Nurse Injector Satisfaction related to Cosmetic Filler Training

Susan Word, BA, RN

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Chair: Tori Canillas-Dufau, EdD, MSN, RN-CNE

Abstract

Aim: To explore California nurse injector satisfaction related to Cosmetic Filler Training.

Background: The California Board of Registered Nursing includes Cosmetic Filler Injection, a popular aesthetic service, as within the scope of practice of the California Registered and Advanced Practice Nurse (rn.ca.gov, 2003). The method of training these nurses have received has not been evaluated in scholarly literature (Niamtu, 2005).

Method: An anonymous online, seven question survey of nurse injectors in California was made available to nurse injectors currently in practice.

Results: There is currently no standardized approach in nurse acquisition of skill and education in regards to cosmetic filler application.

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Thank you to Western Governors University for a creative and challenging program I was able to undertake online while working full-time.

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Chapter 1: Introduction to the Problem

Introduction

According to the American Society for Aesthetic Plastic Surgery (ASPS, 2009), "since 1997 there has been a 231.0% increase" in non-surgical cosmetic procedures, the second most popular treatment of which is soft tissue augmentation. In 2009 alone, 1,313,038 cosmetic filler injections were performed in the United States.

Although the national statistics for how many nurses perform such injections do not exist, the ASPS survey asserts that even 6.0% of their members do not perform cosmetic filler injections themselves in their practices. Aesthetic nursing as represented by nurse cosmetic filler practice is an example of nursing adaptation to the demands of a new century.

Background

Soft tissue augmentation has revolutionized the treatment of the aging face, and in the last decade the field of cosmetic filler injection application has soared due to development of hyaluronic based products (Vedamurthy, 2004). Practitioners are no longer limited by restrictions inherent in the original

cosmetic filler, bovine collagen, which was shorter acting and had a high profile of allergic response (Alma et al., 2008).

The author/researcher was instructed in the specialty of dermal filling injection in 2000 by a lay sales representative of bovine collagen, the filler product prominently in use at that time (Glogau & Kane, 2008). The Collagen Corporation provided cosmetic filling instruction via non-medical corporate representatives as was the experience described above. After exiting specialty practice in 2004 the author/researcher has maintained curiosity regarding current training practices for cosmetic filling after observing that the subject is not well represented in the literature.

This study utilized a seven question anonymous survey offered online to currently practicing cosmetic nurse injectors in California. An online survey was made of anonymous, random respondent nurse injectors in California regarding the source of specialty injection training. Further, respondent assessment and feedback of this training was assessed in the Capstone process.

Problem Statement

Cosmetic filler injection is a physician-supervised medical treatment regulated as a registered nurse practice in California

by the California Board of Registered Nursing. Acquisition of cosmetic filler injector skills requires post-licensure and post-nursing school instruction.

In California, training is most commonly acquired via private pay cosmetic treatment seminars, via individual one-on-one tutoring in a physician's office and or via completion of a manufacturer's written tutorial followed by skill demonstration as the nurse injects a volunteer as a non-medical, non-licensed manufacturers' representative guides the nurse injector with verbal directions. The quality and adequacy of initial training for cosmetic injection skills has not been addressed or formally evaluated by the nursing profession.

Research Questions

The following three research questions were addressed in this study:

1. What is the most common method of cosmetic filler training received by California nurse injectors?
2. How do practicing cosmetic filler injection nurses assess the level of their initial training?

3. What recommendations do cosmetic filler injection nurses have regarding the initial training of nurses new to the specialization?

Rationale and Significance of the Study

The profession of nursing in the United States will benefit by nurse injector assessment of learning in this special area and by formal recommendations regarding training for nurses new to this specialized area of practice.

Definition of Terms

For purposes of this study, the following terms were utilized:

Cosmetic fillers or *dermal fillers* indicate the full array of currently available manufactured or autologous filler substances used to cosmetically enhance the aging or disease related lipoatrophied face (Cohen, 2008).

Summary

The California Board of Registered Nursing includes cosmetic injection within the California registered nurses' scope of practice. Anecdotal evidence asserts that the majority of practice offices in California offer cosmetic filling by (registered) nurse injectors under the supervision of medical

doctors of various specialties. These nurses are not represented in the literature. No scholarly report of their training methods or evaluation of their training methods exists in the literature. This study evaluated nurses' own assessment of the cosmetic filler training they received. This study reports and assesses the nurse self-reports on their cosmetic filler training via the use of a seven question online survey.

Chapter 2: Literature Review

Introduction

Aesthetic nursing is a 21st century example of what Florence Nightingale described in the 19th century as nursing the healthy (Nightingale, 1898). In *Notes on Nursing: What it is and What it is N*ot (1898), the matriarch of nursing outlined 19th century practice essentials such as "never cleaning a slop pail in the sickroom" (Nightingale). She also observed that "laws of nursing" are equal "among the well as among the sick" (Nightingale). However, in prophesying the future of nursing to maintain health, Nightingale may not have envisioned Botox© and dermal fillers.

Today's aesthetic nursing practice actually derives from the more recent history of botulinum toxin (Klein & Elson, 2000), the therapeutic use for which was discovered by Alan B. Scott, a San Francisco ophthalmologist and researcher. Dr. Scott observed decreased wrinkling of the upper face in his injected eye muscle patients as early as the 1970's (Klein, 2006). Dr Scott's discovery has given 21st century faces an antidote for unwanted rhytides in addition to multiple other medical uses for previously untreatable problems (Allergen Corporation, 2003).

