science of midwifery, to raise the efficiency of midwives and to improve their status. Furthermore the MMA is a voice for mothers, their infants and their families, to include organising philanthropic educational activities, including counselling for the childbearing couple and for the family in general.

The running of the association is the responsibility of the executive council which consists of nine members, who are elected for a three year period during Annual General Meetings, held during the month of February each year. The Executive Council is responsible for the entire management of the MMA. The roles of President, Vice President, Treasurer, Secretary, Public Relations Officer & four committee members are appointed by the executive council members during the first meeting following the annual general meeting.

So what does being a committee member involve? The committee meet every fortnight and keep in contact with each other via email between meetings. Roles are

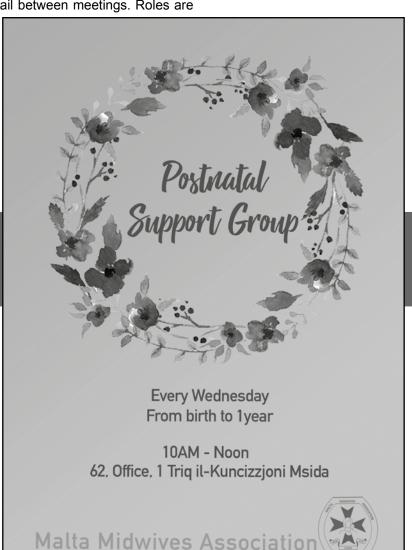
delegated between members depending on their skills, capabilities and interests. The association offers much to its members and society at large, however for those working at committee level who give a lot of their time to running the association the association to them means;

'I feel I can contribute from my organization skills. Midwifery service and education are of particular interest to me.' Doris Grima, Treasurer

'Nagħti ftit lura għal dak li l-midwifery u l-assoċjazzjoni jagħtuni! Nieħu gost meta nara li bil-ftit ta' kulħadd nimxu pass pass 'il quddiem, aktar lejn dak li tixtieq l-omm.' Isabelle Aquilina, Committee member

The MMA however is not just about the committee, the association would not be able to run activities for midwives and for families, issue this journal and represent the profession, without the help of midwife members who offer their time and support.

Interested in becoming more involved? Contact a committee member today!



In June 2018, MMA launched the Post-Natal Support Group





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ICM's strategic directions 2017-2020 Quality, Equity, Leadership: implications for Malta

The International Confederation of Midwives (ICM) Council meetings in Toronto 2017, agreed that the focus for the next triennium will be 'Midwives leading the way: Quality, Equity, and Leadership' in education and regulation of midwifery including research. The focus for this year's International day of the midwife celebrated on the 5th May throughout the world was 'Midwives leading the way with quality care'. Quality as a concept has been in the limelight for decades, yet many countries still lack quality midwifery care and this does not pertain solely to low and middle income countries. In the past years the International Confederation of Midwives, (ICM) has focused on three main pillars, education, regulation and midwives' associations to strengthen midwifery worldwide, including the scaling up of the number and capacity of midwives.

Education, practice, regulation and research form the basis/core of our profession. Midwives cannot provide quality care without the right education. Education is also the means of bringing us out of the 'culture of silence' (Freire, 1972) for it is this culture of silence, which instils a negative, silenced and suppressed self-image in our case midwives, dominated by the status quo. Education and research are the agencies that help us develop a critical consciousness, to appreciate, and recognize that we collectively can change the status quo. Hence, to give quality midwifery care, we need to be fully aware of research that is going on from the local and international perspective.

A number of important publications have been issued concerning the ripple effect that quality midwifery care has on both the mother, child and her family and on society at large, including the implications it has on the economic and financial aspects of the country. Excellent examples include; The Lancet series published in 2014, The State of the World's Midwifery report (SoWMy, 2014) and The High-level Commission on Health Employment and Economic Growth report (Horton et al, 2016) The Sheila Kitzinger Symposium 'Relationships: the pathway to safe, high-quality maternity care', report (Sandall et al, 2016). I trust that some, if not most of us, had the opportunity to read and reflect on these publications and about how we can adopt some of their recommendations for our country.

Undoubtedly, we all aim at delivering high quality maternity care, however one would ask what are our opportunities, and challenges to reach this goal on a local level. I am aware that a number of midwives are carrying out research in a variety of areas, that are either directly or indirectly related to midwifery. This is highly commendable. The values of motivation, respect, the quest for knowledge, the importance of research to help our clients, women, men, neonates, children and families are the agents of moving our profession forward into the future. Conversely, if we are not motivated, if we are afraid to move into unchartered waters, if we prefer the

status quo and are not ready to move on, to discover, to be inquisitive, then our profession is sick or ailing.

This cannot be said of our local midwifery profession. The profession is vibrant and thriving, given that a good number of midwives are furthering their studies in midwifery or in an allied area. A lot of research is going on locally, however we rarely hear about the outcome of this research. Dissemination is critical in education and research. Dissemination is also an ethical obligation on the part of the researcher. The participants have freely offered their time, knowledge and experience to the research, hence it is only fair to learn what has happened to their contribution. Contrarily, most of the time the dissertation is shelved to gather dust. We are happy with our achievement, our degree and happy to stay within our own niche. Probably we are not aware that we are doing a disservice to the mothers, fathers, families, who have participated in our studies.

If we do not disseminate, the public will not become aware of what midwives are doing, society cannot recognize and give credit to the salient work midwives are doing to ameliorate women's, infants and families' wellbeing - hence, the status quo reigns. The public needs to become aware about the actual role of the midwife, what the midwife is doing to create and build a better society. We all play our role, but if we wish to bring midwifery forward, society needs to be aware of who we are and what are we doing. If we want to change the status quo, policy makers need to be aware of our findings. Publishing our findings is the most potent way to raise awareness. This is the only way forward to receive recognition for our work, to be given more responsibility for our actions, to be accredited as autonomous practitioners on our own worth. We have the means, we have the expertise, we have the experience, we know this, each midwife knows this, now the public needs to know about the real scope of practice of the midwife. We need to make this very clear especially to our policy makers. However, this is not an endeavour for a single midwife, or a couple of midwives, we need to collectively be proactive.

The public needs to recognize the potential role that midwives can play in a modern maternity health service. Hence, we need to consider ways how to:

- develop clinical ownership to ensure a role for midwives in maternal and child health as key partners to service development
- affirm career pathways for midwives
- encourage research, given that as discussed earlier, specific data about midwives' activities and outcomes are critical
- sit on the table with policy makers in the planning and the implementation of health services. It is here that midwifery research plays a critical role, it provides the evidence.

Rome was not built in a day, and in a world with limited resources, where finances counts, we have to

prove, we have to show that we are working efficiently and effectively and in the interest of women, infants and families. Publishing our research, auditing our services, making headlines with our findings, could be the mode of tipping the scale in favour of our profession.

Winston Churchill said, 'we make a living by what we get, we make a life by what we give'. What do we want to give to our profession? What is our legacy to our profession?

There seems to be a revival of enthusiasm and motivation, amongst midwives and that in itself augurs well for the future of the profession. Women, infants, and families need us, we are their champions, the profession needs us, we are the profession, we cannot move without each and every one of us, both young and the more seasoned. Teamwork and trust in each other, is critical. We need to bear in mind that not everyone, can or will do the same work, we have to trust in each other, make the most of our diverse abilities, some of us will be at the top (young midwives), in the middle (experienced), or bottom

(cornerstone) of the midwifery chain, the midwifery tower. Each one of us has a unique and critical role in the midwifery chain, to ensure that our profession provides the best quality care for the wellbeing of women, men, children and families.

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Profs. Rita Borg Xuereb

Professor Rita Borg Xuereb is the Head of the Department of Midwifery, Faculty of Health Sciences, University of Malta. She is a registered nurse, registered midwife, has a Diploma in Adult Education, a Masters degree in Midwifery Education and a PhD which focused on the transition to parenthood. She has more than forty years' experience as a healthcare professional and an educator (nurse, 13years; midwife, 30years)

She was the President of the Malta Midwives Association (2001-2007) and a member of the Malta Council for Nurses and Midwives (1990-2013); coordinator of CPD programmes (2003-2009) for Nurses and Midwives in the Institute of Health Care. She was instrumental in the development of the Department of Midwifery, University of Malta in 2009.

She was a member of the EAHC/2013/Health/07 reference network as a Midwifery Academic expert. She chaired one of the Technical workshops at the European meeting in Brussels, on CPD and lifelong learning, in 2014 (EMA; CED; EFN; PGEU; CPME; CHAFEA). She was on the Management committee of the COST Action IS0907 Childbirth, Cultures, Concerns and Consequences.

Prof. Borg Xuereb is an elected Director on the Board of the International Confederation of Midwives, ICM, responsible for Southern Europe and also holds the portfolio for education (2014-). She has represented ICM at several International World Health Organisation meetings, and workshops acting as temporary advisor for WHO, United Nations Population Fund (UNFPA) and Bill and Melinda Gates Foundation, meetings and workshops that concerns sexual, reproductive, maternal and child health and wellbeing, mhealth and midwifery education.

She is an Associate Fellow with University of Newcastle. She is also a member of the Editorial Board of MIDIRS, sits on the Advisory Board of Sexual & Reproductive Health Care International Journal, the Advisory Board of the International Network for Health



Workforce education, and the Editorial Board of the European Journal of Midwifery.

Rita has published in local and international journals, and gave a large number of presentations in leading Midwifery Congresses and Conferences. She is a peer-reviewer of a number of local and international journals, including Midwifery, Woman and Birth, International Journal of Childbirth, Journal of Reproductive and Infant Psychology, and Malta Journal of Health Sciences amongst others.

Concerning local voluntary work, she was founder member of the Commission for the Family, St Gorg Parish, Qormi (1981-2012); member of the Central GRUFAN Committee (1989-1993), Leader couple of Marriage preparation courses (1990- 2012), Natural Family Teacher (1995-) and President of the Diocesan Commission of the Family, delegate of the Archbishop for the family, Curia Floriana (2007-2014).

Her areas of interests are midwifery education and curriculum development, women's health, transition to and preparation for parenthood, perinatal mental health, mixed methods and qualitative research.

