EASING THE TRANSITION: NEEDS ASSESSMENT & SEMINAR DEVELOPMENT FOR

NOVICE ADVANCED PRACTICE CLINICIANS IN PRIMARY CARE

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ABSTRACT

Healthcare is moving away from the traditional primary care physician model to meet changing patient care needs, with increasing utilization of clinicians beyond the primary care physician, including nurse practitioners and physician assistants. As the number of NPs and PAs increase to meet demand for primary care providers, it is imperative that key components to successful role transition from student to clinician are understood and needs of novice clinicians be identified. The purpose of this practice improvement project was to perform and analyze a needs assessment focused on identifying perceptions of practice preparedness, organizational support, and educational needs of new nurse practitioners and physician assistants during the initial transition to advanced practice in the primary care setting. Results show many surveyed clinician's rate current practice preparedness at generally well (60.7%) or very well prepared (14.3%). Organizational support for transition showed varied results with 37.9% percent of respondents feeling either very unsupported or somewhat supported. This offers an area for improvement through transition programming from the employer perspective, a concept well-supported in previous literature. The desire for increased employer support was offered by many needs assessment participants in response to an open-ended question seeking comments on their transition experience. The responses highlighted the desire for use of ongoing education and mentorship in supporting transition to practice. Educational needs identified were utilized in the development of an electronic resource for novice clinicians. Topics identified and covered included coding and billing, mental health/pharmacology, chronic disease management, and procedural topics. Organizational content such as daily workflow, documentation, order entry, services available, and practice management were all areas desired for continued coverage as well. Hypothetical seminar offering frequency, duration, timing, and compensations were

collected; the most desired preferences included monthly in-person seminars lasting one hour during the work day, with continuing education hours as a means of compensation. Findings from the needs assessment were provided to key stakeholders in the sponsoring healthcare system to inform transition-to-practice programming currently under development. The findings can also serve to further highlight the desire from novice clinicians for ongoing support during transition to practice.

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DEDICATION

This dissertation is dedicated to new nurse practitioners in acknowledgement of the great effort and enthusiasm you have put into furthering your education. The transition to independent practice will undoubtedly be stressful, to say the least, but you will soon be wonderful practitioners helping to support and encourage wellness in the patients you provide care to.

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CHAPTER ONE. INTRODUCTION

Background

Multiple changes in healthcare in recent years have created gaps in coverage of many

primary care patients in a variety of settings. Increasing clinician need can be linked to Medicaid

expansion with implementation of the Affordable Care Act, increasing numbers of baby boomers

entering Medicare coverage, and primary care physician supply falling below demand (Boyar,

2015; U.S. Department of Health and Human Services [DHHS], 2013). Various shortage

estimates are presented in the literature with Aston (2011) offering that the American College of

Physicians is anticipating a shortage of 35,000 to 45,000 primary care physicians for adults by

2025. The U.S. DHHS (2013) reports the number closer to 20,400 full-time equivalent

physicians by 2020 if primary care delivery systems are unchanged. This anticipated shortfall has

led to innovative changes in the provision of primary health care services. To meet the needs of

the growing number of patients seeking health care there has been a move away from the

traditional primary care physician model and beyond the primary care physician as lone

clinician, including use of nurse practitioners (NPs) and physician assistants (PAs) in growing

numbers (Green, Savin, & Lu, 2013). As offered by the U.S. DHHS in their 2013 report

Projecting the Supply and Demand for Primary Care Practitioners through 2020, integration of

NPs and PAs into primary care delivery systems could lessen the anticipated physician shortage

to 6,400 full-time equivalent physicians by 2020.

When looking at the history of the nurse practitioner and physician assistant roles, the

two share a common basis for development, rising out of a growing need for quality care

providers that began with the expansion of Medicare and Medicaid services in the 1960s; that

need has never completely dissipated but has gained momentum in recent years. Currently, the

American Association of Nurse Practitioners (AANP) (2016) reports that an estimated 20,000 new nurse practitioners completed their graduate degree training in the 2014-2015 academic year. The AANP (2016) also reports more than 222,000 nurse practitioners (NPs) licensed in the United States, 83.4 percent of those with preparation in primary care. This translates to NPs providing almost 20 percent of primary care in the United States (Green, Savin, & Lu, 2013; Wiltse Nicely & Fairman, 2015). The American Academy of Physician Assistants (AAPA) offers that there are currently 100,000 certified PAs working in the United States, one third of those in primary care (n.d.); this accounts for seven percent of primary care services according to Green, Savin, & Lu (2013). As the number of NPs and PAs increase to meet demand for primary care providers it is imperative that this group of clinicians and those working with them understand the key components to successful role transition from graduate to independent clinician. This is especially true considering that employment turnover rates for NPs are twice that of physicians (Barnes, 2015a, p. 178). A survey conducted in 2012 by Cejka Search and the American Medical Group Association reflects this near doubling of turnover rates for both NPs and PAs compared to physicians, at 11.5 and 6.8% respectively (Cejka Search, 2014).

Current education models for NPs and PAs have both similarities and differences. Both professions are well-suited for roles in primary care through training in history and physical assessment, diagnosis and treatment, interpretation of tests, counseling on prevention, and development of treatment plans (AANP, 2016; AAPA, n.d.). Nurse practitioner curricula builds on undergraduate nursing education and has an emphasis on health promotion, disease prevention, and health education and counseling with coursework and clinical experience taking part in tandem. Physician assistant curricula mirrors the medical model utilized in medical school education which has didactic (classroom) learning followed by full immersion in the clinical

setting. Both approaches have been shown to produce safe and effective providers without residencies (Boyar, 2015; AAPA, n.d.). However, a vast amount of research supports that this is a time of intense stress and uncertainty. When the educational and training tracks of MDs and advanced practice clinicians are compared, the number of supported clinical hours and duration of training for NPs and PAs are much less. Increased stress for new providers can be linked to growing patient complexity, an aging population with multiple comorbidities, and care of a greater number of subacute patients in outpatient setting (Brown, Poppe, Kaminetzky, Wipf, & Fugate Woods, 2015).

A defining difference between the two roles is the level of autonomy afforded to each. PAs are required to work in collaboration and under the supervision of a physician. Nurse practitioners have varied levels of independent practice, with full independent practice authority currently authorized in twenty-two states and the District of Columbia, reduced authority in sixteen states, and restricted authority in twelve states (AANP, 2017). Research has helped to identify difficulties in the transition from graduate to practicing nurse practitioner. Less exploration has been completed regarding the perceptions of physician assistants during the same transition. This may be related to the requirement for PAs to work in collaboration with physicians and the fact that PAs represent a smaller number of primary care providers. Research finds that new NPs experience anxiety, self-doubt, and inadequacy at increased levels related to the role transition and increased responsibilities that come with it (Yeager, 2010). This is pointed out well in a 2004 questionnaire of nurse practitioners focusing on preparedness, which found 51% of NPs felt only somewhat or minimally prepared for practice upon graduation (Hart & Macnee, 2007). A follow-up survey completed in 2012, with partial publication of results, found similar results in that 43% of the 723 eligible NP respondents felt somewhat prepared, 11.5% felt

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minimally prepared, and 3.8% felt very unprepared for practice as an NP after completion of their educational program (Hart, 2012).

Within the local region, no specific transition-to-practice programs are currently utilized for new NPs or other advanced practice clinicians such as physician assistants. Several of the primary healthcare organizations in the area have semi-standardized orientation for clinician groups including onboarding education to the healthcare organization paired with department-specific orientation. The organizational orientation for clinicians at the sponsoring regional health system (RHS), for example, consists of two days of classes covering a wide array of content; topics include practice management, coding, transcription/dictation, staff resources, compliance, quality, computer training, and benefits enrollment, among other areas. An additional three days are then spent orienting to the department in which the clinician will work. The format of the orientation is often variable even within a single specialty such as family medicine. There is no difference in the content covered at the organizational orientation for NPs and PAs compared to new physician employees. Also, there are no specific changes implemented for providers new to practice entirely, though the department can modify orientation based on clinician needs and requests (C. Erickson, personal communication, September 23, 2015).

Problem Statement

Nurse practitioners and physician assistants may not be adequately prepared and supported for the transition to independent practice.

Significance of Project

The stress of the new transition may be reduced by focusing on factors shown in the literature to improve role transition for the nurse practitioner and physician assistant, most

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broadly a formalized orientation process. Desire for improvement in the onboarding process at the sponsoring organization developed after consistent themes emerged during exit interviews of both nurse practitioners and physician assistants, who the organization collectively call advanced practice clinicians (APCs). These themes included being overwhelmed with the extensive knowledge required for job performance and a lack of feeling supported in different clinical settings. The need for improved orientation and mentorship has also been discussed by the RHS's Peer Review committee as a means of ensuring consistent knowledge and training of providers throughout the system.

The sponsoring RHS is an integrated health system with headquarters in Duluth, MN. It has three major regions in the Midwest and includes 15 hospitals, 68 clinics, seven long-term care facilities, two assisted living facilities, four independent living facilities, and one research institute (Essentia Health, 2015b). From these numbers, one can see that the organization has a large footprint in the regional provision of primary care services. Organizationally, improved orientation is a potential means for improving quality of care by reducing adverse outcomes or "near misses", and to improve retention of much needed clinicians (C. Erickson, personal communication, September 23,2015).

Purpose

The purposes of this practice improvement project were to identify perceptions of role preparedness during the transition to independent practice, identification of practice topics for which clinicians desire ongoing education and organizational application as they begin independent practice, and evaluation of practice seminars for ongoing improvement of a transition-to-practice program within a regional healthcare organization. Practice topics were compiled into a resource for utilization by new clinicians.

Program Objectives

The primary project objectives were to:

1) Conduct a focused needs assessment to identify perceptions of role preparedness, organizational support, and content areas for ongoing educational offering

2) Develop electronic seminar content based on recent research and needs assessment findings to cover gaps in practice education of novice advanced practice clinicians

3) Provide recommendations for seminar content to key stakeholders within the sponsoring healthcare organization

4) Increase individual perceptions of preparedness for clinical practice and organizational support from the beginning of participation to the end of participation in practice seminars, and as compared to seminar non-participant recollections.

CHAPTER TWO. LITERATURE REVIEW & THEORETICAL FRAMEWORK

A literature review was conducted in regard to the nurse practitioner role and transition into the primary care setting, as well as models for supporting the transition to independent practice. Keywords of the literature search included nurse practitioner, role transition, primary care, and mentorship, residency, or fellowship. Cumulative Index to Nursing and Allied Health Literature (CINAHL) Complete, MEDLINE, and Health Source databases were utilized in the search, including years 2005-2015. Inclusion criteria were articles written from 2005-2015 and available in full text in the English language. Over 1,208 articles were returned using the described search criteria. The researcher reviewed titles and abstracts for applicability to the desired focus. Many articles present in the search were specific to the educational setting or registered nurse transition, and were therefore excluded. A focus on articles written with a primary care setting in the United States was desired as education and certification criteria are relatively standardized throughout the country. However, several articles were included that discuss general concepts of the transition to practice or studies outside of the primary care setting as the researcher found that they added depth to understanding the transition. The aim of the following literature review was to identify emotions associated with role transition and interventions to support the NP during this time.

Definitions from the Literature

There remains much debate in the healthcare setting and elsewhere as to the labeling used to describe ongoing programs that nurse practitioners may choose to attend to expand training prior to complete independent practice. One reason for the debate is that it could potentially impact policy currently in place for funding from the federal government of graduate medical education (GME), which was developed with the enactment of Medicare in 1965, to guarantee a

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steady supply of healthcare providers (Flinter, 2012). For this reason, many physician groups feel

that terminology such as "residency" should be reserved for medical education only. Graduate

Medical Education (GME) money is not currently available for nurse practitioner residency

training, although a three-year demonstration project completed for fiscal years 2011-2014

provided funding for family nurse practitioners in federally qualified health centers and nurse

managed health clinics (Flinter, 2012; 42 U.S.C. § 296j–1). Several NP organizations including

the AANP prefer the general "transition to practice" terminology to describe postgraduate

training programs (Wiltse Nicely & Fairman, 2015), as it is inclusive of many different formats,

and focuses on the time in which these programs are undertaken. The following definitions will

be utilized in the remainder of this discussion.

Transition

Most definitions refer to a process of movement that occurs over time, from a familiar

place or role to an unknown new setting. There is often adjustment in roles, behaviors, and

relationships with others (MacLellan, Levett-Jones, & Higgins, 2015).

Mentorship

"A mentorship can be defined as an intense relationship between a novice and an expert

to promote role socialization and, ultimately, role success of the novice" (Hill & Sawatzky, 2011,

p. 161). This relationship can be either formal or informal. For the purposes of this discussion,

formal mentorship will be implied.

Residency

A term commonly used in medicine to signify a postgraduate training period required for

licensure for practice. In the context of nurse practitioners, a residency takes place after graduate

education and licensure and consists of mentored clinical time in which new providers are given

the opportunity for discussion with an experienced provider about patient management. The programs also generally include continuity clinics, specialty rotations, and a didactic component (Brown et al., 2015). The term residency as it applies to PAs is more consistent with how the term fellowship is used in NP literature; refer to this definition below. Currently no consensus exists on the exact components of a residency.

Fellowship

Varied terminology is used, but 'fellowship' is chosen more often to describe an "avenue for practicing NPs who want to change disciplines"…"as well as new NPs who want to follow a career path in a subspecialty area" (Fitzgerald, 2015, p. 1). Within the literature, this terminology was not used regarding NPs outside of specialty settings. PAs typically choosing to complete extended training beyond their graduate degree education are those choosing to specialize in areas such as surgery and emergency medicine.

Common Emotions Experienced during Role Transition

The transition from registered nurse to nurse practitioner is individualized for each personal experience but is often described as difficult as the nurse moves from a role of "provider of care to prescriber of care" (Barnes, 2015b, p. 137). Common feelings brought about by the transition include stress, isolation, self-doubt, frustration, and uncertainty regarding clinical knowledge (Bahouth & Esposito-Herr, 2009; Goudreau et al., 2011; Harrington, 2011; Hill & Sawatzky, 2011; Sharrock, Javen, & McDonalds, 2013; Steiner, McLaughlin, Hyde, Brown, & Burman, 2008; Yeager, 2010). Feelings of self-doubt and uncertainty may grow as patients become more complex and productivity expectations grow to meet patient and organizational demand in the outpatient setting. These emotions are often most prominent during the first year of the NPs practice transition (Burke, 2017).