This study, however, focused on the second core aesthetic procedure, dermal filling, and the training received by nurses who practice this cosmetic enhancement as permitted by the California Board of Registered Nursing (Chisholm, 2005).

Lack of Representation in the Literature

In review of the scholarly databases providing references to peer-reviewed and other academic publications, the main points evident can be categorized in three ways. First, there is very little United States generated scholarly literature addressing the topic of how nurses learn to inject cosmetic filler(s).

Second, the literature regarding the history and practice of cosmetic fillers is profuse and cited frequently in this study, although only indirectly related to the topic of nurses injecting. Fortunately, the third area of emphasis in the literature is generously available for purview, and that is the area of scholarly literature investigating methods by which nurses learn.

Rationale for the Study

The rationale for this study is based in part on the dearth of applicable literature specific to the topic of cosmetic filler injection as practiced by United States Registered Nurses

(RNs) or Advanced Practice Nurses (APNs). Although the nurse injector of cosmetic fillers is not a topic addressed directly in the literature, the literature reflects this omission in several illuminative ways.

Dr. Mariano Busso, a practicing dermatologist in South Florida, published an article explicitly advising and instructing the cosmetic filler injector published in a U.S. nursing journal, *Dermatology Nursing,* in June of 2008 (Busso, 2008). In "Soft Tissue Augmentation: Non-surgical Approaches to treatment of the Mid and Lower Facial Regions," Dr. Busso discloses that as an investigator for two filler product clinical trials as well as being a member of advisory boards for two other manufacturers, manufacturers imply consent themselves.

The *Dermatology Nursing* article reviews the recent history of dermal filling for cosmetic enhancement and comprehensively informs the injecting practitioner of the wide choices of filler available today, including their applications, indications, contraindications, and obvious product differences. By way of demonstrating his intent to teach injection technique, Busso (2008) specifically directs his focus to detailed description of his own expertise regarding injection techniques

with precise description of his suggestions to obtain the most optimal treatment results in the use and application of the various commercially available cosmetic filler products.

Although this article is published in a journal targeting dermatological nurses in the United States, nowhere in the body of his article does Dr. Busso acknowledge that he is writing to nurses. Nor does the article mention intention to provide nurses with information to learn or improve injection practice. Therefore, only indirectly does this article acknowledge the presence of nurses among the masses of injectors supplying the industry today.

Nursing specialty organizations including the Plastic Surgical Nursing do feature articles on the subject of biocompatible filler products (Plastic Surgical Nursing, 2004). Yet, it is medical and not nursing literature which is found to address the subject of filler technique (Alam et al., 2008; Glogau & Kane, 2008; Hirsch et al., 2007).

Focus on Injections by Physicians

In contrast, much has been published addressing the injector physician (Alam et al., 2008; Gulag & Kane, 2008; Jacovella et al., 2006; Kirsch et al., 2007). In the "American

Society of Dermatological Surgeons' Guidelines of Care: Injectable Fillers" published in *Dermatological Surgery*, directions are directed at the physician regarding filler choice, selection, patient selection, patient evaluation, and precise technique for product application (Alma et al., 2008). Further, Jacovella et al. (2006) described techniques directed at physicians specific to calcium hydroxypatite.

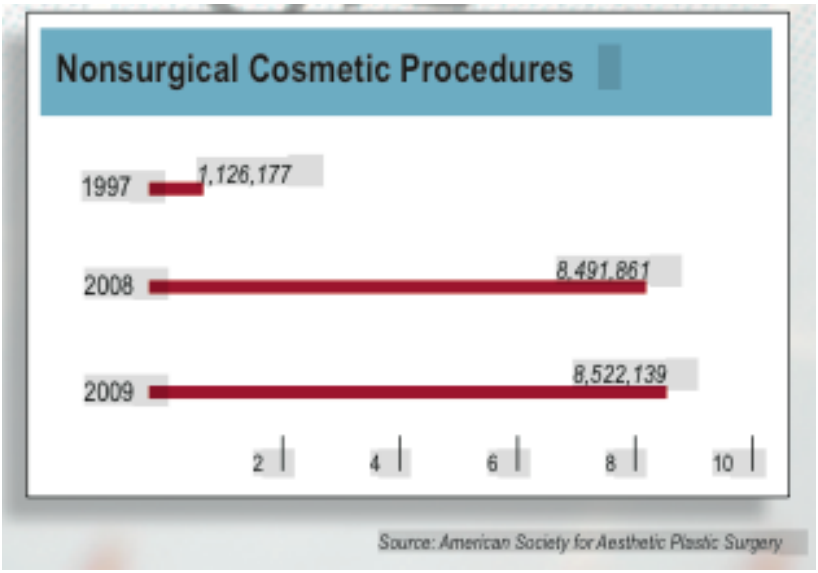
The California Board of Registered Nursing (CABRN, 2006) documents its legislative requirements for RNs performing cosmetic procedures in California as related to dependence on the physician only. According to a published report from June 2010 the State of California Medical Board has advocated with various cosmetic filler corporations and sponsored legislation to "clarify" the role of the registered nurse as supervised under all circumstances while performing cosmetic filler procedures. According to the report itself "the laws needed are already enacted" (CABRN, 2009). As per the CABRN scope of practice all Registered Nurses must practice filler injection under the direct supervision of a physician who is physically present and onsite, or who is available via tele-video electronically and who had made a pre-procedure evaluation of

the patient constituting a physical examination clearing the patient for cosmetic filler application (CABRN, 2006; CABRN, 2009).

