

Time Flies: an Examination of Genetic Counselor Professional Development: Introduction to Special Issue on Genetic Counselor Development

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Oh, how time flies! It was just over 50 years ago that Melissa Richter, a professor of biology at Sarah Lawrence College, envisioned a professional who would “bridge the gap between the increasingly complex scientific knowledge on human genetics and the severely inadequate services provided by most hospitals to physicians and to the patients at risk for or affected by these diseases” (Human Genetics Graduate Program History n.d.). These professionals - genetic counselors - are now flourishing, particularly with advancements in genetic technology and an increasing demand for genetic services in many aspects of medicine. Thus, it is more than timely (and necessary) for us to stop and take this opportunity to reflect on genetic counselor professional development.

Before introducing the many invaluable perspectives on genetic counselor development contained in this issue, it is important to first define and understand what we mean by professional development. Professional development is not specifically defined or well-researched in genetic counseling (McCarthy Veach, et al., 2010). Drawing from the field of psychology and an extensive literature review conducted by the American Psychological Association (APA), professional development can be defined as:

“...the developmental process of acquiring, expanding, refining, and sustaining knowledge, proficiency, skill and qualifications for competent professional functioning that result in professionals. It comprises both a) the internal tasks of clarifying professional objectives,

crystallizing professional identity, increasing self-awareness and confidence, and sharpening reasoning, thinking, reflecting, and judgment and b) the social/contextual dimension of enhancing interpersonal aspects of professional functioning an broadening professional autonomy” (Elman et al., 2005, p. 368 cited in McCarthy Veach et al. 2010, p. 358).

Thus, professional development is an iterative process and one that involves more than “simply accruing continuing education units” but rather “how genetic counselors find the ‘take home message’ from their experiences to apply to their service profession” (McCarthy Veach et al. 2010, p. 359).

Professional development defined, however, does not readily translate into a “how-to” of this developmental process. Prior to this issue (see Zahm et al., 2016), a model of genetic counselor development has yet to be developed. Thus, borrowing concepts from the psychological literature, provides a framework in which to understand genetic counselor development, as well as the papers presented in this issue.

Ronnestad and Skovholt (2013) present a model of professional development - the Cyclical/Trajectories Model - that helps frame the ways in which professional development occurs and/or stagnates across the professional life-span (from novice student to senior professional). In this model, Ronnestad and Skovholt outline three basic trajectories for professional development

- **Trajectory I.** This trajectory presents the process of optimal development of growth. The focus of this trajectory is initiated by professionals [therapist’s] experiences of difficult or challenging work, followed by reflection and then “functional closure” which facilitates growth.
- **Trajectory II.** This trajectory is also characterized by the experience of challenge/difficulties in professional work

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but instead of refection, exhaustion occurs that can lead to “inadequate closure” and either temporary or permanent professional exhaustion.

- **Trajectory III** - In contrast to trajectories I and II, this trajectory involves limited experiences of difficulties/challenges that leads limited reflection which contributes to premature closure and a state of disengagements.

While Trajectory I results in professional growth, Trajectories II and III can lead to professional stagnation (“a subjective sense of arrested or discontinued improvement” in development; Ronnestad and Skovholt 2013, p. 163) and an eventual exit from the profession. Inherent in these trajectories and movement toward growth versus stagnation are self-reflection, interpersonal interactions (i.e., learning from all sources from co-workers to patients), and “flexibility in counselors’ ongoing professional development” (McCarthy Veach, et al., 2010, p. 362). It is within Ronnestad and Skovholt’s (2013) Cyclical/Trajectories Model that we present the papers of this special issue. Specifically, the papers of this issue provide a “snapshot” of the current state of genetic counselor professional development.

Gratefully, we present multiple papers with perspectives that fall within Trajectory I and professional growth.