A common emotion identified in rural settings, where many NPs end up practicing, is isolation (Conger & Plager, 2008). Specifically, Conger & Plager (2008) describe connectedness versus disconnectedness in rural practice settings. Connectedness was tied to "development of support networks, relationships with large urban medical centers, availability of electronic communications, and connections with the rural community" (p 28). Collaboration with former classmates was discussed as a common means of maintaining support networks in sites where physician or other provider collaboration was lacking. Making connections in the rural community through home visits and attendance at community events was described as the beginning of a trusting relationship with the community. Disconnectedness was linked with several environmental factors: lack of advanced care access, poor technology support, and lack of healthcare providers to offer support to the NP in more isolated practice settings. Nurse practitioners with feelings of disconnectedness were less likely to stay in rural practice, where the need is often highest and utilization of nurse practitioners is great.

Environmental Factors that Impede Role Transition

Settings in which there was a lack of support by team members, lack of role clarity, inadequate preparation for required elements of patient care, and unclear expectations for the orientation period lead to increased turnover and lack of confidence in the new provider (Bahouth & Esposito-Herr, 2009; Barnes, 2015a; Rosenzweig et al., 2012; Sharrock et al., 2013; Yeager, 2010). As alluded to above, rural settings often have several factors that make novice clinicians in these settings at risk such as isolated practice setting and little if any presence of other clinicians for day-to-day support (Conger & Plager, 2008). Concerning support in the professional environment, Pasarón (2013) stressed that a supportive professional practice environment is particularly important for nurses' satisfaction. This may be as simple as access to

other specialty providers and interdisciplinary staff; for example, a pharmacist, dietician, case manager, and addictions counselor (Szanton, Mihaly, Alhusen, & Becker, 2010). Brown et al. (2015) reported anxiety could be linked with new providers unable to identify role models or workplace social groups. Harris (2014) found that the burden of transition to independent practice, particularly in specialty settings, is often on the new provider. This "on-the-job training" versus a formal orientation program leads to disparities in role expectations among new providers and the organization culminating in dissatisfaction among all parties.

Support for Mentorship Programs

The use of mentoring or formal mentorship programs are supported well in the literature (Bahouth & Esposito-Herr, 2009; Harrington, 2011; Hill & Sawatzky, 2011; MacLellan, Levett-Jones, & Higgins, 2015; Szanton et al., 2010; Zapatka, Conelius, Edward, Meyer, & Brienza, 2014). Two functions of a mentoring relationship offered by Harrington (2011) include career and psychosocial function. The two functions are focused on organizational, personal, and professional growth of the mentee through interaction with an experienced provider. Mentoring relationships impact four key domains of primary care practice including: "quality of care, productivity, job satisfaction, and longevity" (p. 171). The use of mentorship was found to improve clinical knowledge attainment and decrease isolation by facilitating socialization to practice and organizational norms. The mentoring approach was also found to ease the stress and anxiety of the transition to practice and increase the NP's self-confidence (Hill & Sawatzky, 2011; MacLellan et al., 2015).

The preceding studies found benefits for the mentor as well, including maintenance of up-to-date clinical knowledge and skills. Despite these benefits, Harrington (2011) offers that barriers to mentoring are often related to lack of rewards for the time commitment, either

monetarily or through promotion. Szanton et al. (2010) supports compensation through reduced

patient load or other employer considerations for those who act as mentors.

Support for Residency Programs

Residency programs are designed to help new NPs make a successful transition into

clinical practice, often lasting six to twelve months during the initial year of practice (Fitzgerald,

2015). Residency programs generally include clinical immersion along with ongoing didactic

learning in several different formats (Brown et al., 2015; Flinter, 2012; Goudreau et al., 2011;

Harris, 2014). A 2004 questionnaire administered to attendees of two large national NP

conferences with data compiled by Hart & Macnee (2007) supports that 87% of NPs surveyed

would have been interested in a residency program of supervised clinical training had it been

available just after graduate education completion. In a follow-up survey completed in 2012, the

question "If a formal NP residency program had been available to you after you had completed

your initial NP educational program, how interested would you have been in this?" Results found

that 58.01% of participants would have been extremely interested and 31.92% would have been

somewhat interested (Hart, 2012). Not only are residency programs a popular idea among NP

graduates, but are also a tool that can be used for recruitment and retention of new hires (Harris,

2014).

The first residency program was developed for nurse practitioners at a Federally

Qualified Health Center (FQHC) in Connecticut in 2007 and included both supervised and

independent clinics, specialty rotations, and didactic sessions over the course of one year

(Flinter, 2012). Each resident in this program was assigned to a team consisting of nurse, medical

assistants, and shared resources from the clinic. The resources included interdisciplinary team

members from pharmacy, dietary, behavioral medicine, and diabetes education. A primary care

physician or nurse practitioner oversaw the team. Each team was responsible for a panel of patients with ultimate responsibility for care remaining with the overseeing provider. The resident progressively built their own panel of patients as new individuals sought care at the FQHC leading to increased independent practice. The fact that the first year had 45 finalist applicants for four positions suggests a desire from active nurse practitioners. Program evaluation supported that participants developed confidence, coping, mastery of independent practice with strengthened role identity, and enhanced management skills (Flinter, 2012).

Goudreau et al. (2011) focused on the development of a NP residency program to transition current employees within the Veteran's Health Administration from registered nurse to nurse practitioner. The authors presented the following:

Core concepts of this program included ensuring a smooth transition into care, accountability on the part of the new NP, networking and socialization with peers, collegiality, and mentoring support as the NP moved through a variety of clinical settings, preceptors, and subject matter experts (p. 383).

Within the above model, exposure to specialty areas allowed the resident to better understand the function of various clinics within the system, build working relationships with providers, and gain experience in the initial assessments of specialties commonly consulted by primary care. Evaluation included a modified competency list based on those established by the National Task Force of the National Organization of Nurse Practitioner Faculty (NONPF) and a goal setting document to be completed collaboratively between the resident and preceptor. Feedback from the inaugural resident demonstrated feelings of institutional support, increased confidence, and an intention to stay in her current role within the system (Goudreau et al., 2011).

Support for Fellowship Programs

An article by Zapatka et al. (2014) describes the development of an interprofessional fellowship program in primary care within the Veteran's Affairs healthcare system in Connecticut. The format of the fellowship in this study mirrors that of residencies described above, including clinical immersion with development of a personal patient panel, under the supervision of a physician or NP faculty member. The panel size started at fifty patients with a goal of growing to 300 by the end of the fellowship. The pairing of faculty with fellows allowed a mentoring relationship which supported strengthening of clinical skills and continuous feedback. The fellowship also included specialty presentations and other didactic programming to enhance independent practice. Much of this focused on exposure to interdisciplinary groups including specialty providers, pharmacy, home care, and nutrition. The exposure allowed for an appreciation of how different healthcare clinicians work together to provide patient-centered care (Zapatka et al., 2014). No other articles used this terminology within the primary care context.

Support for Formal Orientation Programs

Formal orientation programs were found to positively impact the role transition for new NPs in a hospital-based setting in two different studies (Bahouth & Esposito-Herr, 2009; Spychalla, Heathman, Pearson, Herber, & Newman, 2014). Both programs were centralized and under the direction of specified leader or department. An experienced NP leader who was available to all new NPs for support, reflection, and guidance was found to be a great resource in the article by Bahouth & Esposito-Herr (2009).

The program described by Bahouth and Esposito-Herr (2009) included many aspects described in the residency programs above. It was a 12-week experience consisting of 1) a streamlined process for completion of administrative activities, 2) assignment of a NP preceptor

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to act as mentor for the new employee, 3) clinical immersion, 4) opportunities for peer socialization, 5) development opportunity and system resource identification, and 6) group mentorship focused on new NPs.

Spychalla et al. (2014) describe the development of a structured orientation program for NPs and PAs in an internal medicine setting at Mayo Clinic, Rochester. The duration of this program ranged from 6-12 weeks with focus areas including system-based learning tools, patient care, clinical duties, ongoing needs assessment, and clinical curriculum developed in a stepwise approach. The program was split in two parts: part one focusing on systems-based learning of departmental and institutional policies and procedures; and part two on assessment of needs and clinical curriculum documentation used to identify the knowledge and skills of each orientee. At the completion of the program the orientees participated in a CME course and "simulation-based boot camp", the latter modeled after a week-long experience for fourth-year medical students prior to transition to their intern year. Infrastructure supports included networking and educational meetings, attendance at NP and PA specific grand rounds, and case studies or simulations (Spychalla et al., 2014).

In both programs, the implementation of multiple supports showed that a consistent approach to orientation across the institution aides successful transition to practice for new and experienced NPs (Bahouth & Esposito-Herr, 2009). Spychalla et al. (2014) reported that program participants "gained a reputation for possessing a strong clinical skill set coupled with a depth of medical knowledge in hospital medicine" (p. 549). Barnes (2015a) notes that orientations are found to help promote a sense of confidence, competence, and clinician satisfaction.

Benner's "From Novice to Expert"

Patricia Benner developed "From Novice to Expert" nursing theory over three decades ago, beginning in 1982, "as a basis for clinical knowledge development and career progression in clinical nursing" (Benner, 1982, p. 402). Benner offered growing patient acuity, decreased hospitalization duration, increasing technology, and increased specialization as factors impacting the need for highly expert nurses at the time (Benner, 1982). These factors remain at the forefront of issues in nursing care, education, and successful transition all these years later. The theory was revolutionary in that it let practice inform theoretical development, as opposed to most other nursing theories at the time, which were developed by researchers and scholars.

The theory includes the description of five levels of nursing experience: novice, advanced beginner, competent, proficient, and expert. These were adapted from the "Dreyfus Model of Skill Acquisition" for nursing. Each level builds on the previous as abstract nursing principles are refined and growth occurs with the goal of expert nurse development through a proper educational background and a variety of clinical experiences. The novice relies on rules of care learned during education and offers fragmented and somewhat detached care, whereas the expert nurse offers care that is intuitive and holistic, honing in on key factors that present in the patient assessment. Benner offers that not every nurse transitions to the level of expert, with many in the hospital setting staying at the competent and proficient levels (Benner, 1984; Benner, Tanner, & Chesla, 1996).

Nurses moving into the NP role have varied clinical experience as registered nurses, with starting points on the continuum from novice to expert. As most graduate education programs encourage but do not require previous registered nurse experience prior to starting an advanced educational program, this is different from the transition for the registered nurse, whose prior

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experience follows a more consistent track. The transition discussed also entails only the initial year of advanced practice for the nurse practitioner. The progression to the expert level offered by Benner takes years to reach, if it is achieved at all. Therefore, Novice to Expert theory acts to inform the progression that individuals make when entering a new role but is not the most fitting guide for the proposed practice intervention.

Limitations

Current research is lacking in comparisons of outcomes among different role transition program formats for nurse practitioners. This literature review also did not include consideration of physician assistant role transition, though the two clinical roles are often considered similar and paired into one category in many healthcare settings. No research identified in the literature review compared NPs participants versus non-participants in formal transition programs. This may be due to the fact that no standard approach to nurse practitioner role transition is accepted within the United States healthcare system, as it is for medical residents. Of the research found, all had limitations of sample size and generalizability due to specific clinical settings used for implementation. Most were formatted as literature reviews or descriptive studies of pilot programs in different healthcare organizations. Fitzgerald (2015) points to scant evidence showing the impact of postgraduate residencies on patient care. It is unclear if this lack of outcome evaluation has yet to be described due to the newness of such programs, time constraints, cost, or some other factor in the organizations who implement such programs.

Implications for Practice

The preceding review of literature provides a considerable amount of support for the development of programs to ease the transition to practice for new nurse practitioners. Several formats have been used successfully in different healthcare settings across the United States. As

mentioned, no studies have been completed to suggest one method over another. However, the literature would seem to show that a program including support for both continuing education, socialization and peer support, and a mentor or preceptor who can provide clinical guidance are all key to a successful transition for new NPs. Of the studies that described pilot residency programs, all found positive impacts on role transition and preparedness for independent practice. Several of the articles cited the residency as a bridge to professional practice. Cost and personnel resources were commonly mentioned as limiting factors in development of transition-to-practice programs. Until research more firmly ties transition programs to patient outcomes and return on investment, lack of support for more comprehensive implementation of formalized transition-to-practice programs within the healthcare system is likely to continue. However, as advanced practice clinicians seek out organizations that show support for the transition, those organizations may be a step ahead in the areas of recruitment and retention of.

The Andragogical Model

The Adult Learning Theory, originally proposed by Malcolm Knowles starting in the 1970s, stemming from work by Lindeman and other, has had ongoing refinement of the concepts continuing today through colleagues of Knowles (Knowles, 1970, 1973; Knowles, Holton, & Swanson, 2005). The model is more commonly described in recent literature as The Andragogical Model; the term andragogy being used to describe any form of adult learning (Knowles, 1970, 1973; Knowles et al., 2005). Knowles et al. (2005) offers the strength of andragogy is that it provides a set of core principles that can be applied to all adult learning situations. The process of adult learning applies directly to individuals moving from the role of student to independent clinician in the role of nurse practitioner or physician assistant, which makes The Andragogical Model a well-suited guide for this project. Having completed a

graduate educational program, the clinician has maturity as a learner and a foundation for independent practice. They also have a need for continued learning and growth in both clinical knowledge and advanced role expectations. Knowles stressed the importance of involving the adult learner in shaping the learning process, a consideration in developing the needs assessment and evaluation pieces of this intervention. In utilizing an andragogical approach, the "instructor" ideally takes on the role of facilitator and resource in interactions with the learner, while encouraging active participation by the learner to meet their individual educational needs (Knowles et al., 2005). The Adult Learning Theory originally consisted of four core principles. In further revisions, the current Andragogical Model includes six core principles that guide seminar development.

Core principles

Core principle one considers the learner's need to know and includes identifying what, why, and how in the learning process (Knowles et al., 2005). What needs to be known, why does it need to be known, and how will it be known? One of the first tasks of the facilitator in working with adult learners is to help the learners become aware of this need. This is often most effective by using real or simulated experiences that help to reveal gaps in knowledge for the learner (Knowles et al., 2005).

Core principle two is self-concept which describes the growth from a dependent into a self-directed human, with a need to be perceived and treated by others as capable of this self-direction (Knowles et al., 2005). Adult learners tend to be resistant to learning new information in settings that are perceived as imposing. Knowles (1973) offers "When found in a situation in which he [the learner] is not allowed to be self-directing, he experiences tension between that situation and his self-concept" (p. 45). Holmboe et al. (2005) offer that self-directed learning

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skills are paramount for developing an appreciation for and providing a means of achieving the lifelong learning that is necessary in medicine. Teaching concepts of self-directed learning are a more recent recommended focus for improvement in medical education, offered by the Society of General Internal Medicine's Task Force for Residency Reform. Approaches to self-directed learning that may be utilized include journal clubs, evidence-based medicine (EBM) curricula, and problem-based learning (PBL) approaches (Holmboe et al., 2005).