The Growing and Exclusive Market for Cosmetic Filler Procedures

According to the American Society of Plastic Surgeons (ASPS, 2010) in the year 2008 alone, 11 billion dollars were spent on "non-surgical U.S. cosmetic procedures," including dermal and cosmetic fillers (see Figure 1).

Figure 1. The Growing Market for Cosmetic Filler Procedures



This same organization has a website and a periodical both of which describe cosmetic fillers as fast, beneficial and effective, but warn away consumers from nurse injectors or even other medical specialties by warning that injectable fillers' "safe use requires a physician with specialized training and a thorough understanding of facial anatomy to recommend and inject an appropriate filler" (ASPS, 2010). This organization offers training seminars to medical doctors, but does not provide training to nurse injectors (Personal Communication, July 2010).

Nurses' Learning Preferences

Accepted as a leader in modern education in America, Ralph Tyler's premise is that learning is accomplished as "the student learns to think through the experience of solving problems for himself" (Tyler, 1949, p. 70). Nursing today should be grounded in evidence-based practice which requires learning, evidence gathering and teaching all enhancing the process of learning (Ersser & Nicol, 2010). A multi-kinesthetic example of the practice and inculcation of nursing task and critical thinking acquisition presents particular application of Tyler's premise today. In nursing, the process of Tyler's "thinking" to learn is

what in nursing is hands-on "return demonstration” (Benner, 1982).

The results of Daley's (1999) study indicate that nurses learning new tasks find that novice learning tends to be contingent on "concept formation and the impact of fear of mistakes and the need for validation..." Furthermore, Daley discovered that "novices used the learning strategies of 'asking experts, particularly the physician,', 'looking it up,' and 'taking formal courses'" indicating that "the novice waits to be spoon-fed" new information.

The demand in nursing task acquisition for involved vs. observant student participation propels the nurse along the continuum from novice and into expert learning (Daley, 1999). According to Benner (1984), an expert is one who views formal learning as "background material" serving to "enhance the knowledge" formerly gleaned from reading, library research, and discussion with colleagues. For experts, it was “being in the practice that mattered,” and they described a much more active and self-initiated process than novices"(Benner, 1984).

In regard to nursing in general, this requirement for hands-on practice to enable skill acquisition makes return

demonstration a hallmark of nursing education (Brydges et al., 2009). However, in terms of cosmetic filling technique and skill acquisition, this learning method may raise ethical questions. The nurse injector may require return demonstration a number of times before acquiring expertise. As Daley (1999) found that transition from novice to expert necessitates "many" return demonstrations.

Due to cosmetic filler involved cost, volunteer patient availability and margin for error, the skill acquisition rate of the new nurse injector of cosmetic filler requires training and expertise development in order to minimize risks to the patient population served. The suggestions in the literature regarding nursing learning in general will be compared and contrasted to the specific implications of results of the seven question survey answered by practicing nurse injectors.

Summary

To summarize, although there is literature on nursing skill acquisition, there is a serious lack of representation in the literature in terms of cosmetic filler injection training for nurses. It is hoped that the findings of this study will assist

in filling this current void in the literature on the topic of nurse training for dermal filler injection.

Chapter 3: Methodology

Introduction

The purpose of this study was to address a void in the literature on cosmetic nurse injection filler training. Thus, the author/researcher developed a survey entitled *Cosmetic Nurse Injection Filler Training Satisfaction Survey*. This survey was designed to explore nurse injector satisfaction related to cosmetic filler training.

The following research questions were addressed in this study:

1. What is the most common method of cosmetic filler training received by California nurse injectors?
2. How do practicing cosmetic filler injection nurses assess the level of their initial training?
3. What recommendations do cosmetic filler injection nurses have regarding the initial training of nurses new to the specialization?

Participants

Polit and Beck (2008) reported that the researcher is often surprised by the length of time required to procure an adequate

body of study participants. This has certainly been true in this case.

Participant sample was initially defined as Northern California nurse injectors currently in practice. However, the sample was broadened to "California nurse injectors" after a low response size became evident. The ultimate sample of cosmetic filler injector nurses in California totaled 25, over one quarter of identified and solicited nurses.

Human Subjects Protection

The author/researcher completed the National Institutes of Health's online training on the Protection of Human Subjects (see Appendix A). Additionally, in order to comply with academic and ethical expectations regarding Human Subjects Protection, the researcher successfully petitioned the educational setting, Western Governors University, for Institutional Review Board (IRB) approval for expedited study. No data were collected prior to this approval.

All surveys were completed anonymously online and participants' confidential responses are not identifiable. Foreseeable risks or discomforts to respondents were nil. Because it was an anonymous, emailed survey any solicitation was

easily ignorable. Each respondent was given an option to opt out of future reminder solicitations.

The potential benefit to the research is inherent in the inclusion of the subject in nursing literature outside of which it currently lies. The study also holds the potential as a justification for future studies on the subject of cosmetic nurse injector training and education.

Methodology

This research study was a quantitative, non-experimental investigation of California nurse injectors' satisfaction with cosmetic filler training. A Likert-scale rated participant satisfaction with certain aspects of initial cosmetic filler training. All data collected were submitted anonymously and electronically by study respondents.

Description of the Survey Tool

The survey questions established the basic qualifiers for participants and solicited opinions from the respondents. The researcher-designed survey included quantification of length of injection experience, method of initial training and self-assessment of errors possible related to said initial training (see Appendix B).