Genetic Counselor Training, Educational Opportunities and Needs

In North America, most genetic counselors enter the field by completing a genetic counseling training program accredited by the Accreditation Council for Genetic Counseling (ACGC) (Accreditation Council for Genetic Counseling 2010), which leads to eligibility to become certified in genetic counseling by the American Board of Genetic Counseling (ABGC) (American Board of Genetic Counseling 2016). Achieving ABGC certification is an important first step in a genetic counselor’s professional development and is a requirement to practice in many positions and in all US states with licensure (National Society of Genetic Counselors 2016). Four articles in this special issue discuss issues related to entry to the field (Wiesman et al. 2016), developing competencies (Guy 2016), special challenges for international students (Akgumus et al. 2016) and challenges presented by the ABGC certification exam (Colón 2016). In their paper *From Campers to Counselors: A Resource for Prospective Genetic Counseling Students*, Wiesman and colleagues discuss the value of educational programs that provide opportunities for prospective genetic counseling program applicants to gain a deeper understanding of the field and guidance about the application process. Notable is the authors’ recognition of the professional development benefits for practicing genetic counselors who organize and/or participate in these programs.

Carrie Guy describes a framework for competency-based evaluation in genetic counseling training in her paper, *Genetic Counseling Milestones: A Framework for Student Competency Evaluation*. Competency-based education, which shifts the focus to the learner and the developmental assessment of skill acquisition and professional development, has been applied in medical education and in other allied health professional fields. The paper provides examples of how this framework might be applied to genetic counselor training and anticipates some potential benefits of this approach.

The special challenges for international students who elect to complete their training in the US are highlighted by Akgumus et al. in their paper *Professional Issues of International Genetic Counseling Students Educated in the United States*. This paper describes the motivations of international students in seeking to complete their training in the US as well as the challenges they face in both the application process and in the job search process. Participants in this study recognized the value of peer support and the need for additional published resources for international students.

In her candid essay describing the experiences of failing the ABGC exam, Christine Colón encourages the genetic counseling profession to “acknowledge failed exam attempts, offer support during difficult times, and have resources available” (this issue). A common theme in these three papers is the recognition of opportunities for genetic counselors to develop professionally by guiding and supporting prospective genetic counselors, students, and recent graduates.

Professional development begins during training, and a key element in genetic counseling training is completion of supervised clinical rotations. Two papers in this issue focus on clinical supervision, one describing the impact of student anxiety on the supervision experience of student-trainees, and the other describing the impact of training on supervisors’ development. In their paper, *Effects of Anxiety on Novice Genetic Counseling Students’ Experience of Supervised Clinical Rotations*, MacFarlane et al. describe the supervision experiences of genetic counseling students with high and low anxiety as measured by the Spielberger State-Trait Anxiety Inventory (Spielberger et al. 1983). Through qualitative interviews, the authors explored connections between student anxiety and their experiences of supervision including their general satisfaction with supervision and their clinical rotations, the perceptions of the structure and logistics of supervision and the supervision process and their self-assessment of how anxiety personally affects them. Based on their findings, the authors have several recommendations to enhance the experience of student supervisees, including assessment and ongoing discussion of the supervisor-supervisee relationship as well as the value of building rapport and normalization of anxiety.

Supervision training workshops provide opportunities for genetic counselor clinical supervisors to learn new skills and reflect on their experiences as supervisors. This combination

of learning and reflection is consistent with Ronnestad and Skovholt's Trajectory I of professional development. In their paper, *Measuring the Effectiveness of a Genetic Counseling Supervision Training Conference*, Atzinger et al. report on the impact of a one-day supervision training for genetic counselors on participants' perceived confidence and competence in the supervisor role. Participants in this study demonstrated an increase in perceived confidence and competence in the supervisor role that remained statistically significant 6 months following the training. Interestingly, the measured impact of training was greater for skills with which the supervisors were less comfortable, suggesting that training targeted towards skills that are self-identified by supervisors to be more challenging has the potential to be most effective.