The third core principle is prior experience which states that previous experiences are used as a reservoir of knowledge when encountering a new situation (Knowles et al., 2005). Using previously learned resources allows for increased learning and growth in new information areas. Experiences that adult learners have are more varied and of greater amounts than their youth counterparts. This corresponds with a greater variance in learning styles, background, needs, motivations, interests, and goals for learning in a group of adult learners as compared to their less experienced counterparts. Emphasis on individualization of teaching and learning strategies with this population is therefore extremely important. Teaching methods that utilize prior experiences such as group discussion, simulation exercises, and case methods are commonly well-received (Knowles et al., 2005). Knowles (1973) offers that adult learning facilitators "convey their respect for people by making use of their experience as a resource for learning" (p. 46).

Core principle four is readiness to learn which is dependent on an appreciation of the relevancy of the learning topic for the adult learner, with a focus on learning tasks required for social roles. Knowles et al., (2005) offers that "timing learning experiences to coincide with developmental tasks" is a straightforward way of assisting adult learners to realize readiness to

learn. These developmental tasks involve moving from one stage of development to another, such as the transition to independent clinician from a student role.

Orientation to learning defines core principle five and the orientation changes as a person matures (Knowles et al., 2005). There is a shift from subject-centered and postponed application to life- or problem-centered and immediate application of learning. This translates to a desire to learn things which are directly relevant to a task needing to be performed or a problem needing to be addressed (Knowles et al., 2005). Knowles (1973) offers a very pertinent statement that resonates with the intention of the seminars in the following text:

> The adult comes to an educational activity largely because he is experiencing some inadequacy in coping with current life problems. He wants to apply tomorrow what he learns today, time perspective is immediacy of application. (p. 48)

The last core principle, Motivation to learn, becomes internal with maturation. An internal drive to meet goals, increase job satisfaction, and personal self-esteem is the translation in developing adult learning approaches (Knowles, 1970). Common barriers to this internal motivation in adults include inaccessibility to opportunities or resources and time constraints. Programs that minimize these barriers may better support the adult learner (Knowles et al., 2005).

Further considerations

Other factors that need be considered when developing adult learning programs include individual learner and situational differences, and goals and purposes of learning. Developing an andragogical approach that considers the uniqueness of the learner and the situation leads to more positive outcomes for the learner and the facilitator (Knowles et al., 2005).

The above principles provided guidance in shaping both the needs assessment and self-evaluation tools for seminar participants. Figure 1 shows application of The Andragogical Model to seminar development and consideration for continual improvement. Each principle has direct application to the formatting of interactions with adult learners to support learning and participation. The principles advocate that seminar content, guided by needs assessment findings, should be steered by its participants through seminar evaluation and feedback to more fully individualize the seminars to learner needs.

The Andragogical Model: New APC Practice Seminars

Need to know
-What, why, and how?

Knowledge gaps identified in needs assessment and literature

Review objectives and topics for seminars with learners

Self-concept
-Resistance to learning if it feels imposed upon the adult learner

-Actively seek participant input in planning/content offering of seminars

-Possibility of optional attendance (attend at least 3 of 6 seminars)

-Provide self-guided case studies to complete outside of seminars; varied topics to meeting leanring needs

Prior experience
-Previous experiences become a resource for current learning & problem-solving

-Provide for open discussion time about previous clinical experiences

-Build upon current clinical knowledge

-Case study discussion

-Recruit providers to lead seminars and provide clinical reasoning for decisions made

Readiness to learn
-Increased desire to learn when there is a real-life task it can be applied to

-Real clients and real clinical situations provide recognition of how learning applies to work context

-Discuss goals for practice & how seminars will help meet these goals

-Content chosen as applicable to current practice needs

-Topics pulled from needs identified in research & needs assessment

Orientation to learning
-Immediate application to a problem needing to be solved

-Content of seminars will be clinically focused to increase learner knowledge and ability in efficient clinical decision making

-Case studies and patient work-ups

Motivation to learn
-Internal motivation

- Stress the impact transition programs have on successful transition to practice

-Review focus areas and in relation to self-evaluation of preparedness

- Stress goals of helping to increase independent practice efficacy and, in turn, job satisfaction

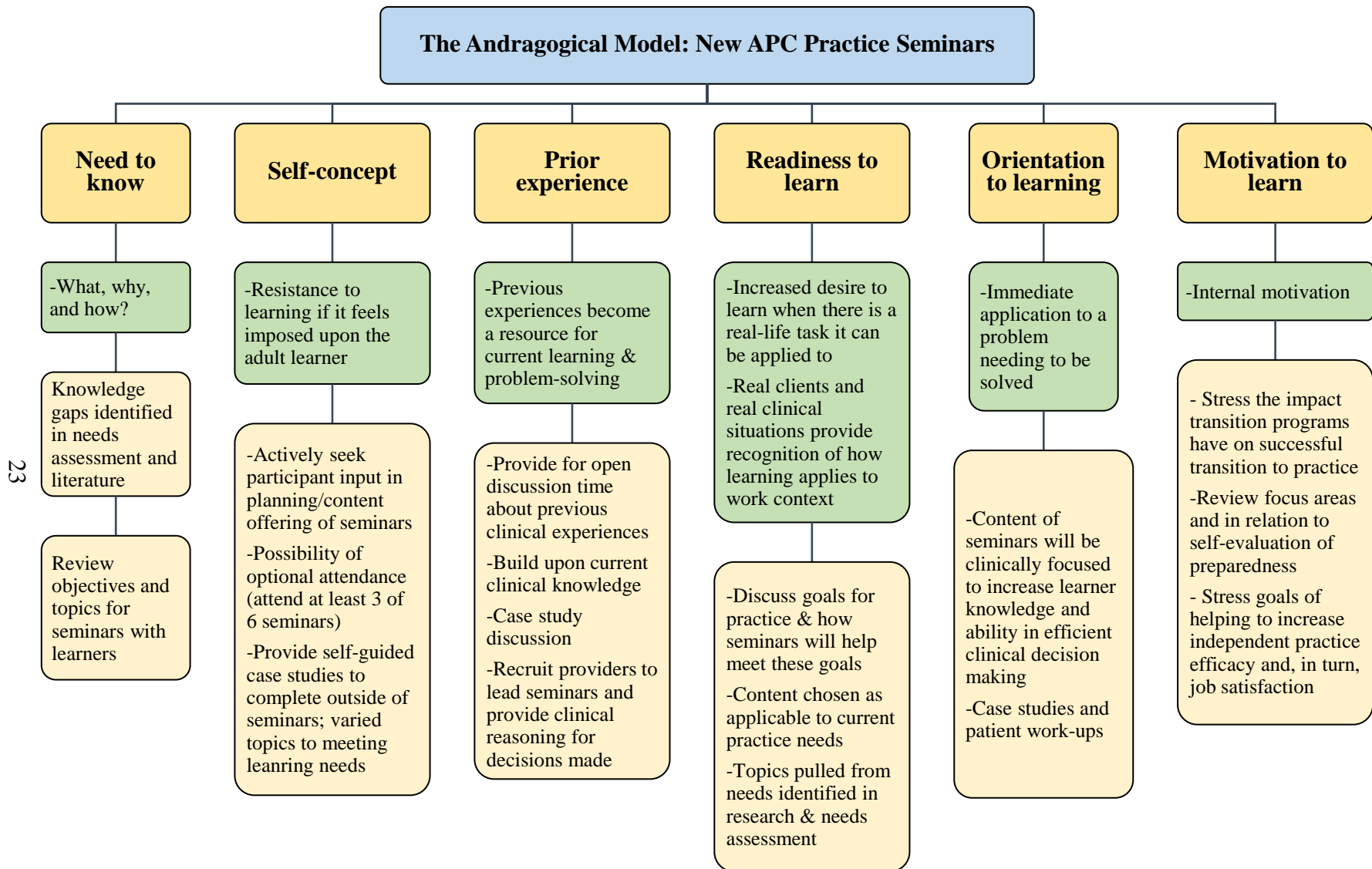*Figure 1.* Application of The Andragogical Model to seminar development

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CHAPTER THREE. PROJECT DESIGN

Needs Assessment Implementation

Needs assessment tool

The first phase of the practice improvement project was a needs assessment conducted to identify perceptions of role preparedness and content for ongoing education among new APCs in primary care. The needs assessment tool was developed after referring to previous articles focused on transition to practice and the desire to collect responses that would offer insight into transition program development for the participating healthcare organization. Demographic information was sought including age, gender, and details about previous healthcare occupation experience and duration. Demographics specific to advanced practice included educational institution attended, advanced practice certifying body, duration of advanced practice, and practice setting community size and mentor/consult availability. The questions seeking to identify duration of time in advanced practice allowed the researcher to identify those meeting pre-determined inclusion criteria seeking those in the first two years of advanced practice. Participation in transition to practice programming and its impact on practice competence was solicited. Demographic information was included for collection to describe characteristics of the sample and allow separation of these variables from the intervention in analyzing needs assessment respondents' perception of transition compared to those participating in transition programming.

A 2004 survey by Hart & Macnee (2007) evaluated perceived preparedness for practice of NPs after completing basic NP education. Questions specific to perceived preparedness were utilized in the needs assessment tool, with slight adaptation by having respondents reflect on perceived preparedness at degree completion and at the current point in practice. Questions of

similar format were included to elicit perceptions of organizational support for transition and familiarity with organizational resources. These areas were included as a benchmark, with the goal of improvement in perceptions from future participants of transition-to-practice programming.

The initial needs assessment included solicitation of self-rating of competency in a variety of specified clinical areas and skills based on content included in national certification outlines. However, feedback from the researcher's committee offered this approach as less insightful; passage of a certification exam demonstrates entry-level competency of a clinician (American Academy of Nurse Practitioners- Certification Board [AANP-CB], 2017b; National Commission on Certification of Physician Assistants [NCCPA], 2017b). Therefore, the format was changed for this portion of the needs assessment, asking respondents to identify practice content areas and skills/procedures for which they desire further education, with up to five fill in the blank choices for each. Examples of content and skills were offered within the question, referring to practice areas identified by Hart & Macnee (2007) and Flinter (2012).

Preferences regarding hypothetical practice seminars offered by respondent's employing healthcare organization were sought including frequency, timing, duration, format, and compensation for attendance. A final open-ended question requested any additional comments respondents had concerning their initial practice experience. Upon completion of the survey, respondents were given the opportunity to enter a drawing to win a gift card as a token of gratitude for survey completion. Refer to Appendix E for the final needs assessment tool.

Questions from the needs assessment tool were loaded into the Qualtrics software (Qualtrics, Provo, UT), selected for its ease of use and free availability to the researcher through North Dakota State University system. Logic was added to decrease question presentation if

previous responses indicated it was not applicable to the respondent. Surveys were distributed in electronic format using Qualtrics software. The software also allowed the link for gift card drawing to be offered separately upon completion of the needs assessment survey. This kept assessment responses and drawing entry information detached to maintain respondent anonymity.

Data sources

Desired respondents were advanced practice clinicians (nurse practitioners and physician assistants) within their initial two years of advanced practice in primary care within the supporting organization. A list of individuals hired into the RHS from January 1, 2014 to December 31, 2015 was generated by organization staff and provided to the researcher. Individuals included those hired into any of the three organizational regions, including Duluth and Brainerd, MN and Fargo, ND. The list did not specify providers new to the organization from those new to the advanced practice role. It specified practice site, so from the list of 125 clinicians, 80 were identified as working in primary care practice settings and included for dispersal.

Prior to any data collection, Institutional Review Board approval was obtained from North Dakota State University; see Appendix I for approval letter. Essentia Institute or Rural Health reviewed the proposed project, classifying it as a quality improvement project for which they do not require submission to their Institutional Review Board Approval. For the organizational approval letter, see Appendix J. Minor changes were made to the needs assessment, including addition of questions present on the evaluation form to allow comparison, and decreased response options for ease of completion, after obtaining IRB approval. An amendment form was completed to reflect these changes (see Appendix K). A letter was sent to

the RHS leadership describing the focus of the project and soliciting support in encouraging their employees to complete the survey. Included in this letter were details regarding confidentiality, anonymity, IRB approval, and participant's rights (see Appendix A). Similarly, this information was included in an invitation letter sent to desired APC participants. A statement regarding consent to participate in the needs assessment was included in this letter with consent indicated by completion of the survey (see Appendix C).

Data collection procedures

An informational email was sent to RHS Leadership by the project sponsor and key informant from the organization on March 23, 2016. The email included a brief introduction of the project from the sponsor along with attachments of the researcher developed letter to leadership and invitation/consent letter to APCs as described above. See Appendix B for a copy of the email sent to RHS Leadership. An invitation letter was sent by the project sponsor and key informant to RHS APCs on March 23, 2016 to desired APC participants. The email included a brief description of the project and invite from her along with an attachment for the researcher developed invitation/consent letter described above. See Appendix D for a copy of the email sent to APCs. An anonymous link to the Qualtrics survey was included in the attached invitation/consent letter from the researcher. A reminder email was sent March 28, 2016 to individuals listed as hired into the organization between January 1, 2014 and December 31, 2015 utilizing a Qualtrics software generated email reminder (see Appendix L). A deadline of April 2, 2016 was given, though data were submitted through April 15, 2016. All survey responses were logged anonymous and secure within Qualtrics' website, under password protection.

Seminar Content Development for Novice Clinicians

The second phase of the practice improvement project was creating a compilation of practice resources to provide to the RHS for consideration of inclusion in transition-to-practice programming in which newly-hired APCs will participate. Current research supports a structured, formal residency program of six months to one year in the form of precepted clinical rotations, specialty rotations, independent clinic exposure, and didactic sessions (Flinter, 2012). The practice resource could be utilized in didactic sessions or for self-study by new APCs during the initial transition to independent practice and those currently in practice.

    Data sources

Seminar content development focused on topics identified by needs assessment respondents as most important for ongoing coverage for new clinicians. Topics identified were compiled, totals tabulated, and those selected most frequently by respondents were included for resource development. Information on selected topics was gathered from publicly available online sources reflecting current evidence-based practice, expert perspectives, national practice guidelines, and professional organization or university medical sources. Content was assembled into an electronic document including quick references and links to online sources including case studies, videos, and selected practice guidelines. The seminar content can be viewed in Appendix H. Several areas identified as needing ongoing coverage are specific to the organization or even specific to different practice sites. Therefore, content resources for such areas were not a focus of resource development, but were shared with organizational leadership as an identified need of novice clinicians in primary care in the organization.