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14



Aquanatal Classes as a form of Exercise during Pregnancy

The benefits of exercise during pregnancy are widely known. Over the last decade, we have been witnessing an ever increasing awareness on the importance of living a healthy, well-balanced lifestyle. Whilst up until a few years ago every pregnant woman was expected to quit all sorts of physical activity and live inside a 'protective bubble' for 9 whole months; over the years we are slowly but surely witnessing a significant shift in mentality, both amongst the medical population and amongst the general public.

In 2006, the Royal College of Obstetricians and Gynaecologists, published an official paper stating that any kind of aerobic exercise and conditioning exercise such as swimming during pregnancy, is considered to be safe and beneficial.

What is Aquanatal?

Aquanatal Classes are a special form of exercise classes held in water, aimed for healthy pregnant women. Aquanatal Classes generally involve a mixture of aerobic exercises, muscle toning exercising, stretching and relaxation. Most exercises practiced are specific for pregnancy and are aimed at improving the expecting mother's physical and psychological wellbeing.

Although exercising in general is always beneficial, being in water provides expecting mothers with several added benefits as opposed to other forms of exercise held on land. The water buoyance supports the weight of the body, thus allowing the mother to feel light once again. whilst simultaneously providing additional resistance making exercises challenging and allowing the client to strengthen her core, back and pelvic muscles. Exercising increases the mother's heart rate which leads to an improvement in the mother's circulation and enhancing the blood flow both to the main organs, including the fetus, and also to other parts of the body, significant reducing lower limb oedema and improving constipation; whilst also ensuring better sleep quality. Moreover, mothers feel safe in water, and are much less likely to experience muscle soreness or suffer from injuries.



Who can attend Aquanatal Classes?

As with other sorts of exercise in pregnancy, all mothers having a healthy normal pregnancy, without any significant complications, can attend. Mothers who are expecting twins or are pregnant after assisted reproduction may also attend, as long as there are no complications. On the contrary, pregnant women who are experiencing a complicated pregnancy should not engage in any form of exercise during their pregnancy. This includes women who have experienced significant bleeding at some point during the pregnancy, irrespective of whether they have a low lying placenta or not; or are being closely monitored in view of intrauterine growth restriction or have a previous history of preterm labour.

My Experience and Conclusion

I was first introduced to Aquanatal Classes during my Erasmus experience in Wales as a third year midwifery student. The community midwife I was working with was an Aquanatal Instructor and she invited us to join a class. I remember being totally fascinated. Not only was it a fun an exciting extension of the midwife's 'job', which allowed her to meet the mothers out of the clinical environment and get to know them a bit better, but it was also very easy to realise that it was very rewarding. The look on the mothers' faces showed it all. I could very easily see that they enjoyed it so much and looked forward for every class. I remember thinking to myself that one day I would love to do it too.

I have now been an Aquanatal Instructor for over 2 years. I must say that it's not always easy and it can be rather challenging at times, but it surely is rewarding and I do encourage other midwives to take on other opportunities and follow their dreams. We must remember that we are midwives and that means that we should be 'with woman' every step of the way! We must not forget that pregnancy is a normal physiological life event and we should encourage the healthy pregnant mother to maintain her physical well-being and fitness, whilst teaching her how she can now accommodate the growing foetus.

To conclude, it is essential to keep in mind that every pregnant woman is followed by a multidisciplinary team and

thus it is always important to refer to them whenever in doubt. I must say that most local midwives and also obstetricians recognize the benefits of Aquanatal Classes and exercise during pregnancy and in fact, I would like to publicly thank all the midwives and obstetricians who believed in my classes from the very beginning.

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Jolene Camilleri

BSc (Hons) (Melit) Midwifery RCM Recognized Qualified Aguanatal Instructor

A Concise History of Diagnostic Ultrasound in Obstetrics

In the medical world, the use of ultrasound as a diagnostic modality has increased tremendously, this is owed to the safety it is roped with, making it the safest diagnostic tool to use especially in obstetrics. In medicine it is often arduous to know when most developments occur, thus resulting in having many people taking credit for being the pioneer to make a breakthrough. Probing the use of ultrasound in Obstetrics and Gynaecology, this is not the case, since the definite beginning of ultrasound use leave no such doubt to whom the credentials are assigned. Everything got underway in 1958, with the classic Lancet paper presented by Ian Donald, John McVicar and Tom Brown. The paper titled, "The investigation of abdominal masses by pulsed ultrasound", was dedicated to ultrasound studies in clinical obstetrics and gynaecology with the first images of the fetus and gynaecological masses exhibited. Another unique attribute this paper had was that these images were the first ones to be acquired with a compound contact scanner, the latter being the first most feasible machine to be used clinically.

When claiming the development and use of medical ultrasound till the stage we identify it nowadays, one cannot be short sighted and not mention some of the great scientists of the 19th and 20th century. In 1801 the term 'phase shifting' in relation to light waves was illustrated by Thomas Young, this concept is currently utilised in the production of 3D images with ultrasound phased array systems, in helping to control interference patterns. Another issue that was adapted in clinical ultrasound use and nowadays we utilize daily, is the Doppler Effect, used as the basis for blood flow studies in pelvic vessels and the fetus. Initially, this was pioneered by Christian Doppler in 1842, when he studied the Doppler Effect in relation to the motion of stars. An additional conceptual advance to which today we use its reverse effect, was founded by Pierre Curie in 1880. Curie described the piezo electric effect where he showed the production of electric charge by the mechanical distortion of ceramic crystals. This invention was taken on board conversely in order to be utilized in ultrasound transducers so that ultrasonic waves are generated. Another breakthrough was that founded by Paul Langevin one of Pierre Curie's pupils who in 1915 built the first hydrophone with the use of ultrasonic waves to locate the position and distance of submarines. This in ultrasound was adapted to the principle behind the measurement of the fetus and abdominal masses.

The invention of 2 dimensional images by ultrasound, got its' adaptation from the development of Radar in 1943 by Watson-Watt and his team where they used electromagnetic waves. Primarily in medical use, the Ascan metal flaw detectors were used in 1949 by George Ludwig. An adaptation of this A-scan metal flaw detector was pursued in 1953 by Inge Edler and Carl Hertz in Lund University. These 2 scientists recorded the first M-mode readings from the adult heart. An engineer John Read together with Wild J.J. published the first 2D images in 1952. The

tribute for yielding the fundamental tomographic images of human anatomy reached Douglas Howry in Denver in the same year (1952). The problem with Howrys' approach was, that to get an image of what is happening one had to immerse in degassed water (water delay scanning), the body part that needed to be examined. As one can see in fig1, the equipment was inelegant and uncomfortable for the patient. This machinery, also made it seems unlikely that ultrasound scanning would have made the breakthrough into becoming the most widespread imaging modality in clinical use, was it not for the development of the compound contact scanner (fig, 2) by Donald Brown in the late 1950's.

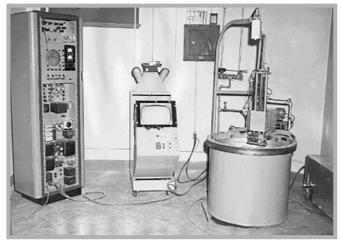


Fig.1

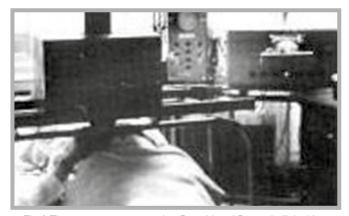


Fig.2 The prototype scanner that Donald and Brown built in 1957



Fig 3 (Donald using the Diasonograph in 1960.) images obtained from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3987368/figure/F3/?report=



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Donald, a Scottish obstetrician with a brilliant mind, was part of the air force, where he got his know how on radar technology. This was fruitful when he paired up with a clever engineer Tom Brown, together they pioneered the world's first contact compound 2D ultrasound scanning machine, named the Diasonograph. The images produced were rather crude and lacked grey scale, they were also static given that the image was created on a cathode ray tube by rocking slowly the transducer over the abdomen. Although not being very precise, by this technique the ultrasound steeplechase had its starting gun fired to what we have today, a very high end sophisticated machines, were one can have excellent and superb images of the human body.

ARTICLES

THE LANCET

INVESTIGATION OF ABDOMINAL MASSES BY PULSED ULTRASOUND

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VIBRATIONS whose frequency exceeds 20,000 per second are beyond the range of hearing and therefore termed "ultrasonic". One of the properties of ultrasound is that it can be propagated as a beam. When such a beam crosses an interface between two substances of differing specific acoustic impedance (which is defined as the product of the density of the material and the velocity of the sound wave in it), five things happen:

(1) Some of the energy is reflected at the interface, the amplitude of the reflected waves being proportional to the difference of the two acoustic impedances divided by their sum (Rayleigh's law). Therefore the greater the difference in specific acoustic impedance between two adjacent materials the higher will be the percentage of energy reflected. This fact makes a liquid-gas interface almost impenetrable to ultrasound and is important in relation to gas-filled intestine within the abdominal cavity.

(2) Much of the energy which is not reflected is transmitted into the second medium but is somewhat attenuated.

(3) Some refraction may occur, particularly when the ultrasonic beam is not at right-angles to the plane of the interface.

(4) Some of the energy may be absorbed and produce heat. The ability to absorb ultrasound varies with different tissues—e.g., that of bone is considerable.

(5) Cavitation may be produced if considerable energies are present at the lower ultrasonic frequencies. This phenomenon, whose mechanism is not yet fully understood, can develop when the negative sound pressure exceeds the ambient hydrostatic pressure, giving rise to small temporary voids in the material. Cavitation becomes increasingly difficult to produce as the frequency of the ultrasound is raised, and usually develops only when the ultrasonic energy is applied continuously or in

Fig. 4 from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3987368/figure/F3/?report=objectonly

After Donald's launch of the Diasonograph quite a number of static scanning machines were produced, mainly in research centres. In comparison with the lustrous real-time ultrasound machines we have today, the Diasonograph was the analogue of Babbage's difference engine to the modern laptop. In fact many Americans very unkindly called it the *Dinosaurograph*,

given that this machine was 8 feet high, occupying about one third of the room. The probe was housed in a very large gantry and had to be physically moved with no small effort to change the scanning plane. However it dominated positive features in allowing users to pave the way in the early ultrasound biometry.