The Challenge of Expanding Professional Roles and Changing Technology

Several papers in this issue speak to professional development that comes from rapidly changing technologies and expanding professional roles. Genetic counselors work in an environment that changes in response to advances in science and technology. In her paper, *Genomic Testing: A Genetic Counselor's Personal Reflection on Three Years of Counseling and Consenting*, Julia Wynn reflects on her experience counseling, consenting and returning results from whole exome sequencing (WES). In another example of how professional challenges can lead to professional growth, she describes how she transitioned from a teaching-model to a counseling model to better meet the needs of her clients. She provides specific examples of how she was able to modify her counseling approach as she reflected on the experiences and reactions of her clients in both pre and post-test counseling sessions.

It seems one way genetic counselors face the challenges that come with a changing environment is to identify ways in which they are able to apply their knowledge of genetics and their transferable core skill set to assume new, or expanded professional roles. Waltman and colleagues describe the expanding roles for laboratory genetic counselors in their paper, *Further Defining the Role of the Laboratory Genetic Counselor*. An interesting aspect of this study is the reported high level of job satisfaction among laboratory-based genetic counselors. This theme is echoed in the study described by Field et al. in their paper, *Emerging Genetic Counselor Roles with the Biotechnology and Pharmaceutical Industries*. Participants in this study also reported high levels of job satisfaction, specifically related to their autonomy, continuing education opportunities, advancement opportunities, supervisor support and salary. The authors noted that dissatisfaction with opportunities for advancement and earning potential are two areas cited by genetic counselors who left or considered leaving the field (NSGC, 2014). Perhaps for some genetic

counselors, professional development consistent with Trajectory I, involves changing positions to work in practice areas that are more satisfying and meet their desire for salary and/or career advancement opportunities. In their paper, *Redefining the Genetic Counselor Role: Genetic Counselors in Startup Companies*, Rabideau and colleagues describe their personal experiences working for startup companies. What is intriguing about this paper is that the authors describe not just *facing* new challenges, but actively *seeking* them as a vehicle for professional development.

A frequent question addressed in studies that describe expanding professional roles for genetic counselors is the degree to which genetic counseling training is preparing graduates to assume these roles. The evidence suggests that genetic counselors have been successful in keeping up with the advances in science and technology and applying their knowledge and skills in expanded roles and settings, even when they report that their training did not fully prepare them for the expanded role. Nonetheless, training programs are encouraged to provide students with opportunities for exposure to expanded and emerging roles.

Reflection and Professional Development

Reflection as a component of professional development is emphasized in several of the papers included in this issue. In her paper *Lessons from Freelancing: Lighting Design to Genetic Counseling*, Michele Disco describes how powerful personal life experiences led to her transition from a career in theatrical lighting design to one in genetic counseling. As she reflects on this transition and on literature concerning career models she identifies common professional development strategies in these two seemingly unrelated careers. The role of reflection in professional development and career trajectory decisions is discussed by Hippman and Davis in their paper, *Put Yourself at the Helm: Charting New Territory, Correcting Course, and Weathering the Storm of Career Trajectories*. As the authors reflect on themes generated by participants in a pre-conference symposium sponsored by the Committee on Advanced Training for Certified Genetic Counselors (CATCGC) at the 2014 NSGC Annual Education Conference, and their own career trajectories, they identify career decision points and strategies that genetic counselors can use to direct their own career trajectories.

Self-reflection as a vehicle to professional development is discussed by Wells and colleagues in their paper, *Development, Experience, and Expression of Meaning in Genetic Counselor's Lives: An Exploratory Analysis*. The study explored the extent to which genetic counselors experience *meaning* and how it has been shaped over time. In their conclusions, the authors postulate that "intentional, focused reflection upon issues of meaning may mitigate risk for

burnout, help counselors cope with compassion fatigue, strength their career satisfaction, and ultimately enhance service provision” (Wells et al. 2016, this issue).