Practice Seminar Evaluation

      Evaluation forms

      Forms were developed to be utilized with participants in practice seminars to gather information including perceptions of their transition and feedback on seminars. A short form was developed with the intent of gaining feedback for seminar content and delivery, as well as recommendations for future seminar content. This supports the application of The Andragogical Model in providing an opportunity for the adult learner to guide their own learning. Objectives of each practice seminar would need to be developed and added to the brief form for evaluation after topic selection and development is finalized. The brief evaluation form was developed using a Microsoft word document, but could be easily loaded into Qualtrics software if electronic completion of surveys were desired. See Appendix F for a copy of the brief evaluation form. A second, longer form included many questions present in the needs assessment tool, including demographic data and questions rating perceptions of preparedness, organizational support, and familiarity with organizational resources. The intent of duplicating questions from the needs assessment was to allow seminar participant self-comparison at specific time points and comparison with seminar non-participants who completed the needs assessment to identify impact of transition seminars. Additional questions were developed to elicit perceptions of peer support and self-perceived impact of seminars on the transition to independent practice. The goal of this questioning was to allow data that would help provide support continuation of transition programming in the sponsoring organization. Content of the long evaluation form was loaded in Qualtrics survey software, allowing for easy dispersal of the survey, secure storage of results, analysis of responses, and comparison to needs assessment results. See Appendix G for a copy of the long evaluation form.

Data collection

Recommendations for evaluation included a brief evaluation form completion at the end of each practice seminar and a long evaluation form completion prior to initial practice seminar, and at three months and six months from start of practice seminar participation. Transition-to-practice programming is still in development for the RHS and forms have not been collected to date.

Congruence to the Organization's Mission, Vision, and Values

The RHS's mission states "We are called to make a healthy difference in people's lives" (Essentia Health, 2015a, Mission, vision, & values, para. 1), with a vision to "be a national leader in providing high quality, cost effective, integrated health care services" (Essentia Health, 2015a, Mission, vision, & values, para. 2). Additionally, core values of the RHS include quality, hospitality, respect, justice, stewardship, and teamwork (Essentia Health, 2015a, para. 3).

The clinical improvement project supports the mission, vision, and core values of the organization by offering insight that will direct the transition process for current novice APCs and develop transition-to-practice programming. Quality is improved through ongoing education of major patient care foci and examination of evidence-based practice guidelines and resources. A greater understanding of organizational resources and workflow will lead to more efficient and responsible use of resources, supporting stewardship and justice. Respect and teamwork are supported in seeking and appreciating input from current APCs to identify opportunities for improvement in practice and the organizational environment.

CHAPTER FOUR. EVALUATION

The focus throughout the evaluation process was to collect data about overall perceptions of clinicians transitioning to the role of novice provider and to inform practice resource development and transition-to-practice programming at the RHS. Data gathered from the first phase of the practice improvement project, the Qualtrics needs assessment, was used in evaluating the first objective of the project, to conduct a focused needs assessment to identify perceptions of role preparedness, organizational support, and content areas for ongoing educational offering. Descriptive analyses were used to summarize needs assessment responses and content desired for ongoing educational coverage, with figures and tables utilized to highlight key findings including perceptions of practice preparedness, organizational support, and desired seminar content foci and delivery characteristics.

The second objective, to develop electronic seminar content based on recent research and needs assessment findings to cover gaps in practice education of novice advanced practice clinicians was only partially evaluated due to lack of seminar implementation. Much of the content identified for ongoing education coverage mirrored topics discussed in the literature, suggesting common areas for which knowledge gaps exist in novice clinicians. The electronic format of the resource allows for the ability to post on an organizational intranet site for access by new clinicians for self-study, in seminar delivery, or as a day-to-day reference for common primary care topics encountered. Feedback for foci included in the seminar content development was partially evaluated during a poster session used in relaying project findings to key organizational stakeholder. Verbal feedback from practicing clinicians and medical residents confirmed topics identified in the needs assessment are indeed knowledge gaps encountered by new clinicians, APCs and physicians alike. Evaluation of content through formal means was not

completed as transition-to-practice programming is still under development and the resource has yet to be utilized in practice seminars with new clinicians.

Evaluation of the third objective, to provide recommendations for seminar content to key stakeholders within the sponsoring healthcare organization, was completed in several ways. First, key stakeholders for transition of APCs in the sponsoring organization were identified. This process started by contacting a physician and advanced practice clinician recruiter who provided contact information for the Vice President of Physician and Professional Services at the RHS-West Region. This individual helped to identify a second contact who is a practicing clinician and highly involved in training and education of APCs in the East Region, where the RHS headquarters is located. This second contact expanded work to include improving the onboarding of new APCs organization-wide and therefore agreed to sponsor the researcher's practice improvement project with the RHS. The project sponsor was utilized for all direct communication and feedback with the RHS. Most recently, the sponsor was named as Director of Nurse Practitioner and Physician Assistant Transition to Practice in the February of 2017, responsible for overseeing the development and coordination of new transition programming for APCs in the organization. Results and recommendations were shared and feedback sought from the project sponsor throughout the improvement project. Results were also presented at an annual poster session at Duluth's Division of Community Clinics (DOCC) meeting. Attendees at this meeting included section chairs from each of the RHS's seventeen primary care sites in their East region and their administrative dyad partner, the chiefs of primary care for Minnesota and Wisconsin clinics, and faculty and medical residents from a Duluth area family practice residency program. This meeting allowed for broad provision of needs assessment results,

recommendations for seminar content and delivery characteristics, and further transition

programming development with multiple stakeholders involved in the primary care setting.

Objective four, to increase individual perceptions of preparedness for clinical practice

and organizational support from the beginning of participation to the end of participation in

practice seminars, and as compared to seminar non-participant recollections, was not evaluated

to date. This was related to delays in implementation of transition programming within the

sponsoring healthcare organization. Areas being evaluated were included in seminar evaluation

forms developed for the project. Several Likert-scale questions were duplicated in the needs

assessment and long evaluation form for cross-comparison and self-comparison among seminar

participants. These include questions seeking perceptions of practice preparedness and

organizational support for transition along with a rating of familiarity with organizational

resources. Qualitative data to expand upon participant perceptions was also to be collected

through the following question sequence on the long evaluation form:

Question 18) Do you feel clinical practice seminar participation has impacted your role

transition and independent practice in a positive way?

Question 19) If yes, please describe how seminar participation has impacted your

practice?

These forms were provided to the project sponsor (newly named transition program director) for

consideration of inclusion upon transition program initiation.

The Four Level Evaluation Model was chosen as a guide in planning the evaluation of

seminar implementation for its focus on results, an important factor in gaining and maintaining

support of leadership within an organization. Although areas endorsed by the model could not be

evaluated to date as the model was applied to plans for evaluation of practice seminars which

have not yet been implemented, they provide the basis for recommendations provided to the

supporting organization as planning continues for transition-to-practice programming for

primary care APCs. The evaluation process is also supported as the most congruent with The

Andragogical Model making it a good fit for the practice improvement project (Knowles et al.,

2005).

Four Level Evaluation Model

The Four Level Evaluation Model is classified as a result-based evaluation and has

become a standard approach for training evaluation within organizations. The model is both

simple and practical and provides a guide for varied aspects of evaluation, stressing the

importance of examining multiple measures of training effectiveness (Bates, 2004; Kirkpatrick &

Kirkpatrick, 2006; McNamara, Joyce, & O'Hara, 2010).

Level one- reaction

The first level consists of evaluating the reaction to an educational offering, obtaining

data from participants about their response to the program as it is taking place (Knowles et al.,

2005) or immediately following the education. Feedback is sought to offer opportunities to

improve the program throughout its implementation. Brief seminar evaluation forms developed

(Appendix F) would provide for collection of reaction evaluation, completed by participants after

each seminar. The evaluation seeks feedback on seminar content covered, meeting of objectives

of the seminar, and recommendations for ongoing seminar content. This process also helps

support application of Andragogical principles by allowing the learner to direct learning needs.

Level two- learning

The second aspect of Kirkpatrick's model is learning evaluation, which consists of

obtaining data about what was acquired during the learning process. This may include skills,

knowledge, or attitudes acquired based on participation in a learning event (Kirkpatrick, 1998; Kirkpatrick & Kirkpatrick, 2006). A before-and-after approach is often used to obtain this level of evaluation information (Knowles et al., 2005; McNamara, Joyce, & O'Hara, 2010). Brief seminar evaluations (Appendix F) would provide qualitative data through open-ended responses about the impact of seminar attendance on participant practice. Pre-test and post-test could be used to identify learning of specific seminar content. This would also aide in obtaining CE hours, identified as the most desired compensation for seminar participation. Long evaluations were developed (Appendix G), with the intent to obtain expanded level two information. Ideally, participants would complete the long evaluation at the initial seminar, and at three months and six months from seminar initiation. Several Likert-scale questions ask the participant to rate their current level of competence for clinical practice, familiarity with organizational resources, and peer support. Another question seeks qualitative input about how practice seminars have impacted the practice transition for the novice clinician. Responses would help reflect learning that takes place regarding seminar participation.

Level three- behavior

Level three seeks to identify how the behavior of the learner has changed, comparing before and after an intervention or training has taken place (Knowles et al., 2005). Partial evaluation of this would be elucidated through questioning of the 3- and 6-month evaluation completed by seminar participants, asking how the seminars impact role transition and practice. Application to practice is also sought in question six on the brief seminar evaluation, in an open-ended format. True reflection on change in practice behavior may be more completely evaluated through self-reflection and discussion with mentors and peers in the clinical setting. Change may

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also be reflected in improved quality measures, use of evidence-based guidelines, and familiarity and appropriate use of organizational resources.

Level four- results

Results evaluation consists of looking at the impact of training on organizational goals and objectives (Bates, 2004), in the case of a transition program for APCs, as a potential means for improving quality of care and improve retention of much needed clinicians. Measures such as turnover, program costs, provider efficiency, and other organizational financial measures are often looked at in results evaluation (Knowles et al., 2005. Level four aspects of evaluation are beyond the scope of this project, but are indeed factors that were cited in gaining organizational support of a program to assist new APCs with the transition to practice and would help support continuation of a programming after an initial pilot period. Current research does not specifically correlate transition programs with improved patient outcomes, retention, or job satisfaction (Boyar, 2013; Fitzgerald, 2015; Flinter, 2012). However, transition programs have been anecdotally linked to increased efficiency, job satisfaction, and retention rates of new clinicians (Goudreau et al., 2011; Wiltse Nicely & Fairman, 2015).

CHAPTER FIVE. PROJECT RESULTS

Needs Assessment Survey Results

The first objective of the practice improvement project was to conduct a focused needs assessment to identify perceptions of role preparedness, organizational support, and content areas for ongoing educational offering. The intent of this objective was to more fully identify the need to improve transition-to-practice processes within the sponsoring RHS from the clinician perspective. The results also provided information to guide completion of additional project objectives and identify characteristics of hypothetical practice seminars most desired by current novice clinicians.

Results below present the concept of mentorship offered by several respondents. This concept was described in the literature review and as a format approach during project development. However, this focus was not selected by the researcher in objective and project design, so specific definitions, formatting, and expectations of mentorship were not elicited or offered as part of the needs assessment described below and are therefore not fully discussed in this paper.

A list of 132 individuals hired into the RHS within two years prior to project initiation was provided by RHS administrative staff. A total of 80 individuals from this list were identified as working in primary care setting, with survey links distributed electronically to these individuals. Figure 2 below, illustrates how the total needs assessment sample was reached from the initial 80 respondents it was sent to, for a final sample size of $N = 29$.

```
80  • Total number of electronic needs assessment links distributed

77  • Total remaining after three respondents reported failure to meet inclusion criteria prior to
      survey completion; they were beyond their intial two years in advanced practice

45  • Total number of respondents who completed the needs assessment in full
    • Represents a response rate of 58.4 percent; ie 45/77

29  • Total included in needs assessment data analysis after additional 16 respondents removed
      from sample for failure to meet inclusion criteria; respondents removed were beyond their
      intial two years in advanced practice
```

Figure 2. Process for obtaining sample for data analysis

The response rate for this survey was higher than typical response rates for an emailed survey. It is unclear how many individuals of the 34 who did not respond would have met inclusion criteria of being within their first two years of advanced practice, as this data was not collected or available from within the sponsoring organization.

Demographic data

Figure 3, below, presents demographic needs assessment responses by questions. The figure shows extremely shortened versions of questions offered on the needs assessment tool (Appendix E). The age of respondents ranged from 26 to 55 years, with a mean age of 34.5 years and a median age of 31 years. Mean time in previous healthcare occupation was 8.9 years, though the range was one to 24 years; this included totals for each respondent which may have represented multiple healthcare roles held. The average duration of practice as an APC was 13.8 months, with a range of three to 24 months. Twenty respondents were certified by nurse

practitioner certifying bodies (69%) while nine had certifications with a physician assistant certifying body (31%). In question 5 in Figure 3, program attended for degree attainment was elicited, with responses as listed and "other" representing a single selection of the following educational institutions: Barry University, Bethel University, Boston College, Des Moines University, Marquette University, North Dakota State University, Oregon Health & Science University, Simmons College, University of Cincinnati, University of Illinois at Chicago, University of Mary- Bismarck, and University of South Alabama.