The rigid main frame allowed that scans could be made at any angle and in any plane, though if the fetus moved it entailed that one had to start again with the lining process, making it very time consuming. The probe used to be on a pulley system making it easy to be skimmed on the woman's tummy while the static image gets created on the oscilloscope.

It was in the mid 1960s that commercial transvaginal transducers were developed by both Aloka and Kretztechnic, but the prospective of this scanning method was not materialized until the advent of real time imaging. Real time scanning kicked off in Germany, thanks to Richard Soldner an engineer who worked for Siemens and developed the first real time scanner. This entailed having a large fluid filled plastic membrane as the scanning head which accommodated 3 revolving transducers in front of a parabolic mirror, resulting in flickering images at the rate of 15 frames per second.

Donald and his team made some early breakthroughs, and in 1963 described the early diagnosis of hydatid mole (with its snowstorm appearance), assessment and growth of the early gestation sac (by the full bladder technique) and the diagnosis of early pregnancy complications (Donald, 1962).

In the 1960s' the holy grail of antenatal diagnosis was the accurate location of the placenta, since placenta praevia was the cause of significant maternal mortality at that time. It was in 1968 that Donald and Abdulla with their superior equipment were able to demonstrate placenta in all locations including even posterior praevia.

It was the A-scan measurement of the biparietal diameter (BPD) which started of fetal biometry studies. After this invention James Willocks from Donald's department issued an interesting paper on head growth in the third trimester showing variable growth rates between normal growing fetuses and those fetuses affected with growth restriction. In 1968, Stuart Campbell one of Donald's registrars, described the B mode technique where the midline echo of the fetal head was seen in a 2D scan and then an A-scan measurement was taken between the parietal eminences at the widest point. This method continued to be applied until the on-screen calipers were introduced several years later. In his studies Campbell showed that the midline echo could be easily relied on as from 13 weeks of gestation, soon after he demonstrated that this was even an effective method to date a pregnancy during the 2nd trimester. It was from these studies that the first cephalometric graph was assembled. The issue with this method was that when measuring only the fetal head, it is not that indicative since the brain is the last structure to show growth restriction. In connection with this pitfall Thompson and Makowsky in 1971, introduced the thoracic circumference measurement, with which in combination with the BPD measurement, the concept of fetal weight prediction was established. Following this

Malta Midwives Association

concept Manfred Hansmann confirmed these results and showed an asymmetry between the BPD and TC in growth restricted fetuses. Campbell who in the meantime has transferred his work to Queen Charlotte's Hospital in London alleged that there should be intrinsic problems with the reproducibility of TC measurements, given the chest is cone shaped and there was no reliable markers to systemically level the scan. It was in 1975 when he introduced a much more reliable measurement- the AC; that is the measurement at the level of the intraabdominal vein, a measurement that is still used today. This is most reliable because sine the AC measurement is at the level of the liver, it's here that growth restriction is going to show first, since the liver is the most severely affected organ in an IUGR.

It was in 1978 were the evolution of routine screening programme gave way, thanks to this programme over

a period of 5 years 24% of women who were uncertain of their expectant dates and 95% of women were delivered within 12 days of the ultrasound prediction. even regarding detection, thanks ultrasound introduction 95% of twin gestations were detected in the second trimester on the contrary of the only 70% before this programme of routine screening started.

Anecdotal reports of anomalies congenital with polyhydramnios were made Bu Sunden B in 1964, where he reported a case of anencephaly. while William Garrett in 1970 analyzed a case of polycystic kidnevs. Prenatal diagnosis by ultrasound started being a reality in 1972 after a paper published by Campbell and his group reporting the diagnosis

of anencephaly at 17 weeks. Subsequently Campbell started examining the fetal spine in women diagnosed with a raised alpha feto protein marker and reported the diagnosis of spina bifida in 1975. Consequently to this, by 1977 he was able to confirm 329 high risk pregnancies who were examined between the 16th and 20th week, in which by ultrasound he detected 25 to 28 neural tube defects, having 10 of the 13 cases of spina bifida were detected, the false negative being low sacral lesions. The widespread benefit of ultrasound in prenatal diagnosis materialized with the invention of the real time scanning machines. In the early to mid-70's mechanical sector real time scanners were introduced, however, being quickly superseded by the multi-element linear and phased array scanners in the mid to late 70's.

The huge advances in integrated circuit technology, made the machines more feasible to use being small and moveable and less expensive, paved the way that a department would have several machines instead of a fixed one. With these machines movements of the fetus could be followed, since the the probe angle could be instantly adjusted to identify the plane of interest, given that with the new technology fetal biometry could be materialized in a matter of minutes, screening the whole population became a reality.

The ADR was the first linear array real time scanner used commercially, had only 64 lines giving a very poor resolution, subsequently the second version sought much room for improvement and had 500 lines and phased focusing, making it rival with static scanners in terms of resolution. Over the next decade ultrasound companies were progressing immensely to produce real time equipment. Definitively it was the Acuson 128 by Sam Maslak in 1983, which set new standards in both contrast and spatial resolution, it was powered by advanced beam forming software called computed sonography. The first realistic endovaginal mechanical

> sector transducer was produced by Kretztechnic in 1975 and was designed to enhance the technique of oocyte collection IVF. These transducers delivered exceptional images. The only disadvantage was probe vibrations. It was at the end of the 1990s that most manufacturers developed the small multi-element probes which nowadays provide outstanding resolution.

> It was never enough, in 1985, Aloka led the colour Doppler

imaging into the real time equipment, other companies follow suite. By 1990 colour was made available as well on the transvaginal probe for gynae investigations. By the end of the 1990's harmonic imaging was introduced making the image resolution much better. In the meantime in Japan since 1984 early studies on 3D imaging were on the way by Kazunon

Fig. 5

Baba, but it was not until the production of the third generation of 530D Voluson in the mid 1990's that the medical world became convinced that 3D/4D ultrasound had an important role to play in both obstetrical and gynaecological imaging. This new technology was promoted by Bernard Benoit who issued stunning 3D images of the fetus especially in the first trimester.

It could thus be said that the contemporary real time scanning machine with high resolution abdominal and endovaginal transducers, harmonic imaging, colour and power Doppler facilities with a 3D/4D option emerged in the medical world by the year 2000.

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Avoiding and Managing Perineal Trauma

Introduction

Trauma to the genital tract commonly accompanies vaginal birth (Williams et al., 1998). Countries report wide variations in trauma rates and further variations exist amongst health professionals (Renfrew, Hannah, Albers, & Floyd, 1998). In some countries, such as in the UK, suturing is part of the midwife's role, whereas in Malta suturing has been delegated to junior doctors. The frequent rotation and inexperience of the junior medical staff have sometimes proven that they are not always the best option to suture the perineum. Midwives should ideally be trained in perineal suturing in actual clinical practice. Evidence suggests that midwives often lack the appropriate training and knowledge and thus are considered not skilled in handling suturing of first and second degree ears.

It is estimated that 85% of women experience lower genital tract trauma related to childbirth, and that 69% will require suturing of that trauma (Albers et al., 2005). The true incidence of perineal tears is difficult to acknowledge since there are issues correlated to incomplete assessment by clinicians (Andrews et al., 2006), confusion about definitions amongst practitioners (Hordness and Bergioso, 1993) and variations in reporting minor perineal tears (Albers et al., 2005).

Suturing has been shown to be a potentially traumatic and painful experience to women, regarded by some worse than the delivery itself (Green et al., 1998). In this day and age where any form of pain relief imaginable exists, some mothers are still not achieving adequate pain relief during suturing. This despite evidence suggesting that pain relief is necessary due to the considerable pain (Sanders et al., 2002) and that pain relief methods can have a huge impact on the whole experience for women (Hedayati et al., 2004). Levels of perineal pain postpartum have been related to various factors amongst which the severity of the trauma sustained, skill of the operator in suturing, technique of repair adopted as well as type of suture material used (Kettle et al., 2007). Perineal trauma has been found to have potentially severe effects on women's physical, psychological, and social wellbeing in that it can disrupt breastfeeding, family life, and sexual relations even in the long term (Grundy, 1997; MacArthur and Bick, 1997). The ideal management to minimize suturing effects on mothers' experiences should thus be set as a priority in midwifery care.

Identification and Assessment of Perineal Trauma

Sultan's (1999) four classification system of perineal tears has been taken on as a standard measure of the degree of tears by many, including the Royal College of Obstetricians and Gynaecology (RCOG) and National Institute of Clinical Excellence (NICE). This classification system has three subsets for third degree tears but it lacks a similar grading for second degree tears. This has led to a lack of consensus on evaluation of perineal trauma among doctors as well as among midwives (Jackson, 2000; Metcalfe et al., 2002; Mutema, 2007). By definition second degree tears may range from a shallow split in the superficial perineal muscle to an extensive three way vaginal tear involving deep perineal muscles (Metcalfe et al., 2002; Ullman, Yiannouzis and Gomme, 2004). Variations in perineal length may also affect impressions of severity (Rizk and Thomas, 2000). Tears are often examined by a visual and digital examination (Jaiyesimi, 2007) but this method

has led to various wounds being misclassified (Dudding et al., 2008. It is therefore crucial that clinicians are able to accurately identify and assess the severity of trauma to ensure the appropriate management. Perineal assessment skills and expertise of those who care for the birthing woman can have a considerable effect on her entry into motherhood (Baston, 2004). Despite having found a suturing material associated with decreased pain levels, women are still being affected by problems in the postpartum period. Thus the associated complications might be more inclined towards incorrect identification and assessment of trauma (Langley et al., 2006). Perineal injury classification system is still regarded as highly subjective to the person carrying out the assessment. The lack of knowledge on how to distinguish tears and the lack of a systematic assessment tool remain an issue. It has been reported that there is a lack of general knowledge on the agreed classification of perineal trauma and that midwives feel inadequately prepared to assess or repair perineal trauma (Mutema, 2007).

| TABLE 1. Classification of Perineal Tears ²³ | | |
|---|---|--|
| Degree of Perineal Tear | Definition | |
| First-Degree Perineal Tear | Injury to the perineal skin and vaginal epithelium only | |
| Second-Degree Perineal Tear | Involves an injury that extends into the fascia and muscles of the perineum, which includes the deep and superficial transverse perineal muscles and fibers of the pubococcygeus and bulbocavernosus muscles. Second-degree lacerations do not extend into the anal sphincter muscles. | |
| Third-Degree Perineal Tear | Involves an injury through the muscles and fascia of the perineum and involves the anal sphincter complex. Third-degree tears are subclassified further into three categories: 3A: Less than 50% of external anal sphincter (EAS) thickness torn 3B: More than 50% of EAS thickness torn 3C: Both EAS and internal anal sphincter (IAS) torn | |
| Fourth-Degree Perineal Tear | Fourth-degree lacerations involve the perineal fascia and muscles, both the external and internal anal sphincters and the anal epithelium. | |

Midwifery Practice

The RCM has issued a guideline suggesting the studies that compare interventions to prevent perineal trauma at birth with usual care antenatally and during the second stage of labour. Some risk factors for more severe perineal trauma (third and fourth degree tears), such as ethnicity, parity and infant birth weight (Groutz et al. 2011) exist.