Various methods of intramuscular injection training have resulted in various practice results and serious error, according to Carter-Templeton and McCoy (2008). Therefore questions about error were included in the context of training for injection. The respondents were asked to contribute to assessment in hindsight in a narrative question.

Data Collection

The seven question survey was initially emailed to email addresses of Northern California nurse injectors. These email addresses were procured in a hunt-and-peck telephone search by the researcher telephoning advertising cosmetic physicians in Northern California in effort to locate practicing qualifying nurses. The initial intent was to garner participants through telephone contact with office personnel (receptionists or estheticians) who could then identify the appropriate nurse injector(s) and then forward each nurse a copy of the survey tool.

The incentive of a $15.00 Amazon.com gift card was offered to the contact person as well as to each study respondent. This approach was time-consuming, but yielded most of the study

participants. The final group, however, required footwork on the part of the author/researcher.

According to Polit and Beck (2008), "gifts and monetary incentives have been found to increase participation along with persistence." Thus, the $15.00 Amazon.com gift card was offered to appropriate respondents, and multiple re-invitations were cordially made as appropriate. However, despite the incentive offered to study participants, sample size remained small. Thus, the survey was extended to nurse injectors within the entire State of California. Eventually, low response forced extension into onsite office visits.

The author/researcher personally contacted over 10 medical offices offering cosmetic services in San Francisco. Adjunctive staff was immediately available to refer nurse injector respondents, although the author/researcher made no contact with the respondents themselves.

Data Analysis

All data were assessed through a commercial online independent survey tool known as **B**oomerang. This preserved respondent anonymity and confidentiality. Statistical data analysis was also completed through Boomerang.

Summary

The study was a non-experimental, quantitative investigation designed to explore nurse injector satisfaction related to cosmetic filler training. The methodology was designed to gain nurse injectors' responses to an anonymous seven question survey submitted electronically. The findings of this study are presented in Chapter 4.

Chapter 4: Findings

Overview

The following research questions were hypothesized as helpful in ascertaining the self-assessment of training initially received by California cosmetic nurse injectors:

1. What is the most common method of cosmetic filler training received by California nurse injectors?
2. How do practicing cosmetic filler injection nurses assess the level of their initial training?
3. What recommendations do cosmetic filler injection nurses have regarding the initial training of nurses new to the specialization?

The goal of this study was to garner publishable data on this hidden group of practicing expert nurses previously not addressed in scholarly nursing literature.

Analysis of the Data

The study sample consisted of 25 completed surveys. The author/researcher was involved organizationally in anonymous data collection, yet it did not involve the researcher contacting any respondents directly. Researcher involvement was

required to identify possible respondents and forward the emailed survey via a third party.

The method involved the author/researcher phoning California offices at random to request email addresses for practicing nurse injectors and then forwarding the survey to a contact for those addresses.

As previously stated, the author/researcher was once trained in this specialty by a non-clinical product representative. Therefore, the researcher was curious to investigate current nurse injector satisfaction related to their own cosmetic filler training.

An intention to avoid bias led to avoidance of corporate involvement. For this reason, study respondents were identified without email lists from various product manufacturers. Each identified nurse injector was informed before being given the survey tool of the survey's purpose as a Capstone thesis for a Master’s of Science in Nursing student at Western Governors’ University. Thus, study respondents were advised of the educational purpose of this study, and that the study had no corporate affiliation.

The author/researcher observed that the respondents were small in number. Inherent in non-industry affiliation as described above is the potential impact on research. There is potential risk of easy dismissal by the nurse provider who is frequently contacted by product representatives and who may have seen the approved $15.00 incentive as too small.

Second, and more difficult to specify, is the movement by certain sectors of physicians and their organizations to market and report cosmetic filling as a physician only or plastic surgeon only procedure. One doctor called me anonymously and questioned my purpose in asking his office if there were nurse injectors. Although, unwilling to give identifying information, the doctor reported in the phone call that "80.0% of (related) California Medical Doctors use nurses to inject fillers."

His reluctance to reveal his name might be due to sentiment from professional medical associations who not only market injections of this type as "surgery," but who exclude nurses from joining training seminars because they are non-physicians.

Patterns and Themes

The specific question of how nurses learn one nursing task is rooted in several general nursing education principles

as to time, task employment and task mastery. For this purpose, the most significant patterns visible in the survey tool were:

1. Length of time respondent has practiced cosmetic injection;
2. Method of original instruction; and,
3. Respondents' feedback on that initial instruction in view of time in practice and method of instruction.

The evident pattern is simple. Although most nurse injectors who completed the survey reported that they would have preferred to have been trained by a skilled nurse injector, they were not. Like the author/researcher, most study respondents reported being trained by a non-clinical product representative, but they still reported satisfaction with that initial level of training.

In terms of skill acquisition of the task, there is no indication that early training by non-medical or non-clinical product representatives led to excessive future error in injection. Nurse injectors still reported the ability to master technique and skill development through practice, with the average respondent reporting times as a nurse injector being greater than five years. The categories included Learning, Time/Practice and Skill Acquisition and Nurse Adaptability.

Patterns and Themes Converge from Different Data Sources

The evident patterns are that the majority of respondents were initially given training by non-clinical product representatives who were obviously not clinically trained. The data source this resonates is #1 below: Product development/history of practice.

Secondly, the pattern shown was that these nurses above who were given training by a non-clinical product representative were able to garner their own expertise by practice on the job. Purportedly, these nurse injectors were under the supervision of a physician as they performed cosmetic filler injections on patients.