In her 2014 Natalie Weissberger Paul Address, *The Greatest Priority for Genetic Counseling: Effectively Meeting Our Clients’ Needs*, Barbara Bowles Biesecker encourages genetic counselors to reflect critically on their practice, prioritize the psychotherapeutic aspects of genetic counseling, and “use the relational aspects of genetic counseling to achieve beneficial client outcomes” (Biesecker 2016, this issue). In her paper, *Stories as a Gift: Patient Narratives and the Development of Empathy*, Anne Spencer describes how recognizing patient narratives as “gifts” can help genetic counselors become a more open and empathetic listeners. Echoing this reflection as well as themes from Wells et al., Biesecker (2016) states:

Our lives are changed by our client encounters. We evolve in our understanding of what it means to be human when we are admitted to the inner lives of others that would otherwise be unknown to us. We are privy to their worries, secrets, dreams, faith, and love. What often shapes us is bearing witness to the strengths clients find; their resilience and hopefulness in the face of difficult circumstances. And the ways they use their strengths to help others as they struggle themselves. We become better people as we open our minds and hearts to the ways that humans respond to health threat and suffering. It provides hope that future clients may find those resources as well (this issue).

The Process of Professional Development: Models and Outcomes for Genetic Counseling

A proposed model for professional development in genetic counseling is provided Zahm and colleagues, in their paper *From Novice to Seasoned Practitioner: A Qualitative Investigation of Genetic Counselor Professional Development*. For this study the authors explored the nature of genetic counselor professional development by interviewing 34 novice, experienced and seasoned genetic counselors. They concluded that professional development is an “on-going, non-linear, and gradual process, with ‘defining moments’ or key events providing additional ‘bursts’ of influence (Zahm et al. 2016, this issue).

Miranda and colleagues provide an empirical description of the personal and professional characteristics of “master” genetic counselors in their paper, *Portrait of the Master Genetic Counselor Clinician: A Qualitative Investigation of Expertise in Genetic Counseling*. Based on their qualitative analysis of interviews with 15 peer-nominated master genetic counselors

the authors describe master genetic counselors as being “voracious learners” who are “authentic and genuine” and “view development as an on-going, career-long process”; they are “reflective, self-aware, and confident” practitioners who “recognize their limitations,” “form collaborative, interactive relationships with patients” and have a “nuanced attunement to the complexity and multiple levels of the genetic counseling process” (this issue). Master genetic counselors are also described as being deeply empathetic individuals who able to recognize and manage the emotional impact they experience through their work. The findings of this study are consistent with Zahm et al. (2016)), and with the five underlying tenets of the Reciprocal-Engagement Model (REM) of genetic counseling practice (McCarthy Veach et al. 2007).

Professional Development and Career Development

While not synonymous, one aspect of professional development is career development and advancement. Two papers in this issue speak directly to these issues. In the first of these, *Climbing the Ladder: Experience with Development a Large Group Genetic Counselor Career Ladder at Children’s National Health System*, Kofman and colleagues describe their experience with developing a career ladder for genetic counselor advancement at one institution. The second, *Developing a Model of Advanced Training to Promote Career Advancement for Certified Genetic Counselors: An Investigation of Expanded Skills, Advanced Training Paths, and Professional Opportunities*, by Baty and colleagues, describes the work of the Committee on Advanced Training for Certified Genetic Counselors (CATGC). This committee was convened by the Association of Genetic Counseling Program Directors and charged with investigating varied paths to post-master’s training and career development. The committee developed three distinct but interrelated grids: skills (overall domains of skill sets used currently by genetic counselors), paths (training paths to obtain new skills and/or knowledge) and positions (types of positions that genetic counselors hold or may aspire to hold). The authors note that along with providing a starting point for developing a model of advanced training and career development for genetic counselors, the three grids can provide a “potential framework for individual genetic counselors considering how they might prepare for a specific, desired career opportunity” (Baty et al. 2016, this issue).