The Cochrane review comparing perineal digital massage during pregnancy with usual care (Beckman and Garrett 2006) found an association with an overall reduction in the incidence of perineal trauma and episiotomy for women who implemented antenatal perineal massage from 35weeks onwards. Women having a first vaginal birth were statistically significantly less likely to have perineal pain at three months post-birth. During the second stage of labour, several studies have assessed the outcome of interventions including perineal massage (Stamp 2001), perineal guarding (McCandlish 1998; Mayerhofer 2002), active pushing in second stage labour with or without epidural analgesia (Brancato et al. 2007; Bloom et al. 2006), maternal position for the birth among women who did not have epidural analgesia (Gupta et al. 2004) and warm compresses applied to the perineum (Dahlen et al. 2007).

NICE (2007) suggest that perineal massage should not be performed during the second stage. McCandlish et al.'s (1998) compared two methods of management; the "hands on", in which the midwife placed pressure on the baby's



head to support ("guard") the perineum, with lateral flexion to facilitate delivery of the shoulders, and "hands off or poised", in which the midwife kept her hands poised, not touching the perineum or fetal head and allowing spontaneous delivery of the shoulders. This study showed that women in the 'hands off' group were more likely to report 'mild' perineal pain at 10 days postpartum. The only other statistically significant differences were in two secondary outcomes: episiotomy rates were lower in the "hands off" group, and manual removal of the placenta was more common. NICE (2007) guidelines suggest any of these techniques could be used to facilitate spontaneous vaginal birth. Approaches to management of the passive and active phases of the second stage of labour have also been considered with respect to interventions to reduce perineal trauma. Current NICE guidance (2007) is that women should be advised that they should be guided by their own urges to push, as there is no high level evidence to support benefit of directed pushing during second stage including impact on perineal trauma.

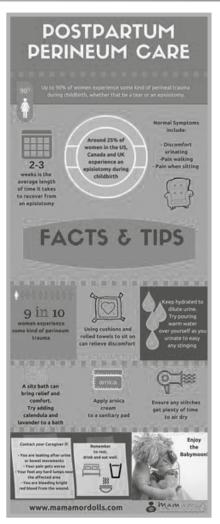
A Cochrane review (Gupta 2004) of positions during the second stage of labour among women who did not have epidural analgesia, found a reduction in use of episiotomy and an increase in second degree tears among women

allocated to non-upright positions, however there is a lack of robust evidence in the matter. NICE guidelines for use of different positions during labour in fact suggest otherwise.

A randomised controlled trial which investigated perineal outcomes and maternal comfort following the application of warm compresses in the second stage for nulliparous women reported that use did not reduce the need for suturing but did reduce the risk of 3rd and 4th degree tears. with some evidence that warm packs reduced the severity of pain (Dahlen et al. 2007). No formal evaluation of the use of cold packs during the 2nd stage of labour has been reported. Episiotomy has also been associated with increased risk of severe perineal trauma. A systematic review of incidence, risk factors and options for management of obstetric anal sphincter injury (Dudding et al. 2008) found episiotomy was strongly associated with a higher frequency of anal sphincter trauma. Maternal outcomes associated with the model of maternity care received also demonstrate an impact on perineal trauma with women who received midwifery led care being less likely to have an episiotomy (Birthplace in England Collaborative Group 2011; Hatem et al. 2009).

Conclusion

Various evidence exists on management and prevention of perineal tears, however different practices continue to be used and various practitioners still do not know what their responsibilities and capabilities are. The use of an accurate assessment tool for second degree tears and framework to distinguish when suturing is needed, can be of greater benefit to mothers. Evidence suggest that first degree tears should



not be sutured and the same principle applies to certain second degree tears where bleeding is not excessive and natural healing is not accompanied by risk of complications such as gaping (Kettle et al., 2007). This requires midwives to have the appropriate knowledge and skills to accurately distinguish such tears from others that require suturing. The prevalence of tears, which are incorrectly identified, and women suffering the short and long term negative effects should put this issue as a priority in midwifery care. Evidence has shown that there are many potentially cost effective and beneficiary outcomes to teaching midwives anatomy and suturing techniques. Proper work based training helps midwives achieve their potential and helps them achieve a better practice outcome, which in turn is beneficial towards mothers in helping them accomplish a positive birth experience and smoother transition to parenthood.

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Technology and the Cascade of Intervention

The increasing use of technology in childbearing has both positive and negative effects, with the process being increasingly seen as risky thus encouraging the idea that safety is to be found in hospital and technology. The use of technology and interventions leads to even more need for interventions resulting to what is known as the cascade of interventions. This raises questions regarding how informed mothers are about the use of technology and its effects on childbearing. The cascade of interventions has to be kept in mind when proposing an intervention in view of the healthcare professional's duty of benevolence and non-maleficence towards the mother. In midwifery/obstetric practice, this is complicated by effectively having two persons the interventions can effect: the mother and the baby.

The process of childbearing, that is pregnancy and the birth itself, is a natural physiological process. This process, especially labour and birth, is driven to a considerable extent by a complex orchestration of hormones, which can be easily disrupted.^{1 2 3}

The first signs of a quite radical change concerning pregnancy and birth appeared between the late nineteenth and the early twentieth centuries. There were two major changes, namely the beginning of formal antenatal care, and the gradual but steady replacement by hospitals of the woman's home as the place to give birth in.⁴ This process of medicalisation of childbirth, including the transfer of labour and birth into hospital, was aimed at ensuring the safety of the mother and her child. The perspective of safety conferred by increasing use of technology fails to take into consideration the morbidity rates, which can be higher the more medicalised childbirth is.⁵

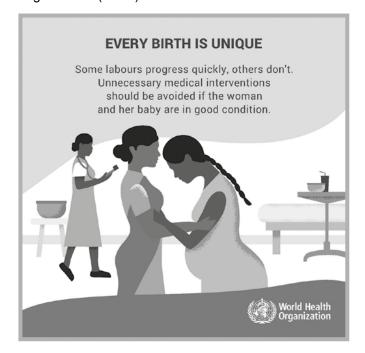
All interventions, especially during labour, have their intended effect but they also have unintended effects which may need further interventions to correct, leading to what is known as the cascade of interventions. The concept of safety presumes risk: pregnancy and birth according to the medical model are considered dangerous until proven otherwise.

This view that childbirth is risky and even dangerous creates uneasiness regarding the whole process leading to the view that it is safer to be in hospital where the experts and technology are available. But the risk approach perpetuates the perception of danger and can be self-fulfilling by focussing on what can go wrong rather than on what is right.⁶

Spontaneous labour and birth is a series of processes which are complex, perfectly attuned to each other but incompletely understood. Interference can only detract from their optimal function. In many instances the labouring mother needs only to be physically and emotionally supported. Too much interference can change physiology into pathology. In the highly medicalised birth, the so-called active management of labour, some interventions are carried out as a routine. However all interventions have unwanted effects besides the desired effect, and often one intervention leads to further interventions to counter these unwanted effects. As all aspects of the active management of labour carry a potential risk to the

mother and/or fetus, active management should not be the norm but reserved for those occasions where there is a clear need for intervention. The hazards of unnecessary intervention is much higher in hospital, simply because the technology is there. Unnecessary intervention is less likely in the community setting not only because there is less technology available but also because the healthcare professionals providing such care have a less interventionist mentality.⁷

Some forms of intervention, such as electronic fetal monitoring, induction or augmentation of labour, pharmacological pain relief and operative deliveries, are very obvious; other interventions are more subtle but they are interventions with all the attendant risks nonetheless. These include restrictions on eating and drinking, restrictions on positions adopted in labour and during the birth, perineal shaving and the administration of an enema or suppositories. Although these seem benign, all have an effect on the physiology or psychology of normal birth or both. These interventions all reinforce the idea that the mother is a patient. Besides, none are based on evidence but on tradition and habit, and some actually go against the recommendations of the World Health Organisation (WHO).^{8 9}



Most usually the first intervention to which most if not all women in labour are subjected to is electronic fetal monitoring, even when the pregnancy was normal and there are no indications for electronic monitoring. Electronic fetal monitoring interpretation can be a problem, and there is no evidence that it is superior to intermittent auscultation with a fetal stethoscope. ¹⁰ As labour can be perceived as prolonged when taking place in hospital with its restrictions on time (although there is no evidence that it should be over within a set period of time), many mothers are subjected to amniotomy and oxytocin infusion. However the actual length of the process can vary from one woman to another, and as long as both the mother and child show no signs of distress



the length of labour itself is not a problem. Limiting the time allowed for labour results in more women requiring unnecessary interventions.11 In many hospitals artificial rupture of membranes is done routinely once the mother is deemed to be in labour. Although the rationale is that the first stage of labour is shortened, there is no scientific evidence of this, besides the possibility of increasing the chances of a caesarean section. 12 Amniotomy is very often followed by the initiation of an infusion of artificial oxytocin (syntocinon). The risks of fetal distress are greater with syntocinon infusion, therefore continuous fetal monitoring is needed. This restricts the positions the mother can adopt. Moving around and changing positions while in labour help the process of labour, making it shorter and less difficult. The result of the induction or augmentation and restriction on changing positions is that women need more pharmacological pain relief.¹³ ¹⁴