Thirdly, this pattern reflects the ability of nurses to learn and teach themselves as a matter of course since the majority of the study respondents "Agree" that they had adequate initial training.

Data Sources:

1. Product development/history of the practice.
2. Nursing Education/Learning data
3. Physician impact.

The biggest negative in data collection was gathering respondents. The biggest surprise in the study findings was that respondents, although trained by non-nurse injectors and non-clinical product representatives, were still satisfied with their initial training.

The fact that nurse injectors reported satisfaction with non-clinical product representative training-- defined by them as training which required building on in years of subsequent practice-- indicates that they are autonomous self-conductors who take responsibility for learning and resourcefully develop expertise acquisition as they learn in practice.

Results and Interpretation

The primary question of length of time the respondents have practiced injection filling was Question number one:
Of the 25 respondents distribution was almost even between relatively new injectors and injectors with over five years experience. See Table 1 below for statistics on years of experience and initial training methods of the nurse injector respondents in this study.

Table 1. Years of Experience & Initial Training Methods

As an RN or Advanced Practice Nurse Cosmetic Filler Injector you have performed Cosmetic Filler injections regularly for how many years?						
	Total*	**What method of INITIAL Cosmetic Filler Training did you receive?**				
		Private Course or Seminar	Training by Representative of Product	One on one training by an experienced non-nurse injector	One on one training by a NURSE injector	No pre practice training
	25	6	11	4	4	0
less than one year	7 28.0%	4 66.7%	2 18.2%	0 0.0%	1 25.0%	0 0.0%
fewer than two years	5 20.0%	0 0.0%	5 45.5%	0 0.0%	0 0.0%	0 0.0%
fewer than three years	4 16.0%	0 0.0%	2 18.2%	2 50.0%	0 0.0%	0 0.0%
more than three years	3 12.0%	0 0.0%	1 9.1%	0 0.0%	2 50.0%	0 0.0%
more than five years	6 24.0%	2 33.3%	1 9.1%	2 50.0%	1 25.0%	0 0.0%

Question Three: How many technique-related untoward events have you observed since receiving initial training for Cosmetic Filler Injection? Forty percent of respondents answered fewer than 5.0% of their errors were involved (see Table 2).

Table 2. Technique-related Untoward Events & Initial Training

How many technique-related untoward events have you observed since receiving initial training for Cosmetic Filler Injection?						
	Total*	**What method of INITIAL Cosmetic Filler Training did you receive?**				
		Private Course or Seminar	Training by Representative of Product	One on one training by an experienced non-nurse injector	One on one training by a NURSE injector	No pre practice training
	25	6	11	4	4	0
None	5 20.0%	5 83.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Fewer than 5% of total injections	10 40.0%	0 0.0%	3 27.3%	3 75.0%	4 100.0%	0 0.0%
Fewer than 10% of total injections	3 12.0%	0 0.0%	3 27.3%	0 0.0%	0 0.0%	0 0.0%
More than 10% of total injections	5 20.0%	1 16.7%	3 27.3%	1 25.0%	0 0.0%	0 0.0%
More than 15% of total injections	2 8.0%	0 0.0%	2 18.2%	0 0.0%	0 0.0%	0 0.0%

Question Four asked respondents the percentage of injection expertise as related to initial training. Most respondents answered that less than one quarter was related to that training (see Table 3).

Table 3. Injection Expertise & Initial Training

What percent of your current injection expertise is related to the initial training you received in Cosmetic Filler Injection?						
	Total*	**What method of INITIAL Cosmetic Filler Training did you receive?**				
		Private Course or Seminar	Training by Representative of Product	One on one training by an experienced non-nurse injector	One on one training by a NURSE injector	No pre practice training
	25	6	11	4	4	0
none	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
less than 1/4	9 36.0%	3 50.0%	5 45.5%	1 25.0%	0 0.0%	0 0.0%
less than 1/2	6 24.0%	2 33.3%	2 18.2%	1 25.0%	1 25.0%	0 0.0%
most of my expertise is related to the initial training	4 16.0%	0 0.0%	3 27.3%	0 0.0%	1 25.0%	0 0.0%
I have trained on too many types of fillers to relate my expertise to one filler training	6 24.0%	1 16.7%	1 9.1%	2 50.0%	2 50.0%	0 0.0%

Question Five asks the percentage of current expertise related to hands-on clinical practice and technique refinement in the time since initial Cosmetic Filler Training. The majority

of study respondents indicated little identifiable effect on current practice from initial training (see Table 4).

Table 4. Hands-on Clinical Practice and Initial Training

What percentage of your current expertise is related to hands-on clinical practice and technique refinement in the time since your initial Cosmetic Filler Training?						
	Total*	**What method of INITIAL Cosmetic Filler Training did you receive?**				
		Private Course or Seminar	Training by Representative of Product	One on one training by an experienced non-nurse injector	One on one training by a NURSE injector	No pre practice training
	25	6	11	4	4	0
None	1 4.0%	1 16.7%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Less than 1/4	3 12.0%	0 0.0%	3 27.3%	0 0.0%	0 0.0%	0 0.0%
Less than 1/2	7 28.0%	2 33.3%	3 27.3%	1 25.0%	1 25.0%	0 0.0%
Most of my expertise is related to my own practice technique refinement on-the-job.	10 40.0%	3 50.0%	3 27.3%	2 50.0%	2 50.0%	0 0.0%
I have trained on too many types of fillers to relate my expertise to one filler training	4 16.0%	0 0.0%	2 18.2%	1 25.0%	1 25.0%	0 0.0%

Question Six: I am satisfied with the INITIAL Cosmetic Filler Training I received. Over 50.0% of the nurse injector study respondents reported satisfaction with their initial training (see Table 5).