Respondents were asked if they took part in any specific transition programming, with several options offered including defined orientation period, mentorship, residency, fellowship, and a fill-in-the-blank option of other. 12 individuals reported participation in a defined orientation period, three in a mentorship, and one reported the option "other- during school" without further explanation of what this entailed. Of those who participated in some sort of transition to practice programming, $n= 16$, all who responded, $n=15$, found the experience helpful. One participant reported participation in both mentorship and a defined orientation period, reaching the total of 16 responses. No individuals reported participation in a residency or fellowship during their practice transition. Fourteen individuals reported no specific programming during their initial transition to practice.
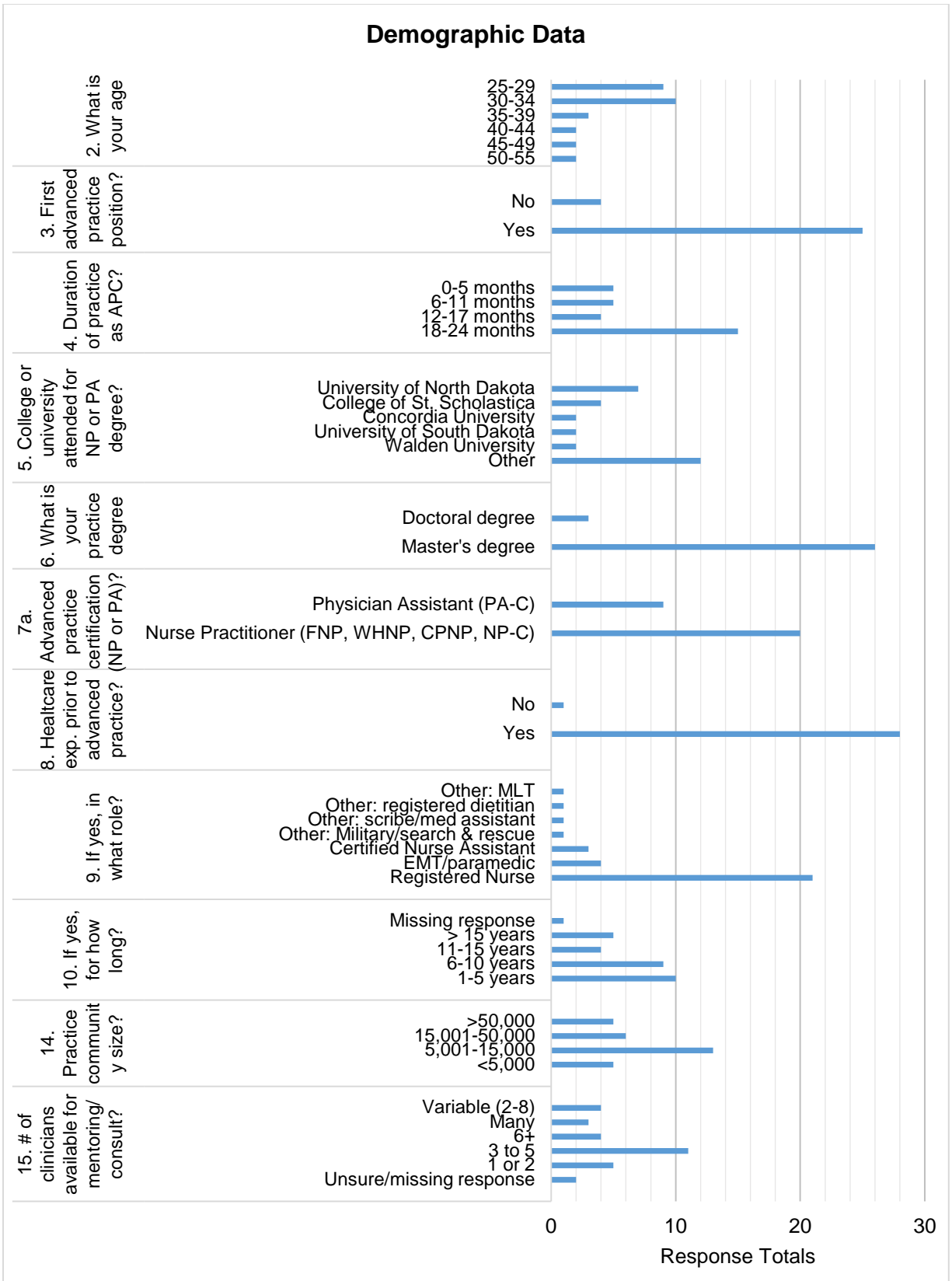
Figure 3. Demographic data

Practice perceptions

Levels of perceived preparation for independent practice were elicited at both completion of education/certification and at the time of needs assessment completion and rated on a 4-point Likert scale, with results displayed in Table 1. Total sample results are listed to present a broad description of the sample. Percentages are included in the following three tables to allow varying sub-sample sizes to be easily comparable.

Table 1

Perceptions of practice preparedness

	EC (*N*=29)		NAC (*N*=29)	
	n	%	*n*	%
1- very unprepared	2	6.9	1	3.4
2- somewhat prepared	10	34.5	6	20.7
3- generally well prepared	15	51.7	17	58.6
4- very well prepared	2	6.9	4	13.8
Missing response	-	-	1	3.4

Note: EC- at education completion, NAC- at needs assessment completion

Results based on time in advanced practice are displayed with responses separated between those in practice for 12 months or less (*n*=11) and those in practice for greater than 12 months (*n*=18). This helps the data to reflect the most described transition period in the literature, the first 12 months of practice.

Table 2

Perceptions of preparedness based on time in advanced practice

	≤ 12 months in advanced practice (*N*=11)				> 12 months in advanced practice (*N*=18)			
	EC		NAC		EC		NAC	
	n	%	*n*	%	*n*	%	*n*	%
1- very unprepared	0	0	0	0	2	11.1	1	5.6
2- somewhat prepared	3	27.3	3	27.3	7	38.9	3	16.7
3- generally well prepared	7	63.6	8	72.7	8	44.4	9	50.0
4- very well prepared	1	9.1	0	0	1	5.6	4	22.2
Missing response	-	-	-	-	-	-	1	5.6

Note: EC- at education completion, NAC- at needs assessment completion

Another subset of data that the researcher wanted to reflect were perceptions of practice preparedness in the nurse practitioner compared to the physician assistant, as the education paths for these two professions are similar but not identical. This comparison is reflected in Table 3. Again, percentages for each response are included to allow comparison among two variable sub-sample sizes.

Table 3

Perceptions of practice preparedness, NPs & PAs

	Nurse Practitioner (*N*=20)				Physician Assistant (*N*=9)			
	EC		NAC		EC		NAC	
	n	%	*n*	%	*n*	%	*n*	%
1- very unprepared	2	10.0	1	5.0	0	0	0	0
2- somewhat prepared	6	30.0	4	20.0	4	44.4	2	22.2
3- generally well prepared	11	55.0	11	55.0	4	44.4	6	66.6
4- very well prepared	1	5.0	3	15.0	1	11.1	1	11.1
Missing response	-	-	1	5.0	-	-	-	-

Note: EC- at education completion, NAC- at needs assessment completion

An additional expansion on preparedness responses presents change in preparedness rating from completion of education/certification (response 1) to rating at needs assessment completion (response 2). This information is presented in Figure 4 as a change in Likert-scale value from response 1 to response 2 for each individual respondent, presented by time in practice including 12 months or less in advanced practice and those beyond 12 months in advanced practice. The bars represent percent of sample for each change in Likert-scale response, again to more adequately compare two varying sample sizes.
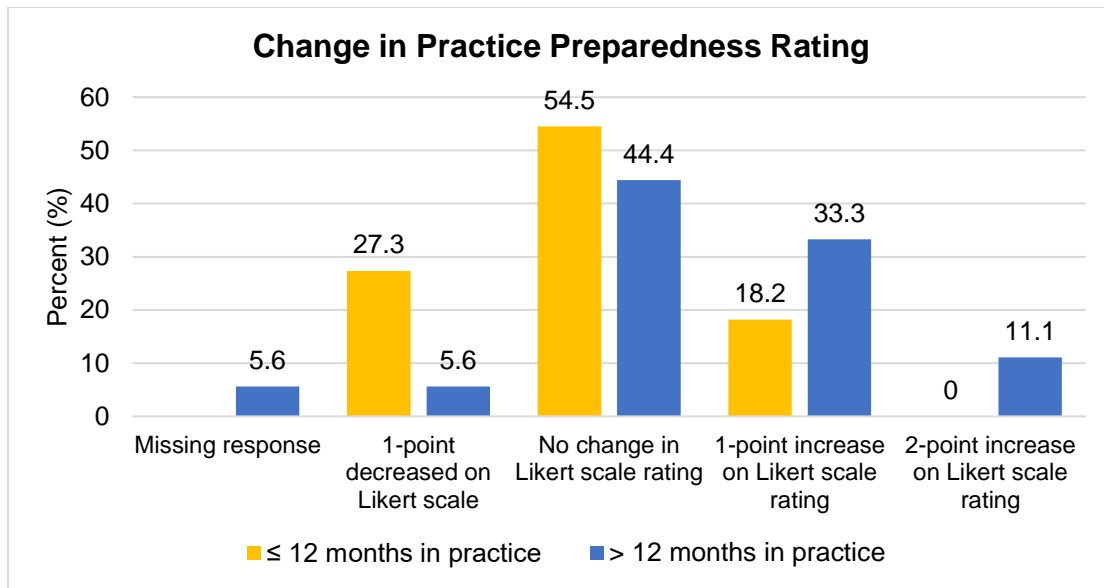
Figure 4. Change in practice preparedness rating from degree completion to needs assessment completion

Perceptions of organizational support for transition and familiarity with organizational resources rated on a 4-point Likert scale were collected as well. Responses displayed in Table 4 reflect the entire needs assessment group and stratification of responses by time in practice to those with 12 months or less in advanced practice and those beyond 12 months in advanced practice. Percentages for each Likert-scale option are included to more easily compare the groups of varying numbers.

Table 4

Perceptions of organizational support and familiarity with organizational resources

	Entire group (N=29)		≤ 12 months in advanced practice (N=11)		> 12 months in advanced practice (N=18)	
	n	%	*n*	%	*n*	%
Level of organizational support for transition						
1- very unsupportive	2	6.9	1	9.1	1	5.6
2- somewhat supportive	9	31.0	3	27.3	6	33.3
3- generally supportive	13	44.8	3	27.3	10	55.6
4- very supportive	5	17.2	4	36.4	1	5.6
Familiarity with organizational resources						
1- very unfamiliar	3	10.3	1	9.1	2	11.1
2- somewhat familiar	7	24.1	3	27.3	4	22.2
3- generally familiar	12	41.4	5	45.5	7	38.9
4- very familiar	6	20.7	2	18.2	4	22.2
Missing response	1	3.4	0	-	1	5.6

Desired seminar characteristics

Responses to questions seeking selection of one of several options for a hypothetical seminar offered to cover clinical practice topics is summarized in the Figure 5, with separate graphs for select preferences including: 5-A. preferred frequency of attendance, 5-B. format of seminars, 5-C. duration of seminars, and 5-D. time of day or week for seminars. Each preference area had one selection that stood out as a clear preferred option by the majority of respondents: frequency of seminar was once a month (51.7%), format for seminars was in person (51.7%), duration of seminars was one hour in length (55.2%), and time of day for seminars was during the workday, in the morning or afternoon (51.7%).
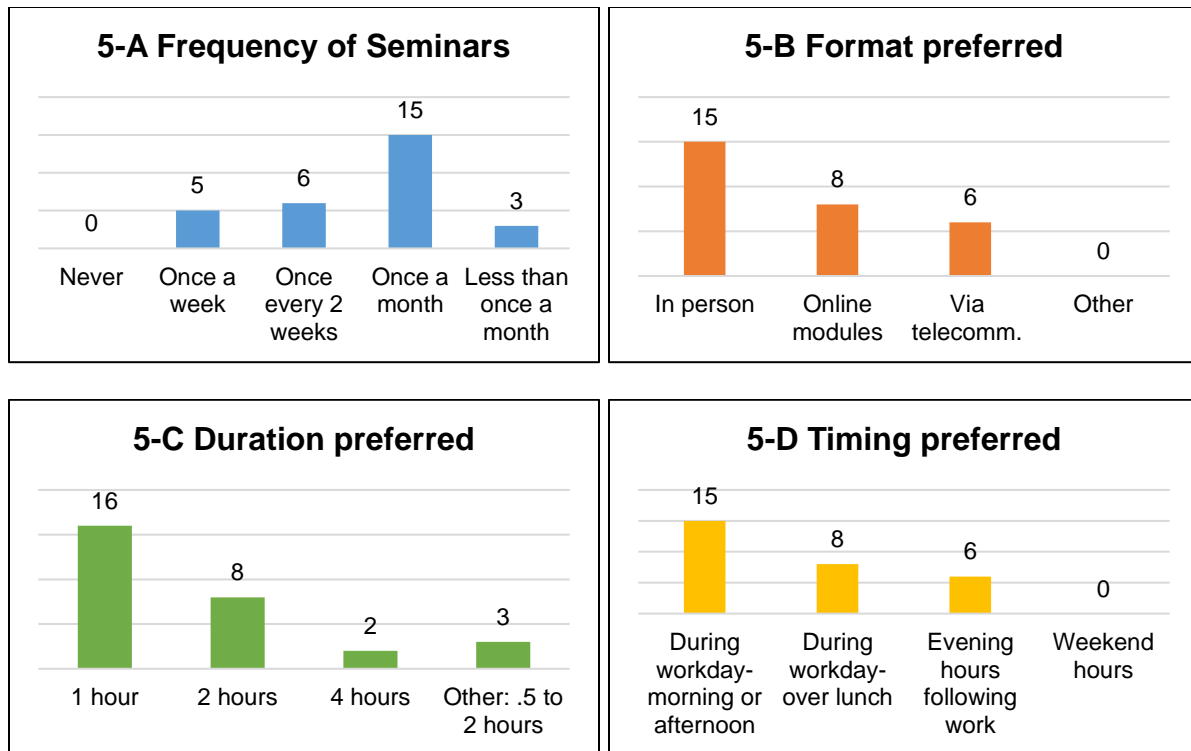
Figure 5. Seminar preferences identified
5-A: Frequency of seminars
5-B: Format preferred
5-C: Duration preferred
5-D: Timing preferred
Note: Numbers at the top of each bar represent *n* respondents who selected each option listed.

Methods of compensation that respondents found reasonable for seminar attendance included a meal provided at the seminar (*n*=17, 58.6%), continuing education hours (*n*=27, 93.1%), monetary (*n*=11, 37.9%), and other: paid time (*n*=1, 3.4%). Selections are all out of *n*=29; respondents could select multiple responses that they felt were reasonable as a compensation measure. Respondents then selected their most preferred method for compensation for seminar attendance, represented in Figure 6.

Preferred Seminar Compensation

- Meal during seminar
- Continuing education hours
- Monetary
- Other: Paid time (training)
- Other: Blocked schedule/paid time

3.40% 3.40% 13.80%
27.60%
51.70%
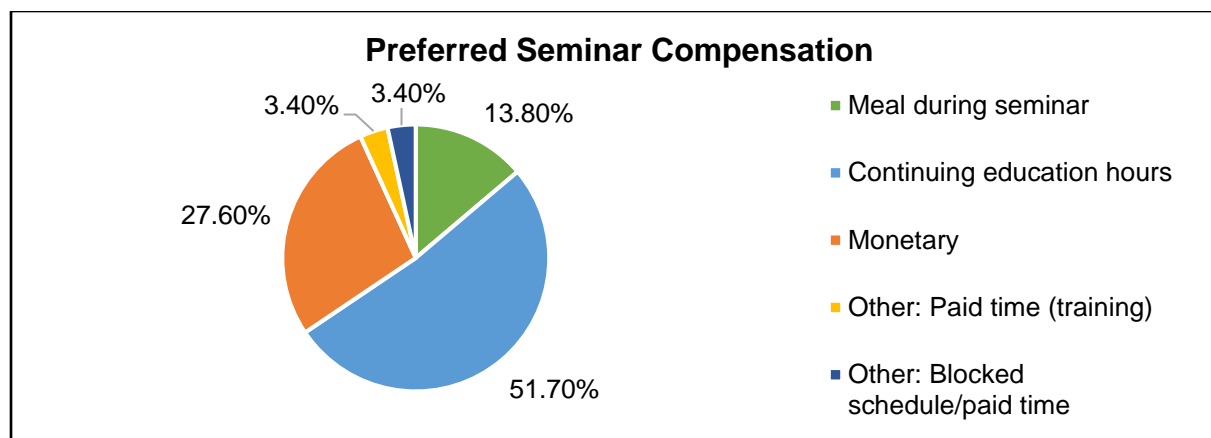
Figure 6. Preferred seminar compensation measure

Desired seminar content areas

Topics selected for coverage in ongoing education were listed as focus area one through five for practice content and skill one through five for clinical skills & procedures. Not all respondents filled in all five focus areas, so totals represent only those responses that were provided. Table 5 presents practice content responses offered in alphabetical order. Table 6 presents skills and procedure responses offered in alphabetical order. Some responses could be sub-categorized, such as a 'diabetes management' response under a broader 'chronic disease management' response or 'punch biopsy' fitting under 'dermatology procedures'. This grouping was employed in compiling the responses into table format for ease of interpretation and to most broadly select foci for seminar content development.