During a natural labour and birth, the mother's body releases a combination of different hormones some of which regulate the strength and efficiency of the contractions. Oxytocin regulates the frequency and strength of the contractions. Other hormones, namely endorphins, reduce the perception of pain. Catecholamines cause the fetal ejection reflex and facilitate an easier and quicker delivery of the baby, even in a tired mother. When syntocinon is administered it interferes with this delicate balance of hormones. Syntocinon levels in the blood tend to be higher as it is infused continuously.15 16 Natural oxytocin is released in pulses and at lower levels. Syntocinon induced contractions are longer and stronger than the mother would experience naturally; thus monitoring is needed and the chances of a caesarean section for fetal distress increases. With the sharper pain of syntocinon induced contractions, the need for pharmacological pain relief is increased, with either pethidine given intramuscularly, or even more likely, an epidural is stared. This reduces pain but can also reduce the contractions, necessitating ever greater doses of syntocinon. Unlike oxytocin, syntocinon does not cross the blood-brain barrier, so endorphins are not released, again necessitating pharmacological pain relief.17

While epidurals provide excellent pain relief, the physiology of labour is disrupted. Besides interfering with the release of hormones necessary for labour and birth, they also relax the pelvic floor muscles. This relaxation of muscles together with the restriction on moving and changing positions make the rotation and descent of the fetal head more difficult, with an increase in the chances of an operative delivery, either using forceps or a ventouse extractor or through a caesarean section. Epidurals are not always effective, either fully or partially. This can be a psychological side-effect, when the mother was promised an end to her pain but this relief does not materialise. Occasionally, there is an accidental puncture of the dura resulting in a severe headache for the mother for some hours or days after the birth.18 Another sideeffect of epidurals is lowering of the maternal blood pressure, which can lead to maternal and fetal distress. To counter this, intravenous fluids are given and blood pressure recorded frequently, which further restricts the mother's mobility. 19 20 The lack of sensation from

the waist downwards produced by an epidural means that the mother has an increased difficulty in passing urine, and a catheter is inserted to counter this. Besides being uncomfortable and possibly embarrassing, catheterisation increases the risk of infection. Epidural anaesthesia is usually considered safe for the baby. While narcotic drugs are known to pass through the placenta and can affect both breathing and feeding in the neonate, epidurals are considered as not causing these effects. But some studies point to a different conclusion. The chances of the baby having more difficulties to start breathing and the need for admission to a special care unit are greater if the mother had an epidural during labour; there are also more feeding difficulties especially in the first days.

Many times there is a restriction in eating and drinking when a mother is in labour, in spite that starvation and dehydration, besides being unpleasant, can make it more difficult for the mother to meet the energy demands during labour. This restriction on eating and drinking is due to the observations made by Mendelson that during general anaesthesia there is a higher chance of vomiting and aspiration of the stomach contents which can result in severe lung disease and even death, known as Mendelson's syndrome. But these observations took place in the 1940's, and since then obstetric anaesthesia, both drugs and techniques, has changed dramatically, and nowadays very few mothers are actually administered general anaesthesia even for a caesarean section. Besides this, it is now known that restricting oral intake does not prevent Mendelson's syndrome as the stomach is never completely empty, and fasting does not ensure less acidic stomach contents. In spite of this, many mothers are still advised not to eat or drink when they are in labour, which goes against recommendations made by the WHO.24 25 26

Because of the restriction on oral fluids, and to control blood pressure when an epidural is set up, the mother is frequently given an intravenous infusion of fluids when in labour. This can lead to fluid overload, with a resultant reduction in contractions. Many times, as the mother is





not eating, the intravenous infusion contains glucose. Unless this is given slowly, it can cause hyperglycaemia in the mother and fetus, and hypoglycaemia in the newborn baby, which will need correcting, together with blood sugar monitoring. An intravenous infusion can also cause oedema in both mother and child, with the result that when after birth the baby responds by passing larger amounts of urine to get rid of this oedema, there is a larger weight loss than what is considered normal, necessitating even more monitoring.²⁷

When forceps or a ventouse is used, or when there is a delay in the second stage of labour, an episiotomy is usually performed which needs to be sutured after the birth. Episiotomies are also more likely if the mother was lying in bed for the birth; adopting a more natural upright positon helps in lessening delay in the second stage, while letting the perineum stretch better. Episiotomies are considered to lessen the risk of perineal tears and reduce the pressure on the fetal head during the birth. But research shows that, contrary to this, a restrictive use of episiotomies leads to less morbidity in both mother and baby. Equation 1999.

There is a higher not lower risk of severe tears of the perineum when an episiotomy is performed. As episiotomies cause crushing of tissues besides the cut itself, they result in more pain than spontaneous tears. There is usually less bleeding from tears than when an episiotomy is performed, especially if the episiotomy is done earlier. Episiotomies also take longer to heal and may contribute to incontinence, while proffering no advantages to the child.³⁰ ³¹ ³²



The interventions used during the first and second stages of labour effect the third stage as well. necessitating more interventions. The drugs given as pain relief relax the uterine muscles, while syntocinon alters the physiology of normal birth and makes the brain less recipient to oxytocin.33 These can interfere with the separation and the delivery of the placenta, leading to retained products of conception which may necessitate evacuation of the uterus under anaesthesia. Haemorrhage is also more likely to occur. To counter this, an injection of syntometrine is given. But when oxytocic drugs are given, the placenta must be delivered within a short time, as otherwise the cervix will close, trapping the placenta in the uterus. This is usually through controlled cord traction. If cord traction is started too early, when the placenta has not separated completely, the cord can be pulled off the placenta, making its delivery more difficult, and an increased likelihood of the need of it being removed under anaesthesia. Cord traction is a painful procedure for the mother. There is also a very small risk of inversion of the uterus; this is a rare but real emergency in obstetrics. ³⁴ ³⁵ Another intervention which is common in the third stage of labour is the early clamping of the umbilical cord.³⁶ Early cord clamping causes the placenta to baulk, increasing the chances of a retained placenta and postpartum haemorrhage. To counter this, controlled cord traction must be commenced immediately; but this practice has a higher risk of the cord separating from the placenta, necessitating manual removal.³⁷ ³⁸ If the third stage is managed physiologically, clamping and cutting of the cord is delayed for some minutes until the cord stops pulsating. In this case, delaying clamping and cutting the cord for one to two minutes helps the newborn in its transition to extra-uterine life. Some of the cord blood is transfused into the neonate, providing extra blood volume and red blood cells together with a higher perfusion of oxygen. This enables the baby to have optimal haemoglobin levels with less risk of anaemia later. There is also better cardiovascular and pulmonary adaptation and better perfusion of vital organs. If the baby is born prematurely, delayed cord clamping is even more important. Although the practice in these cases is to clamp and cut the cord immediately so resuscitation can start as soon as possible, delaying cord clamping can protect the preterm infant from respiratory distress syndrome and intraventricular haemorrhage. When cord clamping is delayed for one or two minutes, preterm babies also need less blood transfusions. Another advantage of a physiological third stage is the lessening of the chance of isoimmunisation in the cases of a Rhesus-negative mother giving birth to a Rhesus-positive child. 39 40 41 42 43

Although interventions in labour are aimed at achieving a vaginal, non-operative birth in a reasonably short time from when labour is established, the more interventions used the more the chances of this decreases, and the chances of the ultimate intervention, a caesarean section, increases.⁴⁴

The time after birth is a time of physiological and psychological adjustment for both mother and child.⁴⁵ The interventions used during labour have an impact on the postnatal period. The more interventions used, the higher the chances of the newborn needing special care



therefore separating the baby from the mother. This has an effect on attachment between the two. For a long time, attachment was believed to be instinctive and therefore automatic. It is now known that attachment is not wholly instinctive, and is influenced by various factors including the amount of time the mother and newborn spend together. Attachment is made more difficult if the mother had a highly medicalised birth. Besides the increased chances of maternal-infant separation following a medicalised birth, difficult attachment may be the result of extreme tiredness, discomfort or pain, the drugs given or in the case of a caesarean section. Separation of the mother from her child can have serious consequences; failure to thrive without organic reason and child abuse and even abandonment 46 are more common in infants who were separated from their parents immediately after birth. Even if the mother and infant are kept together, while in hospital the mother can come to rely on the staff, who may be perceived as the experts, for direction regarding baby care. This can generate feelings of inadequacy which persists after they are discharged home.47

As a result of interventions during labour and birth, breastfeeding is also affected. Successful long-term breastfeeding depends in part on early initiation. The more interventions used the more difficult this will be, even if the mother and baby are not separated. The administration of syntocinon and syntometrine also interfere with breastfeeding, as one of the hormones which controls the production of breastmilk is oxytocin; the brain is less recipient to syntocinon than to oxytocin.⁴⁸

The interventions used during childbearing, but during labour particularly, while seeming benign or even beneficial, have an effect beyond their intention. One intervention usually leads to another to correct its effects and the cumulative result can be much greater than the original intention. Such interventions should only be used when their benefits are clearly greater than the benefits of not intervening, with practice based on evidence not on habit and tradition.

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Traditional Chinese Medicine and Reflections on my Experience in China

Traditional Chinese Medicine seems mysterious and strange to many of us, but understanding the basic principles of Chinese medicine will clarify this ancient and lasting system of medicine. Chinese medicine is an ancient medical system based on the Daoist view of a universe in which everything is interconnected. Through thousands of years of observation and practice, the Chinese have developed a unique method of understanding the structure of the internal organs and the body's physiological processes (Ho & Lisowski, 1999).