Table 5. Respondent Satisfaction and Initial Training

I am satisfied with the INITIAL Cosmetic Filler Training I received.						
	Total*	**What method of INITIAL Cosmetic Filler Training did you receive?**				
		Private Course or Seminar	Training by Representative of Product	One on one training by an experienced non-nurse injector	One on one training by a NURSE injector	No pre practice training
	25	6	11	4	4	0
Strongly Disagree	2 8.0%	0 0.0%	2 18.2%	0 0.0%	0 0.0%	0 0.0%
Disagree	2 8.0%	0 0.0%	2 18.2%	0 0.0%	0 0.0%	0 0.0%
Undecided	6 24.0%	2 33.3%	3 27.3%	0 0.0%	1 25.0%	0 0.0%
Agree	13 52.0%	3 50.0%	3 27.3%	4 100.0%	3 75.0%	0 0.0%
Strongly Agree	2 8.0%	1 16.7%	1 9.1%	0 0.0%	0 0.0%	0 0.0%

The final quantitative question was: In retrospect, which of the following training additions do you wish had been included in your INITIAL Cosmetic Filler Injection Training?

The majority of the nurse injector study respondents reported that they would have preferred one-on-one training by a skilled nurse injector as part of their initial training (see Table 6).

Table 6. Preferred Training and Initial Training

In retrospect, which of the following training additions do you wish had been included in your INITIAL Cosmetic Filler Injection Training? 						
	Total *	**What method of INITIAL Cosmetic Filler Training did you receive?**				
		Private Course or Seminar	Training by Representative of Product	One on one training by an experienced non-nurse injector	One on one training by a NURSE injector	No pre practice training
	25	6	11	4	4	0
Non-nurse instruction through product manufacturer	0 0.0 %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Nurse instruction through product manufacturer	5 20.0 %	2 33.3%	2 18.2%	1 25.0%	0 0.0%	0 0.0%
Private seminar or course	1 4.0 %	0 0.0%	0 0.0%	0 0.0%	1 25.0%	0 0.0%
One-on-one training by a skilled nurse injector	16 64.0 %	4 66.7%	8 72.7%	3 75.0%	1 25.0%	0 0.0%
other-- make comments below	3 12.0 %	0 0.0%	1 9.1%	0 0.0%	2 50.0%	0 0.0%

Narrative suggestions in addition to survey data above resonate these responses and will be discussed in Chapter 5.

Summary

Although cosmetic nurse injectors generally are given initial training by non-clinical product representatives, the cosmetic nurse injectors of dermal fillers in this study sample reported their initial training as being satisfactory. These same cosmetic nurse injectors described a low rate (less than 5.0%) of error in technique attributable to initial training.

Cosmetic nurse injectors train themselves on the job as they become more and more skilled at injection through practice. Finally, cosmetic nurse injector study respondents stated that retrospectively, they would have preferred one-on-one initial hands-on training by another skilled nurse injector.

Discussion, implications, limitations, recommendations, and conclusions related to the study findings are addressed in Chapter 5.

Chapter 5: Discussion and Conclusions

Overview

Cosmetic filler as a nursing practice is a niche practice within a burgeoning 21st century medical market of cosmetic procedures which appeal to baby-boomers and younger people alike (Klein, 2006). No database exists, but anecdotal evidence indicates that a majority of medical doctors who provide aesthetic services in California utilize either registered nurses or advanced practice nurses to administer cosmetic filler injections. Additionally, there was a deficit in the literature on nurse injector satisfaction related to cosmetic filler training.

Therefore, the following three research questions were addressed in this study:

1. What is the most common method of cosmetic filler training received by California nurse injectors?
2. How do practicing cosmetic filler injection nurses assess the level of their initial training?
3. What recommendations do cosmetic filler injection nurses have regarding the initial training of nurses new to the specialization?

Discussion

Via a researcher-designed survey, nurse injector study respondents were questioned about learning method; subsequent untoward results of those methods and about how they retrospectively recommend cosmetic filler training be taught. Nurse injector study respondents who answered the survey displayed an ability to adopt a variety of routes to learn cosmetic filler injection technique.

Of the 25 survey respondents, the majority reported being taught initially by non-nurse corporate product representatives. Despite listing training other than this method as preferable for future nurse injector trainees, the majority of the survey respondents still agreed that initial training of this sort was satisfactory.

However, it is important to note that nurse injector survey respondents ultimately reported recommending that hands-on, one-on-one nurse demonstrated training procedures should be the preferred choice of future training. This is a valuable finding that may help to shape the future initial training of nurse injectors.

Implications

Implications are for further study of the population. Implied in the findings is the desire for nurse injector experts to perform one-on-one demonstration techniques as a method of training. Also implied by the study findings is that this area of nursing practice is so specialized that unique certification may be indicated.

Limitations

Like many research endeavors, this study had limitations. Limitations of this study included the difficulty of locating appropriate study subjects, gaining their participation, and subsequent small sample size.

The first of these limitations comes from research objectivity goals as the corporate product manufacturers individually hold information as to where nurse injectors are in practice under medical doctors in California.