Table 5

Practice content responses

What practice content would you have liked more education on when beginning independent practice?	*Focus Area 1*	*Focus Area 2*	*Focus Area 3*	*Focus Area 4*	*Focus Area 5*	**Foci Total/ Grouped Total**
Advanced directives/HCD			1			**1**
Chronic disease management	3		1			**4/21**
Asthma		1	1			**2**
COPD			1		1	**2**
Diabetes management	1	1		2		**4**
Obesity/metabolic syndrome		1		1		**2**
Cardiology		1	1		1	**3/7**
Appropriate w/u				1		**1**
HTN/CHF/HLD				1	2	**3**
Coding & billing	6	5	2	1	2	**16**
Dermatology	4					**4**
Emergency/urgent care	1					**1**
Endo/GI			1	1		**2**
Eye exam		1				**1**
Insurance coverage- effects on treatment plan				1		**1**
Mental Health/pharmacology	4	5	3	3	1	**16**
Neurology		1				**1**
Orthopedics	3	3	1	1	2	**10/13**
MSK exam/back pain		1		1	1	**3**
Pain management/alternatives	1	1				**2**
Palliative care		1				**1**
Pharmacology			1			**1**
Procedures	1			2		**3**
Radiology/Image interpretation	1				2	**3**
Resp. infection management (outpt)				1		**1**
Standard visits- preoperative, wellness, pre-employment					1	**1**
Skin/wound care	1				1	**2**
Social svcs/psychosocial aspects of role			1	1		**2/4**
Community resource availability				2		**2**
Well child visits/Pediatric care			3	1		**4**
Women's health		1			2	**3**
Organizational specific topics						**- /23**
Documentation (EHR, flowsheets available for different questionnaires)	1	2	2		1	**6**
Hospital- acute care/direct admit/consult specialists			2			**2**
Hospital follow-up (complex pts, lack of history with patient)			1			**1**
Leadership support					1	**1**
Patient goals affecting reimbursement		1				**1**
Provider roles/expectations	1			1		**2**
Competence assessment				1		**1**
Referrals/specialties are available w/in system?		3	3			**6**
Work flow (daily, facility navigation, system protocols, paging, communication)		2		1		**3**

Table 6

Skills and procedures responses

What clinical skill & procedure areas would you have like more education on when beginning independent practice?	Skill Area 1	Skill Area 2	Skill Area 3	Skill Area 4	Skill Area 5	Skill Total/ Grouped Total
Canalith repositioning procedure (Epley)				1		**1**
Dermatologic procedures	7	3	2			**12/18**
Skin lesion removal/punch biopsy		2	2	1	1	**6**
HEENT			1			**1/4**
Eye, acute procedures			1			**1**
Eye, exam			1	1		**2**
ECG interpretation		1	3		1	**5/7**
Other: Echo, Holter					1	**1**
Management of DVT/PE				1		**1**
GYN procedures		1	2	2	1	**6/15**
Bartholin's cyst- word catheter			1			**1**
Endometrial biopsy	1					**1**
IUD insertion		2		2		**4**
Implanon insertion				1		**1**
Pessary insertion/removal					1	**1**
Vulvar biopsy		1				**1**
Incision and Drainage	1	1	1	1	1	**5**
Musculoskeletal exam/procedures	4	3	3	1		**11/30**
Management of acute fracture				1		**1**
Casting/splinting	2	1	3	1	2	**9**
Joint Injections	2	2	1		3	**8**
Trigger point injections	1					**1**
Suturing	2	1	2		1	**6**
Toenail removals					1	**1**
Radiologic interpretation		1		1		**2/23**
CT scan		1	1			**2**
MRI			1			**1**
Xray	6	6	2	3	1	**18**
Respiratory		1				**1**
PFT interpretation/peak flow	1			2	1	**4**

Initial practice experience comments

A final open-ended question seeking any additional comments regarding respondents initial practice experiences provided insightful information from 15 individuals. General themes reflect concerns discussed in the literature. Concern about unclear role expectations, the need to self-direct parts of orientation without identified resources, and the need to generally improve the orientation process was reflected in the following comments, "Orientation within the place of employment is key as this was lacking for me."

Another respondent offered:

"I did have some issues with the clinic manager and understanding the role and
expectations of my position. I started during a very busy time at the clinic and did not
even have a full orientation and was expected to figure out a lot of things on my own,
including how to ask for time off, hours of work expected, etc. That should have been
explained by the management, but I was forced to ask other clinicians about things that
they should not have to answer."

Still another respondent offered the following:

"I only work PRN so I have no organized orientation. I met with a computer trainer for
about 30 minutes and sat with the primary MD for 2 morning visits and was on my own.
There has been no follow up on my orientation process."

Offering support for organizational orientation:

"Giving a tour of the building, meeting other providers and staff, and learning where x-
ray/lab/med room/lounge/etc. are is important!"

Another common theme was a desire for a mentoring relationship with another clinician
to aid in the transition, reflected by a respondent offering, "It would have been very beneficial to
have a mentor to help me transition into the FNP role." Further supporting mentorship is another
respondent's reflection:

"Nothing can fully prepare you for seeing patients on your own. It would be beneficial to
have someone schedule a time frame to meet and discuss circumstances that did not
smoothly evolve in real time. A scheduled time for this is ideal versus someone popping
in randomly and asking how work is going, or if I have had any concerns without having

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sufficient time to think about previous issues/concerns. This is what has been occurring

at my work."

And still other thoughts in support of a mentoring relationship:

"Having more time to practice independently but still have others available to ask

questions to. Such as seeing patients and completing all charting and care, but having

someone in person to discuss patient and plan of care, plus having the support if EMR

problems arise."

Comments supporting use of a mentorship were offered, including:

"I have a mentor- but it's not a formal mentorship. I have been the main initiator in

regards to "checking in" with my progress."

A comment supporting a seminar format other than that selected by a majority of respondents

was, "If additional seminars offered – on line or telehealth to complete on your time schedule

would be awesome".

The first objective was met fully as supported by the information described above. A key

facilitator in achieving the first objective was organizational support for the practice

improvement project. This stemmed from a desire for improved orientation processes for APCs

within the organization. Specifically, an advanced practice registered nurse acted as project

sponsor from within the organization and was heavily influential in distribution of the needs

assessment and letters of support to clinic leadership and novice APCs. Other factors that

facilitated completion of the needs assessment included short survey duration, ease of electronic

completion, and opportunity for a gift card prize for completion. These all may have impacted

response rates in a positive way. Key barriers included a small initial sample for possible

distribution and possible lack of clinician time or perceived personal benefit from needs assessment completion.

Seminar Content Development

The second objective of the practice improvement project was to develop electronic seminar content based on recent research and needs assessment findings to cover gaps in practice education of novice advanced practice clinicians. Foci included in seminar content development were those with the greatest total selection by needs assessment respondents. Due to organizational delays, in-person seminar content was not yet developed. Instead, the foci were developed into a free, accessible electronic practice resource. Full seminar content links and sources of information can be seen in Appendix H.

Practice content areas selected were coding and billing, chronic disease management (asthma, COPD, diabetes mellitus and diabetic neuropathy, hypertension, heart failures, hyperlipidemia, metabolic syndrome and obesity), dermatology, mental health and mental health pharmacology (general resources, anxiety, depression, substance use disorder), orthopedics (general resources, osteoarthritis, exam basics), pediatrics (well child and regional early intervention resources), and general pharmacology resources. Skills and procedures content included diagnostics (cardiology, PFTs/spirometry, radiology) and multiple procedures (orthopedic, basic dermatology, women's health, wound management).

Reflecting on Tables 5 and 6 above, several content areas desired for additional coverage are specific to organizational workflow, resources, and administrative topics. Many of these have been included in previous onboarding processes of clinicians into the sponsoring organization. Enhanced development or more detailed coverage will be left under the purview of the organization who can approach it in a manner they see fit.

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Several key facilitators contributed to completing objective two in the form of an evidence-based electronic resource. Topics identified in the needs assessment presented several areas that clinicians undoubtedly desired for additional coverage, many of which were also supported in the literature review. A wide range of evidence-based resources were freely available online, supporting ease of development, with inclusion of hyperlinks to the electronic sources in the compiled content list. The format used supports androgogical principals by allowing self-directed learning of content as the need arises in practice. The electronic format also allows minimal time and effort on the part of the clinician in accessing information as needed during the clinical day. Finally, the resource can be easily shared with clinicians at the beginning of seminar participation and later referred to in applicable seminars.

A key barrier to fully achieving objective two was lack of actual use of seminar content by clinicians. This would have allowed for feedback on topics included, format of the resource, and recommendations for improvement. Lack of clinician use was related to delays in transition program development by the sponsoring healthcare organization. Feedback on usability and content included could have been gathered from other sources in the interim to further inform evaluation of this objective.

Providing Recommendations to Key Stakeholders

The third objective of the practice improvement project was to provide recommendations for seminar content to key stakeholders within the sponsoring healthcare organization. Findings from the literature review and results from the needs assessment were provided informally to the project sponsor, and recently named Director of NP and PA Transition to Practice, at several points during the project through email communication including document attachments of results data, graphs, and poster development. The sponsor utilized this information in gaining

further support for full implementation of a transition program for NPs and PAs in the organization.

Results and formal recommendations were presented at a poster session for primary care leadership at the RHS's DOCC meeting in Duluth, MN on March 14, 2017. Roughly 30 individuals were present for the poster session. Verbal feedback from attendees on the needs assessment findings provided support of the need to improve practice transition and ongoing education resources for new clinicians. Practice foci for ongoing seminars specifically reinforced by medical residents included coding and billing and chronic disease management. Experienced clinicians in primary care settings also supported topics identified as a need for expanded coverage during transition. Medical resident needs during transition were not a focus of the practice improvement project but can be provided as a recommendation for consideration in transition program expansion or collaboration. During the poster session, a panel of four judges evaluated quality improvement posters displayed by medical and pharmacy residents and a nurse practitioner doctoral candidate. The four judges were selected from within the organization including:

- A member of the RHS Foundation

- A Vice President for Strategy and Performance

- Director of the East Primary Regional Clinics

- Program Director for local Family Medicine Residency.

Feedback on practice improvement projects was provided in the form of a scoring sheet covering four areas: innovation/creativity (I/C), quality outcomes (QO), poster presentation (PP), and applicability/future direction (A/FD). Each area was scored from one to four, with four being the

highest possible score. Table 7 represents scores given to the researcher and any additional comments from each of the four judges.

Table 7

Poster session scores

	I/C	QO	PP	A/FD	Additional comments
Judge 1	4	1	4	4	Best content; this was a great idea
Judge 2	3	2	3	3	n/a
Judge 3	4	4	4	4	Great info on needs for APC's. Can see this being extended to other clinicians
Judge 4	2	2	3	4	Good study- interesting voice of the consumer. Data based on making positive transition with orientation into practice. Practice start-up and long term engagement of APs is key to the future of healthcare

Key facilitators in meeting objective three included support to identify individuals involved in education and training of new APCs within the RHS at the beginning of the project and a strong organizational desire to improve the transition for APCs. The DOCC meeting format also facilitated provision of recommendations to multiple primary care leaders gathered in one place and a setting supportive of student involvement in improving care delivery using evidence based interventions.

Key barriers to meeting objective three included that the primary site of organizational leadership responsible for system-wide changes was located over four hours from the researcher's residence and University. The researcher also had no prior affiliation with the health system. This lead to most communication with stakeholders occurring by email, extended periods between updates provided from the organization on project progression, and lack of familiarity with organizational structure and culture.

Seminar Evaluations

The fourth and final objective of the practice improvement project was to increase individual perceptions of preparedness for clinical practice and organizational support from the beginning of participation to the end of participation in practice seminars, and as compared to seminar non-participant recollections. Seminar evaluation forms completed by novice clinicians participating in practice seminars were not collected to date. Lack of data collection and results was related to unanticipated delays in organizational development of transition programming for new APCs. This delay was a major barrier in attempting to meet objective four.

The intent for evaluation of this objective was comparison of needs assessment responses to those of seminar participants regarding perceptions of practice preparedness and organizational support using the long evaluation form (Appendix G). Comparison of responses from each seminar participant at initiation to three months and six months into transition program participation was also an evaluation piece to assess for change as the novice clinicians progresses into independent practice. Significance of change could be analyzed using statistical analysis such as two-sample T test, chi-square homogeneity test, or Fisher's exact test; the choice of test based on total sample size, but the researchers chose to use descriptive statistics due to the statistical significance limitations posed by sample size.

Several key facilitators were included in the plan for evaluation of objective four. Questions were duplicated in both the needs assessment and seminar evaluation forms for easy comparison of perceptions related to practice preparedness, organizational support for transition, and familiarity with organizational resources. Also, the short evaluation and long evaluation form were uploaded into Qualtrics survey software for ease of distribution, data collection, and secure storage by the researcher.

CHAPTER SIX. DISCUSSION & RECOMMNEDATIONS FOR PRACTICE

Interpretation of Results

Needs assessment

The needs assessment was completed by APCs within their first two years of advanced practice in primary care sites throughout the organization. This represents the desired population of needs assessment respondent, aiming to elicit transition perception of novice APCs. Most respondents (86.2%) were in their first advanced practice role. Of the four respondents who were not in their first advanced practice role, all were still within their first 24 months of advanced practice. Initial practice sites and reasons for position change for these four respondents were not elicited.