The origins of Chinese medicine are shrouded in thousands of years of mystery, myth, and long-lost ancient texts. One of the oldest surviving texts dates back to around 2,500 B.C. and is called the Yellow Emperor's Canon of Internal Medicine. While the actual written text is only dated back to 1,000 B.C., it is thought that it represents and older verbal tradition (Ho & Lisowski, 1999)

The most fundamental concept of Chinese medicine is Yin and Yang. All things in the Universe are either Yin or Yang. However, nothing is ever all Yin or all Yang, but a balance between the two that is ever changing. They are opposites, yet complementary. They are not independent of each other but change into each other. For example, the day (Yang) turns into night (Yin) and winter (Yin) turns into spring (Yang.) Illness is caused by an imbalance of Yin and Yang in the body. In Chinese Medicine, treating illness is the process of rebalancing Yin and Yang. Moreover, wellness is viewed as the combination of a thriving body, a clear mind, and a peaceful spirit. It is only when Body, Mind, and Spirit are unified in balance that one can be well (Xia, Shen, Chen, & Xiao, 2013).

Many people are familiar with acupuncture, but TCM actually has five branches of practice including Herbology, Acupuncture, Tuina, Cupping and Moxibustion. All of these therapies, used independently or combined together can help balance the Yin and Yang in body.

In TCM the concept of Qi is also very important in understanding how it works. 'Qi' is believed to be an energy force running through our bodies, it runs through invisible channels called meridians. There are 12 meridians, which are connected to all organs of the body. Health is affected by the flow of Qi through the body. If the flow of Qi along channels is disrupted, insufficient or stagnant, then Yin and Yang become unbalanced, which may result in illness. This is where acupuncture comes in. All acupuncture points are Qi access points along the Meridians (Xia, Shen, Chen, & Xiao, 2013).

Acupuncture

Acupuncture, meaning, "needle prick," is a form of treatment that involves sticking needles into various points, known as "acupuncture points." These points are specific to what ails you and acupuncture has been



proven effective in treating pain, headaches, nausea and other various ailments. However, in traditional Chinese medicine, the purpose is more than merely curing what ails you, the purpose is to put your "Qi" and body in harmony and to ensure that each part of your body had adequate yin and yang. The important thing to know is that each acupuncture point is a way to redirect your Chi to improve the function of your various body parts (Xinnong, 2010).

The acupuncturist will typically use sterile, thin single use stainless steel needles at each acupuncture point you need treated. The acupuncturist usually diagnoses the patient by examining the face, the tongue, the pulse and lifestyle. Then, upon determination of disease the acupuncturist will choose specific points, which are proven by clinical trials to help improve the condition. Most people are a bit weary of having needles inserted in their body. However one must know that an acupuncture needle has an average diameter of 0.00325 inches. That's like a strand of hair. Also it is not painful. Often people experience a dull achy feeling, sort of like when you're getting a massage at a key pressure point. Even though it's not the most popular sensation, it's a good thing called the Arrival of Qi. Which means that the energy in your body is flowing(Deadman, Al-Khafaji, & Baker, 2007).

Many people are curious on the depth of needle insertion. It really depends on the location where the needle is inserted. Places that have a lot of muscle or fat lend themselves to a deeper insertion, sometimes up to 2-3 inches. However, needles going into places like hands, feet, ears and wrists that are not as fleshy may only go 1-2 mm. The condition being treated is also a factor in how deeply they are inserted. For example a patient being treated for sciatica usually need a deep needle insertion in order to reach the sciatic nerve and calm it down. Moreover, needling around the head, neck, spine and over internal organs demands care on behalf of the acupuncturist. All licensed practitioners are aware what is underneath the area which is being needled (Deadman, Al-Khafaji, & Baker, 2007)

Just like any other form of treatment, acupuncture has a few side effects. All of which are non life threatening and disappear after a few hours. One of the most common side effects of acupuncture is a small bruise or hematoma where one of the needles was inserted. Other side effects include headaches, a slight feeling of dizziness, extreme tiredness after the first session, and occasionally a significant emotional release, many practitioners will take this as a very positive sign that the

balance of the system is being restored (Xinnong, 2010).

There is still a lot of debate on how acupuncture works. Most studies have revealed that its most effective to curing symptoms of pain. One of the leading theories is that the needles used help release more of the body's natural endorphins. Another theory is that acupuncture has a good effect on blood pressure to improve circulation and target pain at its source.

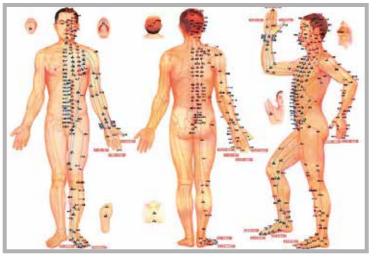
Chinese Herbology

The second major branch in TCM is Herbology, where Chinese herbal practitioners use a variety of specific herbs to rebalance the body in the treatment of disease. Chinese herbology has existed since prehistoric times. The earliest known records are attributed to Shen Nung, 3494 B.C. The ancient Daoist monks left detailed records of extensive herbal studies aimed at finding "elixirs" to provide a healthy and long life (Maciocia, 1993). These lead to many theories about herbology. Today, the basis of most common formulas often dates back 2,000 years or more. Chinese herbs are usually dispensed as tablets, liquid or powdered granules. Chinese herbal medicine can have a very powerful effect on the body, however, negative side effects are generally rare and mild. The most common negative side effects would be various gastrointestinal disturbances (ie loose stools) though instances are still rare and generally correct themselves if dosages are altered or medications are discontinued (Chen & Chen, 2003). (Wu, 2017)

Chinese herbal medicine can have a wide variety of effects on the body. There are herbs that strengthen and/or invigorate the circulation of the body's Qi or vital energy, nourish and move the blood, calm tension, regulate hormones, strengthen and cleanse internal organs, clear infection or inflammation, etc. There are over three hundred commonly used Chinese herbs many of which have a history of use going back at least 2,000 years (Monda & Scott, 2006).

Tuina, Cupping & Moxibustion

Tui Na, which means pushing and pulling, is an ancient form of Chinese massage. It uses the basic principles of Chinese medicine with massage, manipulation, and traction techniques to relieve your symptoms. Tui Na is slightly more vigorous than a Swedish massage, and can realign your musculoskeletal relationship. Tui



Na is helpful for those with back and neck pain, carpel tunnel syndrome, sprains, and so forth (Pritchard, 2015). In addition, different protocols of Tui Na assist internal disorders such as gastro-intestinal problems, emotional disorders, and are especially effective in treating pediatric ailments. Tui Na can be done over clothes and might also be combined with topical applications to achieve the most effective relief.

Cupping is an ancient technique that uses sterilised cups (glass, plastic or rubber) that are applied to your skin's surface and stick by removing the oxygen. While it can leave marks on your skin that resembles bruises, they are not painful and will disappear after several days. The theory behind cupping is that it brings circulation and blood to the surface and muscles, removing the toxins that cause pain. Cupping is mostly used for those with muscular and joint pain (Wu, 2017)

Moxibustion is the burning of several herbal substances above the skin in specific areas of the body. This produces varying degrees of heat — sometimes used to warm the abdomen or uterus, stop pain in the toes or other joints, and even regulate menstruation. Several varieties of moxa exist; some can be formed like a thumbtack and be placed on fresh ginger while others are formed and burned like a cigar while others come in a predetermined cone size and can be placed on needles. Moxa can open up the body's passageways which are blocked by cold or stagnation - which results in pain. Overall, moxa produces a gentle warming and calming sensation. Moxa uses include: painful menstruation, breech presenting baby and arthritis (Xinnong, 2010). (Pritchard, 2015)

Internship at Shanghai Research Hospital of TCM

Back in October of 2017 I was offered the opportunity to go to Shanghai, China and take part in a one-month internship in an acupuncture research hospital. This opportunity was given to me because I had completed a Masters Degree in Traditional Chinese Medicine and Culture with the University of Malta in collaboration with Shanghai University. I obviously could not miss this chance of a lifetime to visit China and deepen my knowledge on traditional Chinese medicine. Now that I'm back I want to share my experience with all of you.

My journey to China was long and nerve wrecking. I was mentally preparing myself for a culture shock and

a language barrier, as I did not know a word of Mandarin. However as soon as I arrived in Shanghai I had a warm welcome and somehow I felt excited to start the adventure! I arrived in Shanghai in the late evening. As I was travelling by taxi to my hotel I was overwhelmed with how huge the city was, how tall the buildings where, colorful lights and people everywhere. I had visited other major cities, but nothing compared to Shanghai.

First weekend in Shanghai I was jetlagged and I started to explore the city little by little. The pace at which the city and people move is phenomenal in comparison to Malta, it took a while to get used to, but it was amazing to see and experience.

In China people have the choice to either go to a Western medicine hospital, a Traditional Chinese



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Medicine Hospital or a hospital where both schools of medicine are integrated. For the four weeks I was in Shanghai I had a placement in the Shanghai Research Centre for TCM. I had two traditional Chinese medicine doctors as mentors and I shadowed them during their clinical practice. The research center was like a walk in clinic where people could walk in and are seen by a doctor according to their chief complaint. The center had doctors specializing in different areas of medicine like pediatrics. I saw small kids getting acupuncture for coughs, for slow development and for ADHD. The kids with ADHD were being sent home with needles all over their heads so the parents could take them out after 8 hours. The retention of the needles for a longer time enhances the treatment for certain conditions, and it is common to leave them in to be removed later.

Also during these four weeks I had the chance to meet patients suffering from a variety of conditions, ones, which I was not exposed to during my course in Malta. Also I got to observe the patients' progress during their acupuncture treatment course. For example, I saw a stroke patient who came in for treatment a few days after I arrived. He came the second or third day after he had the stroke, which caused one side of his face to be completely paralyzed. When I first saw him, he couldn't



close his eyes or close his mouth, and by the time I left, 70% of his symptoms had gone. He came to the clinic every day and got acupuncture on his face, head, and whole body.

During my internship I also noticed the differences present in the hospital setting. Somehow the Chinese patients have no problem with having no privacy at all. The doctor would be having a consultation with a patient while the other 20 patients are waiting close by and listening to each consultation. And in the same way, men and women receive acupuncture on beds in the same room, with no shame about having their bodies exposed. Somehow it felt like a meet up, where they made friends and talked to each other while getting acupuncture. Seeing the same people everyday made the experience more personal as I myself ended up making friends with some of the patients and made me feel like I was part of their community.