The second limitation lies in individual nurse election to respond. In an effort to ensure anonymity, the survey was administered via electronic mail only. This may be considered one reason why few respondents replied compared to the number of requests sent out. Participants were also given an incentive.

The third limitation is a direct result of the first two limitations. Difficulty in locating appropriate study subjects, and difficulty in gaining their participation resulted in a small sample size of only 25 nurse injector study respondents.

Recommendations

The following recommendations are made based upon the results of this study:

1. Initial training of cosmetic filler nurse injectors should be standardized to include a variety of methods to enhance learner satisfaction.
2. One-on-one, hands-on opportunities provided by other nurse injector experts should be included in the initial training of future nurse injectors.
3. Due to the absence of an alliance of cosmetic filler nurses in California, the establishment of a nursing specialty organization in this area may be warranted.
4. Additional study should be conducted to determine the initial and on-going learning needs of this specialized group of nurses.
5. Special certification may be indicated for nurses who serve in this unique area of nursing practice.

Conclusions

This study verifies the presence of nurse injectors in practice in California under the auspices of medical doctors as mandated by the California Board of Registered Nursing. The findings of this study present the opinions of a representative sample of those nurses that their preferred method of initial training is via one-on-one nurse expert hands-on instruction.

This study presents to nursing literature verification of the presence of nurses performing cosmetic filler injection in a rapidly trending aesthetic specialty of nursing in California at the beginning of the second decade of the 21st century. Due to adherence with present legislative mandate, each nurse who performs this nursing task must hang his or her shingle beneath the name of the practice supervising physician. Such physicians who may provide multiple varieties of services, and this author/researcher discovered such physicians may not be eager to reveal the presence of nurse injectors.

This umbrella system for cosmetic filler nurses obscures identification of these specialty nurses and may contribute to the absence of alliance of cosmetic filler nurses in California. Included in lack of nurse-oriented alliance is an educational

standardization deficit which prompted the question initiating this study: How do cosmetic filler nurse learn their craft?

In answer to this question, the small sample reported that they learned their craft by every way possible: by paying privately for seminars; by nurse-nurse tutoring; and, by the non-nurse, non-clinician verbal directives of a pharmacy or product representative. However, the clearly preferred method, as cited by respondents in this study, was to learn one-on-one using hands-on demonstration from another skilled nurse injector.

This survey concludes that a niche of nurses partake with expertise in a lucrative, mushrooming industry in California---the aesthetic cosmetic enhancement market. Although they are willing to learn cosmetic filler techniques in several ways, the majority preferred to learn their craft from nurses who are already expert.

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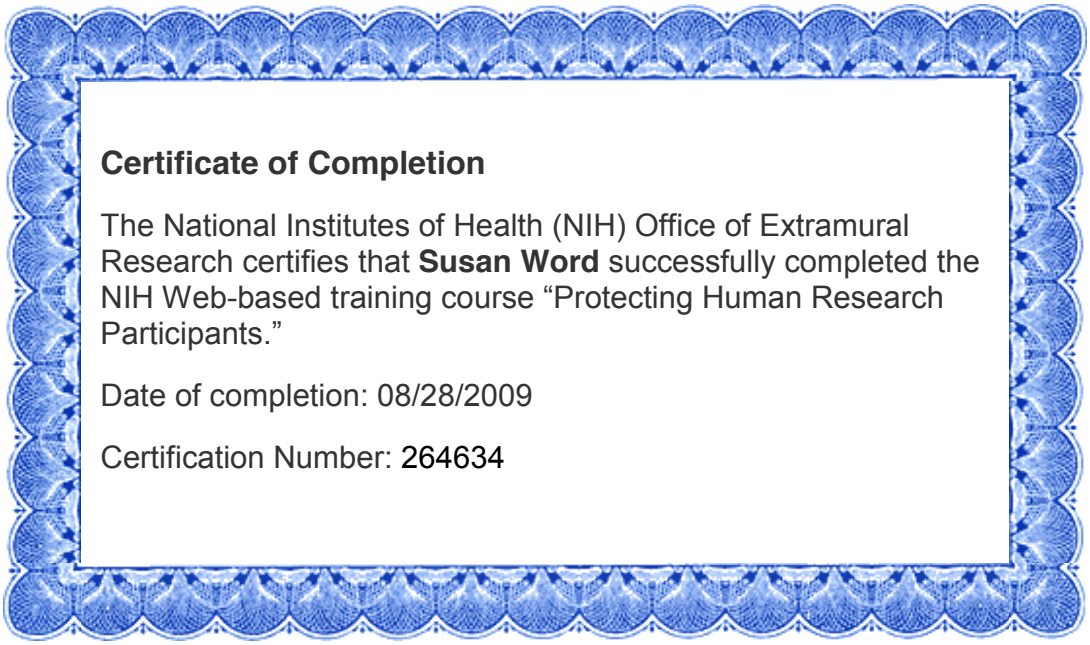
Appendix A