Nurse practitioners represented 69 percent of respondents, while 31 percent were certified as physician assistants. This is reflective of the larger advanced practice population, with a greater number of NPs trained and certified in primary care (AANP, 2016) as compared to PAs (AAPA, n.d.). Nurse practitioners represented the three respondents who had obtained a doctoral degree; the remainder achieved a master's degree, either physician assistant or nurse practitioner. This is a small percentage of respondents prepared at a doctoral level, which is endorsed by the American Association of Colleges of Nursing (AACN) as the most appropriate degree for the advanced practice registered nurse (2004). This small number ($n = 3$) does not allow any inferences to be made from the data about impact of practice degree. It should be noted that most physician assistant programs are three years in length and include credit hours well beyond most other master's degree programs (AAPA, 2017) so this may not be an accurate reflection of NP to PA educational preparation beyond the degree awarded.

Fully 96.6 percent of needs assessment respondents reported previous work in healthcare for an average of 8.9 years prior to obtaining their advanced practice degree. Sixty-nine percent of those worked as registered nurses previously. Barnes (2015a) found a non-significant relationship between prior RN experience and NP role transition. No other formal studies reflecting the impact of previous healthcare experience on transition to advanced practice were identified.

Twelve needs assessment respondents reported participation in a defined orientation period, all reporting this experience as helpful for increasing feelings of preparation and competence for independent practice. This is echoed for the NP role by Barnes (2015a), who found a positive correlation between formal orientation and NP role transition. The desire for a more standardized transition plan with improved orientation to the practice site was offered in responses from several needs assessment participants, as presented in the results section.

Three needs assessment respondents reported participation in a mentorship during practice transition, all reporting this experience as helpful for increasing feelings of preparation and competence for independent practice. This mirrors the impact of mentorship described in the literature, purported to ease the stress and anxiety of the transition to practice and increase NP self-confidence (Hill & Sawatzky, 2011; MacLellan et al., 2015). Desire for a mentoring relationship came up in several of the final thoughts offered regarding transition experience by need assessment respondents. A mentoring relationship also supports feelings of connectedness for NPs practicing in rural settings (Conger & Plager, 2008, p. 29). Mentoring is part of the planned transition programming under development by the sponsoring RHS, though a full description is beyond the scope of this paper. However, the literature review offers key benefits of a mentorship program. Hill & Sawatsky (2011) offered, "Time spent with a mentor facilitates

socialization into the NP role, promotes self-efficacy, and enables novice NPs to meet the demands of the organization and health care system" (p. 161). It is important to consider characteristics needed for a successful mentoring relationship include training and organizational support for the mentor as well (Harrington, 2011; Hill & Sawatsky, 2011).

Community size of practice setting was variable with the largest set of respondents practicing in communities of 5,001 to 15,000 residents (*n=13*). The variation reflects the clinic locations served by the RHS ranging from rural to urban locations. The greatest impact of the community size reflected in needs assessment responses was availability of other clinicians for mentoring and consult, with smaller community size associated with fewer available clinicians, a logical conclusion. Conger & Plager (2008) offer that in rural settings, lack of other healthcare providers to offer support increased feelings of disconnectedness, in turn, leading to clinicians leaving these rural sites. No respondents offered a complete lack of clinicians available for mentoring or support in their practice site. Several (*n=4*) reported as few as one to two clinicians available for support. This is an important consideration within an organization that provides predominantly rural healthcare. It should be mentioned that fewer clinicians in a practice site may allow for closer relationships, especially that of mentor and mentee, to develop.

Another consideration regarding clinician availability in the practice setting is use of peer socialization and support during practice seminars. Building a relationship among peers could be supported during in-person sessions to enhance experience-sharing, comradery, and self-reflection. The peer relationship could provide additional resources, especially for those in rural settings with limited local clinician support. Peer support was offered in several of the articles discussed in the literature review, though no needs assessment respondents specifically reflected on this concept (Bahouth & Esposito-Herr, 2009; Conger & Plager, 2008; Goudreau et al., 2011).

Perceptions of practice preparedness

Seventy-five percent of respondents reported feeling generally well or very well prepared for practice at the time of needs assessment completion, up from 58.6 percent selecting one of these responses when asked to rate perception of preparedness at time of education completion. The levels of respondents selecting very unprepared or somewhat prepared both decreased from education completion (6.9% & 34.5%) to needs assessment completion (3.4% & 20.7%), reflecting that preparedness gradually increases with time in practice.

The literature review offers the most difficult time for new clinicians is the first six months to one year of practice (Flinter, 2005; Goudreau et al., 2011; Steiner, et al., 2008; Szanton, et al., 2010). This is likely reflected in the needs assessment responses who were beyond their first 12 months in practice. In Table 2, one can see that respondents were asked to reflect on their preparedness at degree completion and then again at the time of survey completion. In the group with more than 12 months in advanced practice, there are more obvious improvements in ratings of practice preparedness from education completion to degree completion, whereas the group with 12 months or less time in advance practice had very little change in response ratings in the overall sub-sample. Respondents in their first 12 months ($n=$ 11) had less variability in ratings of current perceptions of practice preparedness with $n=3$ selecting *2- somewhat prepared* and $n=8$ selecting *3- generally well prepared.* No respondents in this group selected *1-very unprepared* or *4- very well prepared.* However, their responses are not overwhelmingly more negative then respondents beyond the first year of practice.

Reflecting on figure 4, the group of respondents in their first 12 months of practice had a greater percentage select a practice preparedness rating lower at needs assessment completion than at degree completion ($n=3$, 27.3%) when compared to those with greater than 12 months in

advanced practice (*n*= 1, 5.6%). This change could reflect the stress of initial entry into practice described in the literature. The difference may also reflect the realization, which occurs with exposure to truly independent practice, that one is less prepared for practice then initially perceived at degree completion, highlighting the need for support during this transition period. Conversely, the group with greater than 12 months in advance practice had a larger percentage of respondents have an increase in rating from degree completion to needs assessment completion (33.3% with 1-point increase & 11.1% with 2-point increase) compared to those in their first 12 months of advanced practice (18.2% with 1-point increase & none with 2-point increase). This again supports the literature describing the first year as the most stressful time of transition. Beyond that year, clinicians begin to feel more prepared for practice. Comparing needs assessment perceptions to seminar participant perceptions may help to more clearly describe the relationship of time in practice to perceptions of preparedness and the impact of transition programming on perceptions of preparedness.

Comparison of nurse practitioners to physician assistants in terms of perceptions of practice preparedness showed slight differences when reflecting on Table 3. The nurse practitioner group had more variability of responses, though this would be expected as it represents a larger number of respondents. Both groups reflect improvement in perceptions of preparedness from education completion to needs assessment completion, with a majority selecting either generally well or very well prepared by needs assessment completion. Overall, the two groups appeared more similar than different in regard to perceptions of practice preparedness.

Organizational support and resource familiarity

Organizational support among needs assessment respondents varied based on duration in advanced practice in several small ways. In the overall sample, 44.8 percent of respondents felt the organization was generally supportive and 17.2 felt it was very supportive. Those with 12 months or less in advance practice had a greater number select very supportive, 36.4 percent, compared to those with greater than 12 months in advanced practice, 5.6 percent. This more experienced group most often selected generally supportive, 55.6 percent of the time, which was selected by 27.3 percent in the less experienced group. This may not represent a meaningful difference but could point to a perception of increased support during the initial year related to a more recent completion of onboarding tasks and more frequent contact with leadership during the initial employment period.

It should be noted that a fair number of respondents in both groups selected the bottom two Likert-scale ratings, 6.9 percent feeling very unsupported and 31 percent feeling only somewhat supported during transition to practice. These perceptions offer that organizational support for transition may be an area to focus efforts for improvement in novice clinician transition. This is supported in the literature review, which identified organizational support or a supportive work environment as important piece of the transition to practice (Harrington, 2011). Opportunities for improving organizational support may include structured orientation program such as that being developed by the sponsoring RHS.

An important piece of the orientation to a new practice setting is familiarization with organizational resources. Most respondents felt either generally familiar (41.4%) or very familiar (20.7%) with how to utilize organizational resources. However, a fair number of respondents selected being very unfamiliar (10.3%) or only somewhat familiar (24.1%) with organizational

resources. These perceptions again point to an area of transition that could be improved upon. Many areas that could be classified as organizational resources were identified as foci important for ongoing education by needs assessment respondents. There was no meaningful difference in ratings of familiarity between those with 12 months or less compared to those beyond 12 months in advanced practice.

The list of individuals to whom the needs assessment was sent were new to advanced practice within the RHS. However, it was not specified, through human resources or a needs assessment question, if individuals were new to the organization. It would seem intuitive that individuals who had worked in the organization in a different role (registered nurse for example) would be more familiar with resources then those new to the system entirely.

Seminar content

Foci selected by needs assessment respondents for ongoing coverage in practice seminars closely mirrored those identified by Hart and Macnee (2007). Areas identified in both as needing ongoing preparation included coding and billing, casting, electrocardiogram interpretation, simple office procedures, splinting, suturing, x-ray interpretation, and management of mental health diseases. Topics identified were also included in didactic portions of pilot studies described by Flinter (2012) and Rosenzweig et al. (2012). The needs assessment foci are included in curriculum of both NP and PA programs as they are included in certification exams for the AANP-CB (2017a), American Nurses Credentialing Center (ANCC) (2016) and the NCCPA (2017a). However, content areas require repeated review to fully grasp and implement application in practice. Reiteration of content also helps to apply principles of andragogy including prior experience, readiness to learn, and orientation to learning as the knowledge gap

and need to fill this gap are more immediate to the novice clinician facing deficiencies in their practice competency.

Areas identified specific to organizational processes were abundant including daily workflows, system protocols, interdisciplinary/collaborative communication and referral processes, and facility navigation among others. This represents a need to improve onboarding processes currently used to cover this practice content at the sponsoring RHS. Improvement could be supported through mentoring relationships, practice seminars covering specific organizational topics, or both.

Initial practice experience comments

Themes identified by responses to the open-ended questions seeking final comments on the transition to practice provide several points of consideration in future transition program planning. The comments quoted in the results section suggest a desire for both improvement in the organizational orientation and a desire for mentoring relationships. Further expansion is needed regarding the mentoring aspect, as this was not a primary focus of this practice improvement project. However, comments offered seem to correlate with concepts discussed in the literature, including the use of mentors to work through clinical problems in real-time and as a more consistent source of support and feedback. The comments provide a glimpse into transition experiences of novice clinicians within the sponsoring organization.

Limitations

Throughout the course of the practice improvement project several areas of limitation were identified, providing an opportunity for learning and reflection by the researcher. The first limitation was in the development of the needs assessment tool, for which validity and reliability were not established. The tool was developed to meet specific needs of the project and the

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sponsoring organization. After data collection and initiation of data analysis several areas became apparent where modification of the needs assessment tool would have provided more clear and insightful data. A question should have been included to explicitly identify those meeting inclusion criteria regarding primary care practice setting, such as 1) Are you currently working in a primary care setting (family medicine, internal medicine, OB/GYN, pediatrics, urgent care)? This information was not easily identifiable from the list of contacts compiled by administrative staff from the RHS. Another question asking if the respondent had a desire to participate in "transition programming", with a brief explanation of what the programming would hypothetically entail, could have added support to clinician desire for program development. This concept was partially alluded to in the fact that no needs assessment respondents selected the option "never" for frequency of hypothetical seminars in the needs assessment section seeking seminar characteristics. Therefore, addition of such a question would not necessarily change the outcomes of this project. Finally, for the two questions seeking foci for practice content and skills and procedures, it was requested that respondents list the five foci considered most important for additional coverage as a new provider. Inclusion of a phrase asking respondents to rank foci from most important to least important would have allowed more concrete prioritization of content for practice resource and seminar development. This may have been how respondents interpreted the question, but without this additional phrase, such a conclusion cannot be drawn.

A second limitation of the project to be considered was the sample size of 29 respondents. Response rates for the needs assessment survey were higher than expected for an internet survey, supported by internal dissemination, ease of completion, and reward opportunity. This limited the strength of any conclusions drawn from the data, though from an organizational

standpoint, strong recommendations can still be offered based on findings. The sample is representative of the desired population for data collection and met the purpose of identifying perceptions of transition in novice APCs within the sponsoring RHS. However, this represents a very specific population. Needs assessment findings reflected those identified in the literature review, but cannot be generalized to the needs of NPs and PAs in other organizations, practice settings, or other regions of the country. Generalizability of data may have been increased by distributing the needs assessment through the Board of Nursing in North Dakota and Minnesota. This would have limited the applicability to the sponsoring organization in applying data to program development to meet the specific needs of their APCs.

A third area of limitation was the selection of content for practice seminar development, completed exclusively by the researcher (Appendix H). The aim was to choose resources from national organizations and recent evidence-based sources. However, despite attempting to choose a variety of educational formats (case study, quick reference tables, complete practice guidelines, videos) the format of content selected likely represents personal bias of learning preferences of the researcher. The selections do not necessarily represent formats or content desired to meet the needs of individuals who may take part in the seminar. It is also far from an exhaustive collection of information on the topics identified, and more of starting point for further expansion by the learner based on individual preferences.

The last and most significant limitation was failure to implement the transition program to date due to organizational processes that lead to a protracted planning and development course. This impacted several components of the project to the point they were not completed. These include lack of seminar content evaluation by end users and lack of seminar evaluation to assess impact on perceptions of practice preparedness, organizational support for transition, and

familiarity with organizational resources. Initial plans for transition program development began in 2014, with the researcher approaching the organization in 2015 to collaborate on portions of the process. A director position for a new APC transition program was finalized and approved in May of 2016. As February 2017, an individual was selected and announced for this position, but program development was still underway with the hope that the pilot program will begin in the fall of 2017 with APCs in primary care. Working with a large healthcare organization who had intentions of a system-wide change may have been an unrealistic prospect for project completion in the researcher' pre-defined timeline.

Recommendations

The organization has chosen to develop a program with three major emphases including individualized orientation based on self-assessment of learning needs, formal mentorship, and didactic sessions during the first year of practice. Areas identified in the needs assessment for ongoing coverage and the seminar content developed based on these areas were provided to the director of NP and PA transition programming. The director plans to let this information guide initial didactic sessions that will be offered to novice clinicians upon transition program initiation. If coverage of practice content needs to be limited for any reason, topics most frequently identified as important for additional education by needs assessment respondents included chronic disease management, coding and billing, orthopedics exams and procedures, dermatology procedures, and diagnostics interpretations (specifically, x-ray). Organizational content desired for expanded coverage should include daily workflows, system protocols and processes (such as admitting patients, patient outcomes impacting reimbursement), interdisciplinary/collaborative communication and referral processes, role expectations, and facility navigation. Key seminar characteristic recommendations based on needs assessment

findings include a seminar occurring: 1) once a month, 2) in an in-person format, 3) for one hour, 4) during the workday, either in the morning or afternoon. If these characteristics need to be adjusted to meet organizational constraints, avoidance of any weekend hours for seminar is a secondary recommendation. Recommended compensation based on needs assessment results is to provide participants with continuing education hours with secondary consideration monetary compensation.