Unfortunately during this internship I did not have any opportunity to meet any expectant mothers using acupuncture during their pregnancy, as usually they receive treatment from a maternity hospital, and it was not part of my programme. However from this experience I learned to have greater assurance in the power of Traditional Chinese Medicine and that it could successfully treat so much more than the limited list of conditions that the WHO says it can treat. I learnt some of the limits of TCM and when to call in help from western medicine. I also learnt how the two paradigms of medicine could be successfully employed together to get the most benefit for the patient being treated.

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Elacta Conference, Rotterdam, May 2018

The 10th ELACTA (European Lactation Consultants Alliance) conference on Breastfeeding 'Breastfeeding Without Borders' was held in Rotterdam, The Netherlands. The conference was held in a unique location on board an old ocean steamer, SS Rotterdam, which is berthed and serves as a hotel and conference venue. The conference was very well attended and delegates spread as far as the USA and a number of Asian countries.

The conference was opened by Jo Jewel, a nutrition technical officer for the European region from the World Health Organisation (WHO). This was extremely appropriate as the 'Baby Friendly Hospital Initiative' has just been revised by WHO and he discussed the changes that have been made in the updated version. He also discussed the 'International Code of Marketing Techniques' which has been given more importance in the revised document stressing the importance that hospitals are not being used as marketing mediums.

The guest speaker was Dr Amy Brown an associate Professor from Swansea University, UK. 'Breastfeeding and Body Image' was the title of her talk which covered several themes including society's attitude to breastfeeding mothers. An amusing exploration of physiological, social and cultural barriers to breastfeeding was given which helped to understand how we can better support mothers. Dr Brown created a shift in the perception of breastfeeding as an individual mothering issue to a wider public health problem discussing how we can create a society that protects and encourages breastfeeding.

All presentations were excellent but there were a few that I found very relevant to practice giving me updated information for the clinical area.



Dr Gina Weissman gave an overview on 'Breastfeeding and Surgery'. All types of breast surgery were discussed which highlighted that breast surgery may or may not impact on breastfeeding and that close observation is necessary with formula supplementing only introduced when all signs lead to this. This talk was followed by another good presentation by Dr Panaglotis Mavridis, a paediatrician from Greece, who discussed newborn issues such as hypoglycaemia, hyperbilirubinemia, infant weight loss and growth and preterm breastfeeding. He described jaundice as 3 types, physiological, breastfeeding related or breastmilk jaundice. Nearly all cases will be attributed to physiological reasons. He gave a good description of breastfeeding related jaundice which is a symptom of poor feeding. However, he stressed this is a symptom and cannot be a standalone symptom as the reason jaundice occurs is because the baby does not pass stools therefore there must also be a history of lack of stooling. It was also highlighted that jaundice cannot be flushed out and this was proven with trials using glucose water or infusions which actually increased bilirubin levels rather than decrease. Increased feeding is only vital with breastfeeding related jaundice although the first line of action should be to improve breastfeeding rather than immediate formula supplements.

The final speaker was Professor Helen Ball, a world renowned expert on infant sleep. She discussed attitudes and practices regarding infant sleep, behavioural and physiological monitoring of infants and their parents during sleep, infant sleep development and the discordance between cultural sleep preferences and biological sleep needs. Apparently even adults rouse after around 3 hours of sleep but do not wake. This talk was extremely helpful to understand human sleep patterns and how modern life is affecting this creating this unrealistic idea that human infants are abnormal if they do not sleep the night when the reality is that it is abnormal for them to sleep for such long periods.

I have attended several ELACTA conferences but this year's was exceptional. I enjoyed nearly every presentation and came away motivated and updated. I was also lucky enough to have two colleagues join me which I am hoping will help implement the take home messages being a larger force in our clinical area.

Helen Borg RM, BSc, MSc, IBCLC



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Through the Eyes of an Erasmus Student

I had the pleasure of travelling to Malta in January of this year to undertake a nine-week midwifery placement at Mater Dei, I honestly did not know what to expect but was anxious to find out. I began my experience at the Central delivery Suite in Mater Dei travelling from our accommodation in local Birkirkara, I loved walking to the hospital in the morning and passing early church-goers and market vendors.

Initially the language barrier proved to be more of a problem than expected, but by the end of my placement I felt I knew the staff well and most would translate the care to me after. I found from having a language barrier that my non-verbal communication developed and I have found this has transferred over to my care in the U.K. The effect of a smile or a nod can make a woman feel so welcome to an alien environment and its affect has not been lost on me even in an environment that was alien to myself.

Over this time, I acknowledged differences between U.K. and Maltese practice and the effect this had on outcomes. I was disappointed to note that home births were 'not-allowed' even though evidence supports their safety. I also found that pools were not available for analgesia or for birth. I discussed these dissimilarities with many midwives and found that many shared this opinion. It seemed the bureaucratic environment of the hospital and its rigid policies did not support a holistic, woman-centred model of care. However I did find midwives who, despite the environment and conditions they were presented with, still provided individualised and compassionate care regularly. This was reflected in the work of the Malta Midwives Association. I attended two

'Positive Birth Movement' meetings, a movement started in the U.K. and hosted at the association. It evoked woman-to-woman discussions about birth and allowed an opportunity to ask questions and vent concerns. Supporting this education was the hospital's antenatal classes which I managed to observe whilst there. I found these to be comprehensive and individually focused. Compared to the U.K., I found women had more contact time and received classes on every topic possible. The hosts of which were extremely accommodative and supportive, even asking my colleague and I to teach a class, which we enjoyed thoroughly.

Coming back to the U.K. I have reflected on my practise in Malta heavily. I have been so grateful for the support received and the opportunities I was often granted. However, from meeting such wonderful midwives I hope it is not too long until they are given the autonomy, resources and support they deserve. I also hope the new Mother and Baby unit goes to fruition to allow for change for the better. Lastly, I hope women are increasingly trusted to make their own choices about their care, their birth and their baby because, at the end of the day, midwives are women's advocates always striving for better.

I would like to thank all the midwives at central delivery suite for their wonderful support and eagerness to teach, it will not go unforgotten and has significantly contributed to my development as a student midwife.

Cydney Hoy-Griffiths

Erasmus Student at the University of Malta between 3rd January and 2nd March 2018.

Non-Verbal Communication: Reflections on an Erasmus Placement

My recent Erasmus placement in Malta gave me an invaluable insight into the importance of communication in maternity care that I would not have gained in my home country. Communication may seem like an easy, everyday skill. We do it constantly. Often without thought. However, 'effective communication' requires conscious effort and can be especially difficult because it is a two-way process, whereby the other person is an 'unknown' dynamic (England and Morgan, 2012:1). Effective communication is crucial because it is the gateway to understanding a woman's needs, fears and hopes surrounding pregnancy, childbirth and family life (England and Morgan, 2012). Moreover, it is a catalyst for action, allowing the midwife to perceive when to 'inform, suggest, act... withdraw and remove oneself' (England and Morgan, 2012:6). In the United Kingdom (UK), communication is one of the National Health Service's 'fundamental values' and is iterated throughout the Nursing and Midwifery Council's statutory (2015)

Working and learning as an English-speaking student midwife in a predominantly Maltese-speaking hospital allowed me a glimpse of what it may feel like to be a woman in maternity care that does not understand the native language. In the face of important conversations, like handovers and ward rounds, I tried guessing what words meant. I tried focussing on facial expressions and body language. I tried reading the short hand off of the whiteboard. However, at the end of the day, these were just educated guesses. Not understanding what was being said often made me feel lost and cut-off. This was definitely not intentional. The midwifery staff I worked with were warm, welcoming and inspiring and I am grateful for their inclusion and all that they have taught me. However, if this was how it made me feel, as a student in a privileged position, it could be worse

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for some of the vulnerable, non-native women for which midwives care. Those women could be labouring in pain or tired from their birth and desperately trying to feed their newborn, but may be blocked from support by a language barrier.

Being aware and mindful of such language barriers is paramount because a lack of effective communication leaves women 'disadvantaged' and more prone to poor pregnancy and birth outcomes (Warwick, 2013:i). Furthermore, research shows that perinatal outcomes are significantly worse in non-native women than native women (Lewis, 2007). This is particularly significant as levels of immigration to both Malta and the UK are increasing year on year(National Statistics Office, 2016 ; Office for National Statistics, 2017). Upon discussion with my colleagues, I realised this is reflected in everyday care; most midwives can recall looking after a woman that they were convinced just said "yes" to everything that they were asked because of their limited vocabulary and lack of understanding. However, healthcare providers are often hindered when tackling such issues by the unavailability of services and a lack of time.

Consequently, this made me reflect on the little things that act as linguistic stepping stones, which can make a big difference and don't take up time or resources. This is where I came to appreciate the real, yet often overlooked, value of non-verbal communication. The

simplest gesture like a smile can make the world of difference to making someone feel welcome, safe and included (Wysong and Driver, 2009). It certainly did for me everytime a member of staff smiled at me whilst I was on placement. It encouraged me to get involved and keep persevering, even when spoken language made it difficult. On top of this, various studies have found that patients perceive their care as of a higher quality if their health care providers smile and are friendly (Wysong and Driver, 2009).

Through my time as an Erasmus student in Malta, I feel I can now better empathise with women that do not speak the same language as their care providers. In a society that is more and more multicultural, with an increase in the movement of migrants and refugees, challenges created by language need to be recognised and acted upon. After all, I believe my role as a midwife is to support women to the best of my ability, no matter their circumstances. I will personally never underestimate the power of communication, especially non-verbal, in providing competent and compassionate care. The impact that a simple smile can have is huge in making someone feel welcome, safe and included.

Emily Brocklebank

3rd Year Midwifery Student, BSc Midwifery, University of Nottingham. Erasmus Student at the University of Malta between 3rd January and 2 March 2018.

Public Speaking



The course objective focuses on effective public speaking particularly dealing with the fear of speaking. It shows participants that public speaking is fun and easy. The course provides practice in both impromptu and prepared speeches and also addresses the important issue to 'wake 'em up!" during presentations! Participants are introduced to the principles of adult education.