NIH Human Subjects Protection Certificate



Certificate of Completion

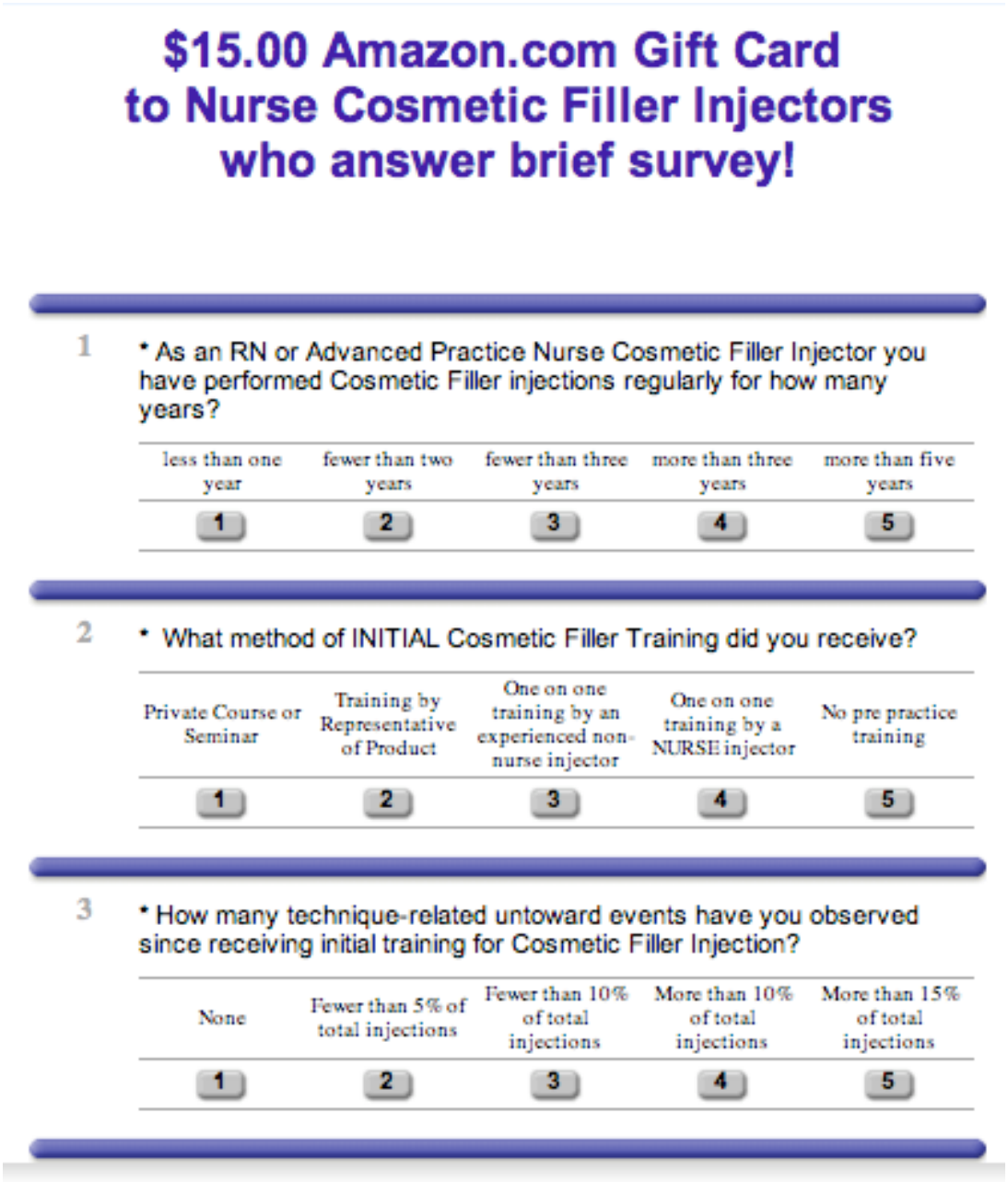
The National Institutes of Health (NIH) Office of Extramural Research certifies that **Susan Word** successfully completed the NIH Web-based training course "Protecting Human Research Participants."

Date of completion: 08/28/2009

Certification Number: 264634

Appendix B

Researched-designed Survey Tool



$15.00 Amazon.com Gift Card to Nurse Cosmetic Filler Injectors who answer brief survey!

1 * As an RN or Advanced Practice Nurse Cosmetic Filler Injector you have performed Cosmetic Filler injections regularly for how many years?

less than one year	fewer than two years	fewer than three years	more than three years	more than five years
1	2	3	4	5

2 * What method of INITIAL Cosmetic Filler Training did you receive?

Private Course or Seminar	Training by Representative of Product	One on one training by an experienced non-nurse injector	One on one training by a NURSE injector	No pre practice training
1	2	3	4	5

3 * How many technique-related untoward events have you observed since receiving initial training for Cosmetic Filler Injection?

None	Fewer than 5% of total injections	Fewer than 10% of total injections	More than 10% of total injections	More than 15% of total injections
1	2	3	4	5

4 * What percent of your current injection expertise is related to the initial training you received in Cosmetic Filler Injection?

none	less than 1/4	less than 1/2	most of my expertise is related to the initial training	I have trained on too many types of fillers to relate my expertise to one filler training
1	2	3	4	5

5 * What percentage of your current expertise is related to hands-on clinical practice and technique refinement in the time since your initial Cosmetic Filler Training?

None	Less than 1/4	Less than 1/2	Most of my expertise is related to my own practice technique refinement on-the-job.	I have trained on too many types of fillers to relate my expertise to one filler training
1	2	3	4	5

6 * I am satisfied with the INITIAL Cosmetic Filler Training I received.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

7 * In retrospect, which of the following training additions do you wish had been included in your INITIAL Cosmetic Filler Injection Training?

Non-nurse instruction through product manufacturer	Nurse instruction through product manufacturer	Private seminar or course	One-on-one training by a skilled nurse injector	other-- make comments below
1	2	3	4	5

8 Please add any comments regarding or suggestions you have regarding your initial Cosmetic Filler Injection training.

SUBMIT