Professional Stagnation

While this special issue speaks to the many ways in which genetic counselor professional development advances, it is important to acknowledge potential barriers to development. Johnstone and colleagues’ paper provides a closer

examination of one significant barrier – burnout. Specifically, Johnstone’s study documents the experience of significant burnout amongst genetic counselors during their careers and the association of occupational stressors (e.g., exhaustion, cynicism, and professional efficacy). Their paper calls for a more preventative approach in acknowledging for genetic counselors that they will likely experience symptoms of burnout and providing educational tools to cope and advocate for resources necessary to support them in managing the many stressors of their work.

It is important to note that Johnstone’s paper was just one of 21 papers received for this special issue that spoke to professional challenges that lead to stagnation and potential exit from the field. This may be a hopeful sign that the profession is expanding rather than stagnating; yet, it is important (and realistic) to also acknowledge any additional professional factors that may be preventing optimal development. Further research is needed to examine other factors that may impede genetic counselor professional development.

Implications

Yes, time has truly flown by! And yet, in the 50 plus years since the inception of the field, genetic counselors have undeniably advanced and evolved (Stern 2009). The 21 papers in this special issue on genetic counselor professional development illustrate an iterative process of growth consistent with Ronnestad and Skovholt’s (2013) cyclical/trajectories model. Reassuringly, these papers speak to many ways in which genetic counselor professional development is occurring in a trajectory that supports advancement and moves the professional/profession forward (i.e., Trajectory I). Whether through re-examination of training and educational needs (Akgumus et al. 2016; Guy 2016; MacFarlane et al. 2016; Wiesman et al. 2016), expansion of genetic counseling roles (Field et al. 2016; Rabideau et al. 2016; Waltman et al. 2016), or response to technological advancements (Wynn 2016), the critical importance of professional challenges to launch and sustain genetic counselor development is evident. As these papers attest, genetic counselors should remain alert and open to the ways they can challenge themselves professionally. These growth-invoking challenges may be subtle or embedded within personal experiences (Colón 2016; Disco 2016), professional characteristics (Miranda et al. 2016), patients’ stories (Wells et al. 2016; Spencer 2016); or career journeys (Hippman and Davis 2016). Alternatively, the opportunities could be more blatant: creating new training opportunities (Atzinger et al. 2016; Wiesman et al. 2016), training models (Baty et al. 2016), or career ladders within large hospital structure (Kofman et al. 2016). Regardless, these professional challenges are paramount and likely, protective against career stagnation and burnout (Johnstone et al. 2016).

The importance of self-reflective practice is not novel within the profession. Self-reflection has been written to “integrally influence the professional development of genetic counselors throughout their lifespan” (McCarthy Veach, et al., 2010, p. 363). As Orchowski et al. (2010) state, “In addition to adopting a reflective stance toward their clinical activities, practitioners who engaged in continuous self-reflection tended to engage in regular personal and professional interactions with others, work in supportive and open professional environments, and engage in dialogue about their professional activities (p. 52).” Thus, these papers serve as an important reminder that in order for growth to occur in the face of professional challenges, self-reflection must be intentionally practiced. This issue contains award speeches by two experienced professionals who are reflecting on their own genetic counseling professional lifespan (Bernhardt 2016; Biesecker 2016). Their stories speak to the need to examine and reflect on some of the many roles that genetic counselors will likely hold throughout their careers: patient educator, advocate, supervisor, counselor, mentor, and leader. Becoming a genetic counselor is clearly not a fixed destination, but rather an iterative and “non-linear” developmental journey (Zahm et al. 2016, this issue). Through reflective practice, genetic counselors can better listen to their personal and professional experiences as integral growth points in their development.

Conclusion

It would be simplistic to reduce professional development into two main themes - challenges and reflection. It is more complex and multi-faceted. And yet, these are the “take-a-ways” that we are pleased to present in this special issue on genetic counselor development. It is our hope that genetic counselors in all points of development - from trainee to seasoned professional- can benefit from taking time to read and reflect on how genetic counselor development has (and will continue) to transform and progress as time moves forward.

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