Another area which is discussed in these sessions is stage fright. This is a phenomenon that one must learn to control. Participants are encouraged to think of any presentation as a friendly conversation rather than a formal speech. Communication with confidence is the key.

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M.Sc Midwifery Abstracts

Proposed Guidelines for Antenatal Care of Teenage Mothers: A modified Delphi Study

It is generally accepted that a teenage pregnancy is a highrisk pregnancy associated with psychosocial problems causing these young women to default from antenatal care. Whilst pregnant teenage mothers are provided with antenatal care locally, the service provided is not directly focused on the needs of these teenage mothers. Being a vulnerable group, teenage mothers require additional antenatal care focusing mainly on their individualised needs.

In view of this, a Modified Delphi study was carried out using a self-designed questionnaire/s to design and develop a set of guidelines with the aim of enhancing the provision of antenatal care for teenage mothers. To achieve this goal, the researcher identified and formulated clinical practice items required in the provision of antenatal care for teenage mothers through an indepth literature review, and validated these items using a Modified Delphi approach. A heterogeneous sample comprising Clinical Midwives, Obstetric Doctors, Midwifery Educators, Mothers, Policy-Makers and Counsellors/Guidance Teachers were recruited by purposive, non-probability sampling technique and snowballing technique. This Modified Delphi Study consisted of two rounds of questionnaires. A sample size of 186 participants (68.6%) were recruited in Round 1. The response rate of Round 2 was 46.5% (n = 126) contributing to a total of 32% dropout rate. The homogeneity of the tool was demonstrated by testing its reliability using test-retest and internal consistency. Data analysis involved identifying the level of consensus for each clinical item in both rounds and was analysed using frequencies, cross-tabulations and correlational statistics.

Through the in-depth literature review, 37 items and 4 themes were generated. These items formed the Modified Delphi questionnaire. Upon completion of Round 2, 34 items achieved the pre-determined 70% level of consensus, with the majority of items (n = 21) scoring above 90%. Clinical items that

gained consensus included those related to barrier issues, that is, amongst others, problems associated with a standard clinic and the socio-demographic statuses of the pregnant teenagers. Other items that gained consensus included those related to the need for follow-up sessions and additional support programmes for pregnant teenagers, family counselling sessions, continuity of care, alternative models of care, antenatal care in the community, after-school antenatal clinic, liaison with other relevant services, as well as the request for more training and guidelines for staff and student midwives. Items related to topics on the provision of transport for pregnant teenagers, the presence of older pregnant women in the antenatal clinic and the impact of unfriendly attitudes from health workers did not gain consensus and were excluded from the refined proposed guidelines.

By using Carper's Theory of Knowing, the Model of Change and the Practice Guidelines Evaluation and Adaptation Cycle as a guide, the researcher discussed how the responses of this study correlated with trends reported in previous literature. Based on the findings of this study, the conclusion provided recommendations for clinical practice, research and education, including among others, the need to publish the proposed guidelines for them to be used as a basis for the provision of local antenatal care, and the need to offer comprehensive training to those midwives who wish to extend their role and specialise in this field. It was concluded that the possibility of the development of a teenage antenatal clinic would require subsequent research, including the evaluation of the competencies needed of health

professionals and the investigation of the success of this teenage antenatal clinic over time. Other suggestions for further practice, research and education were also drawn up.



Analise Gingell University of Malta B.Sc. (Hons) (Melit.), M.Sc. (Melit)

The Lived Experiences of Maltese Midwives and Obstetricians Caring for Childbearing Migrant Women

Worldwide migration has increased drastically in the last decade. Malta has also reported an increase in new migrant communities across the Maltese Islands. Our healthcare system has witnessed steady growth in births within families of foreign nationals, thus exposing Maltese midwives and obstetricians to the diverse challenges of caring for multi-cultural people. While international studies have looked at how this phenomenon affects migrant women, little research has been done to explore the views of the healthcare providers themselves. The study aimed to explore the lived experiences of Maltese midwives and obstetricians caring for childbearing migrant women.

The qualitative paradigm was used to conduct the research by using a semi-structured interview schedule. The interview guide was specifically designed for the purpose of the research. A total of four midwives and four obstetricians were recruited by purposive sampling, and all participants took part in one audio-recorded interview, the data of which was collected between December 2016 and January 2017. Ethical issues were taken into consideration and adhered to throughout the research process.

Data was analysed using Interpretative Phenomenological Analysis (IPA) as described by Smith, Flower and Larkin (2009). The resulting four super-ordinate themes identified how meeting with childbearing migrant women was initially a 'wake-up call' for midwives and obstetricians, which was followed by feelings of 'powerlessness' and a 'process of metamorphosis' to ultimately suggesting the need for 'compassionate maternity care'.

The findings demonstrated that midwives and obstetricians faced numerous challenges when caring for childbearing migrant women. These ranged from, difficulties in communicating, to lack of compliance to appointments and care plans. For this reason midwives and obstetricians have suggested a reorientation of our maternity service to provide more culturally compliant, sensitive, non-stereotyped, and compassionate care. Key recommendations include; better interpreting services, increase

in transcultural education among healthcare professionals, outreach programmes with migrant women, and provision of continuity of maternity care with improved interprofessional collaboration.



Marie Soler University of Malta B.Sc. (Hons) (Melit.), M.Sc. (Melit) Malta Midwives Association



Genetics in Midwifery: Exploring the Midwives' Views and Educational Needs in Clinical Practice

Genetics is becoming increasingly important within healthcare, but the evidence indicates that midwives may not feel confident in dealing with the genetics need of patients and thus education is often inadequate. In Malta no studies have ever been conducted on genetics in midwifery. This study was useful to understand how it is best to enhance genetics education in this profession and served as an initial step toward the creation of continuous educational material targeted to midwives. The aim of this study was to explore the midwives' views on genetics and in addition to assess the educational needs of midwives in the field of genetics in Malta. The main objectives were to explore the current status of midwives' knowledge and its applicability in practice; to assess the attitudes of the midwives regarding genetics and its importance in their clinical role; to identify the barriers of integrating genetics into practice and to determine the genetic education needs of midwives in relation to their clinical

To fulfill the study's aim, a 'needs assessment analysis' using a mixed method approach, combining both quantitative and qualitative methods was used. Data were collected in the first phase, by means of a questionnaire, which focused on the current status of midwives' knowledge, their attitudes, the identification of any barriers in integrating genetics and the educational needs of midwives. This was combined with a focus group interview, where midwives were allowed to discuss their views on how to implement improvement in genetics education. There was a presentation seminar at the end, with the aim of serving as the first continuous professional development (CPD) event on genetics. This was targeted to practicing and student midwives. Data collection took place in all the maternity settings within the state local public hospital. The sample consisted of 150 midwives and the sampling technique chosen was a purposive sampling. Frequencies, percentages and three non-parametric tests were used in this study. The data from the focus group was analysed using Burnard (1991) thematic-content analysis, where eight themes emerged and within each theme, further categories were elicited.

Ninety-eight midwives participated in the questionnaire, resulting in a response rate of 65.3%. From these 98, five midwives agreed to exchange and share their ideas through the focus group interview. The majority of midwives felt that genetics is an important and an essential component of midwifery practice, however, the majority did not feel confident enough to undertake certain activities to integrate genetics into their clinical practice. The majority were found to have inadequate knowledge on genetic information, genetic services and epigenetics. In fact, the need for educational preparations in genetics at both pre- and post- graduate levels was highlighted. Most midwives agreed that lack of knowledge about genetics among educators and practitioners; lack of understanding of relevance to practice; limited number of clinical mentors and limited number of educators to explain difficult concepts, were considered as barriers for integrating genetics into their daily clinical practice. The midwives' preferred learning approach was the workshops with a mixture of presentations and group activities. A need for a clear description of responsibilities to enable effective use of genetics in the midwives' clinical practice was also identified. One main limitation of the study is that 59 out of 150 midwives. did not attempt to answer the questionnaire and thus there may be bias.

As an outcome of the study several recommendations were proposed. Continuous awareness should be made to student midwives and qualified midwives about the midwife's role in genetics. Hence, it is best to continue the current teaching of

genetics in the undergraduate curriculum, and possibly expanding it even to the postgraduate programme, with the introduction of study days as part of every midwife's CPD.

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The Birth Environment: Mothers' and Fathers' Lived Experiences

The birth environment has a powerful impact on the mother and those with her during labour. An increasing amount of research is bringing to light fathers' birth experiences. Fathers provide support to most women during labour therefore, their experience of the birth environment is also crucial. This study aimed to explore both mothers' and fathers' lived experiences of the birth environment. Objectives were set to explore how the physical, psychosocial, spiritual and cultural environment during labour, influences the parents' birth experience, and to delve into the similarities and differences between mothers' and fathers' views and experiences of the birth environment. Experiences of the birth environment at home during early labour and at hospital, in labour and during a normal vaginal birth were studied.

The study adopted a hermeneutic phenomenological research design. A purposive homogenous sample of seven couples was recruited from the local public hospital. The method of data collection was a one-time, face-to-face, semi-structured interview. Interviews were carried out with the couple together. The birth territory theory by Fahy (2008) guided this study. Data was analysed using interpretative phenomenological analysis as

described by Smith, Flowers and Larkin (2009). Three super-ordinate themes emerged from the data; 'the home-hospital gap', 'midwifery care' and 'movement in labour'. A conflict between the comfort of home and home-like aesthetics, and the reassuring, but foreign, clinical environment and medical equipment, was felt by mothers and fathers. Movement in labour was important to mothers. Fathers became more involved in the labour when mothers were mobile during labour. The birth environment consisted of facilitating and impeding factors to movement, which influenced the parents' experiences. The midwife was a fundamental part of the birth environment, taking precedence over the physical environment. The midwife's role should go beyond the care of the mother to involve and support the father too. Mothers and fathers experienced the birth environment from different perspectives however, they have indicated

similar needs and desires from the birth environment, creating a shared experience. Recommendations for improvements to the local birth environment, midwifery practice and further research were made.

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