Further recommendations include use of the already-developed brief evaluation and long evaluation forms at set points during the pilot transition program. The brief form was designed to identify areas for improvement of seminars, gain input from participants on content covered, and evaluate if seminar objectives have been met. This would help meet level one and part of level two evaluation based on the Kirkpatrick's Four Levels. The long evaluation was designed to collect qualitative input from participants on the impact of seminars on their practice. It could also provide data for comparison to seminar non-participants which may help elucidate the impact of transition programming on areas including practice preparedness, organizational support, and familiarity with organizational resources. Statistical analysis to complete this comparison may utilize a chi square homogeneity test, assuming sample size is at least forty for the seminar participant group or a two-sample T-test, assuming the sample is normal. This may not be the case, as integers were utilized and the sample sizes are relatively small. One other consideration for statistical analysis that would not be as limited by the small sample size is Fisher's exact test, though this is not as readily describable to a general audience. Collection of long evaluation data could be conducted by the program director, support staff, or by recruitment of another student to undertake completion of the intended project. Support for behavior change, level three of Kirkpatrick's model, can be evaluated through assessing use of evidence-base

practices, quality metrics, productivity measures, and resource utilization by seminar participants. Level three, or learning evaluation, can also be completed by re-evaluating participant attainment of seminar objectives at a distant point following coverage of specific content. Level four evaluation, or results evaluation, can be completed by considering several areas: cost of programming, cost savings that may be realized due to improvements in care and efficiency of clinicians, and turnover and retention rates. Transition program participant rates should be compared to rates prior to program implementation to assess impact. Kirkpatrick's Four Level Evaluation plan fits well with organizational interests of programming which were stressed to elicit support for completion of this important evaluation piece.

Thorough evaluation of the transition program impact will help to guide the organization in whether to continue to program after the initial pilot group goes through. It could support expansion to other clinicians, including new physicians entering primary care, as voiced by participants in the DOCC meeting. It will also help to identify areas of greatest impact and what may be most applicable for expansion into areas beyond primary care. A study by Rosenzweig et al. (2012) found that nurse practitioners entering practice in an oncology specialty had knowledge gaps beyond oncology care, including primary care topics and organizational processes. This highlights that there is opportunity to improve the transition to practice for many APCs.

Reassessment of novice APC transition needs within the sponsoring organization could allow for a larger sample size that would provide the opportunity to gain statistical significance in data analysis. Data supporting the timeframe that would be most impacted by organizational investment in the form of transition programming will be necessary for program longevity and continued organizational funding.

A final recommendation for inclusion in seminars is to provide an environment of peer support and allow discussion among the newly hired APCs to acknowledge common difficulties and successes during the transition into independent practice. This was discussed in the literature review, and is well supported in registered nurse residency programs, but did not materialize in any of the needs assessment data (Bahouth & Esposito-Herr, 2009; Conger & Plager, 2008; Goudreau et al., 2011; Kowalski & Cross, 2010). Group discussion to provide time for reflection and sharing of experiences is the approach most often taken. Open discussion could be encouraged at each session by a group facilitator who is guiding the seminar for the day. This approach is meant enhance an environment of collegiality and socialization to the APC role and peers within the organization.

Implications for Practice

The practice improvement project helped to highlight needs and knowledge gaps of advanced practice clinicians in primary care in a RHS that have already been explicated in the literature. Specific practice topics and organizational content that local APCs desire were highlighted and can be used to inform transition programming that is currently under development. Unfortunately, delays in implementation did not allow evaluation of transition programming during the project timeline. This evaluation would allow for comparison of transition program pilot participants with non-participants (needs assessment respondents) to help further elucidate the impact of formal transition programs for novice clinicians.

Dissemination of needs assessment results and seminar content developed based on those results was completed with the newly named Director of NP and PA Transition to Practice for consideration as she works with others in the sponsoring organization to finalize development of

the program, with final recommendations provided. Results from the needs assessment were developed into several posters presented at events including:

- North Dakota Nurse Practitioner Association 8th Annual Pharmacology Conference in September of 2016

- North Dakota State University College of Health Professions Poster Session, in April of 2016 and March of 2017

- RHS and local Family Medicine Residency Program Quality Improvement Poster Presentation in March of 2017

Last, the researcher plans to identify if evaluation of the pilot transition program can be completed following program completion so that impact of the program can be illuminated and further developed for possible future publication.

Implications for Future Research

Current research supports the positive influence of formal orientation programs on nurse practitioner transition to practice through formats including mentorship, fellowship, and residency. It does not, however, point to one format over another to help guide organizations in selecting the most impactful and cost-effective transition program format. Also, research has yet to describe perceptions of transition for novice clinicians, comparing those taking part in transition programs to those who did not participate in such programs within the same organization. Evaluation of the developing program with this RHS or similar, as intended by this researcher, would provide this information and provide a larger sample then current literature, which has primarily described small pilot studies of several clinicians. Completing this comparison may further provide support for transition to practice programming and highlight a possible format to be implemented.

While the needs assessment met the objective of identifying perceptions of preparedness, organizational support, and content for ongoing novice clinician education, it was specific to the participating RHS. The data may not be representative of other organization's clinician needs, or in other regions of the country. Further assessments could be designed to identify needs for transition or level of preparedness focusing on other groups including: rural clinicians, number of clinical hours, previous healthcare experience, or type of educational format attended for advanced practice degree. This list is in no way exhaustive of the groups that could be focused upon for further needs assessment completion. An example of expansion, even with slight modification of the needs assessment utilized could more fully elicit effects of educational program format. The completed needs assessment asked respondents to provide academic institution attended for advanced practice degree. However, the question was worded in a way that did not provide clear data for analysis as the specific type of program format attended was not elicited from respondents. Program format attended for degree completion was inferred based on a search of the program online by the researcher. Presumed formats included online ($n=8$), blended but primarily online ($n=9$), and classroom-based ($n=12$). Further study may help support or refute a finding from a survey conducted in 2004 by Hart and Macnee (2007), which offered:

> Despite the demand for and surge in distance and Internet educational offerings, NPs who had completed these types of programs were more likely to report feeling less prepared for practice than NPs who had been educated in a more traditional format. (p. 40)

Collecting specific program format may help expand on the variables that impact the transition to advanced practice and inform students selecting programs and educators who are designing the programs offered.

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A broader assessment would not support comparison of clinicians taking part in a specific transition program to those who did not. It would, however, add to the body of literature describing clinician needs and emotions during transition to advanced practice. As numbers of advanced practice clinicians continue to grow, this is a critical area to fully expound upon.

Application to Doctor of Nursing Practice Roles

The DNP degree is one of growing interest and pursuit among the nursing profession for its practical focus in bringing research to practice. The major point of distinction from other advanced degrees is a heightened concentration on professional leadership, evidence-based practice, and quality improvement in DNP program curriculum (AACN, 2017). It is the professional responsibility of the DNP graduate to utilize their enhanced leadership skills in shaping practice, patient outcomes, and systems delivery (Newland, 2015).

This practice improvement project incorporated DNP roles of leadership, advanced clinical practice, information technology, and interprofessional collaboration. The researcher worked in the role of leader to identify a practice issue and collaborate with a regional healthcare organization to use evidence-based interventions in improving the practice issue. This was done on a large scale requiring collaboration with multiple stakeholders including advanced practice clinicians, organizational educators, and leaders within the organization and data collection from both NPs and PAs new to practice. Theory guided the project design, with consideration of principles of The Andragogical Model and Kirkpatrick's Four Level Evaluation. Collecting information to shape the intervention required skills in using varied information technology resources. The researcher also acknowledged technologies growing role in clinical practice in choosing an electronic format for practice resource development. An understanding of the advanced practice role to select topic content useful to the NP role was a necessity in seminar

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content development. The overarching goal of the project was to provide intervention

recommendations based on literature and needs assessment findings to a regional healthcare

organization to improve the transition to practice for novice advanced practice clinicians,

including new DNP-prepared nurse practitioners.

Conclusion

As the number of NPs and PAs increase to meet demand for primary care providers it is

imperative that key components to successful role transition for these two clinicians are

understood. A literature review supports that several forms of structured transition programming

help to decrease stress and anxiety associated with the transition to independent practice in

novice NPs, including residency and mentorship. The practice improvement project included

completion of a needs assessment to help identify perception of new APCs within a regional

healthcare organization, with findings reflecting literature and highlighting a desire for increased

organizational support during the transition period through ongoing education and mentoring.

Foci selected for ongoing education reflected areas identified in the literature, supporting

common knowledge gaps of novice clinicians that can inform transition programming currently

under development for NPs and PAs. They also highlighted topics specific to organizational

processes and workflow that suggest areas for improvement in organizational onboarding in the

sponsoring RHS. Delays in program development and implementation limited evaluation of the

impact of transition programming of novice APCs, which would help to expound upon findings

currently available in the literature.

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APPENDIX A. LETTER TO REGIONAL HEALTH SYSTEM LEADERSHIP

NDSU School of Nursing
Dept 2670
PO Box 6050
Fargo, ND 58108-6050
701.231.7395

Essentia Health Clinic Leadership:

My name is Kari Hektner. I am currently a Doctor of Nursing Practice student at North Dakota State University. As part of my degree requirements, I am partnering with Christie Erickson, DNP, APRN at Essentia Health to collect a needs assessment to better understand the educational and support needs of new APCs within the Essentia Health organization. This is part of a larger clinical improvement project titled "Easing the transition to practice: Needs assessment and seminar development for novice advanced practice clinicians in primary care". The findings of the needs assessment will be used to identify content for development of practice seminars for current and future new primary care APCs within the organization.

I am seeking your assistance in distributing an electronic format needs assessment tool to nurse practitioners and physician assistants within their first two years of practice in primary care. Information gathered will include basic demographics, educational and transition experiences, and recommendations for ongoing educational seminars for APCs. Questionnaire responses will be kept anonymous and confidential. IRB approval from North Dakota State University has been obtained. Approval for the project was also received from Kate Dean in Medical Education at Essentia Health.

Thank you in advance for your assistance in this important project. Input from the APCs is valuable in identifying needs and common experiences during an exciting and stressful time.

If you have any questions or comments, please feel free to contact me at kari.hektner@ndsu.edu or call 701.793.4556. You may also contact my advisor, Dr. Mykell Barnacle, by email at mykell.barnacle@ndsu.edu or by phone at 701.231.7730. If you have questions about the rights of human participants in research, or to report a problem, contact the North Dakota State University IRB Office by telephone at 701.231.8995 or toll-free at 1.855.800.6717, by e-mail at NDSU.IRB@ndsu.edu, or by mail at North Dakota State University, Research 1, 1735 NDSU Research Park Drive, NDSU Dept. #4000, PO Box 6050, Fargo, ND 58108-6050

Thank you again for your assistance in this practice improvement project.

Sincerely,
Kari Hektner, RN, BSN
Doctoral Student in the Department of Nursing

Transition to practice- Needs Assessment

EE   Erickson, Christie E. <christiee.erickson@essentiahealth.org>

👍   ↩ Reply | ⌄

Wed 3/23/2016, 3:56 PM
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NP transition

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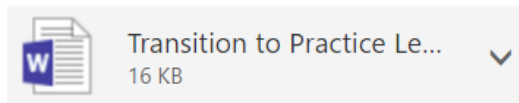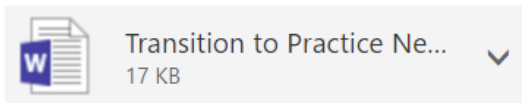
⌄ Show all 2 attachments (33 KB)   Download all   Save all to OneDrive - North Dakota State University

In an effort to better understand the needs of newly hired APRNs and PAs, Essentia is partnering with UND and DNP student Kari Hektner to perform a transition to practice needs assessment. APCs in many of your areas are being asked to provide input as we identify content for development of practice seminars for future primary care APCs within the organization. The attachment is a letter from Kari outlining the project. This project has been approved by Kate Dean, Director Education at Essentia. There is no need to distribute the needs assessment as I have already sent it to the appropriate individuals, but wanted you to be aware of the project. Please feel free to contact me if you have any questions.

_____

Christie Erickson DNP APRN CNP
Nurse Practitioner, APN/PA Clinical Education Coordinator
Essentia Health
Hermantown Clinic
4855 West Arrowhead Road, Hermantown, MN 55811
218-786-3540 I christiee.erickson@essentiahealth.org

APPENDIX C. LETTER TO REGIONAL HEALTH SYSTEM APCS

NDSU School of Nursing
Dept 2670
PO Box 6050
Fargo, ND 58108-6050
701.231.7395

Essentia Health Advanced Practice Clinician:

My name is Kari Hektner. I am currently a Doctor of Nursing Practice student at North Dakota State University. As part of my degree requirements, I am partnering with Christie Erickson, DNP, APRN at Essentia Health to collect a needs assessment to better understand the educational and support needs of new APCs within the Essentia Health organization. This is part of a larger clinical improvement project titled "Easing the transition to practice: Needs assessment and seminar development for novice advanced practice clinicians in primary care". The findings of the needs assessment will be used identify content for development of practice seminars for current and future new primary care APCs within the organization.

You are being invited to take part in this survey as you are an APC within the first two years of independent practice at Essentia Health.

Information gathered will include basic demographics, educational and transition experiences, and recommendations for ongoing educational seminars for APCs. Questionnaire responses will be kept anonymous and confidential. Your participation is entirely voluntary and your completion of the online survey with submission of responses implies your consent to participate in this project. You may change your mind or quit participating at any time. No physical or legal risks exist in completing the survey. A small risk of emotional distress may exist do to survey content, including reflection on previous feelings of practice preparedness. IRB approval from North Dakota State University has been obtained. Approval for the project was also received from Kate Dean in Medical Education at Essentia Health.

The link below will take you to the survey questions, which will take roughly 10-15 minutes to complete. The survey will be available from March 23, 2016 through April 2, 2016.

https://ndstate.co1.qualtrics.com/SE/?SID=SV_0IdSpYO3L9qmV5X

Upon completion of the needs assessment, you will be taken to another survey link. This will provide you the opportunity to send in contact information separate from you survey responses, to be entered in drawing for one of two $50 dollar Visa giftcards. This is completely optional.

Thank you in advance for your participation in this important project. Input on your experiences during this transition into practice is valuable in identifying needs and common experiences during this exciting and stressful time. Again, completion of the survey will constitute your consent to participate in the survey.

If you have any questions or comments, please feel free to contact me at kari.hektner@ndsu.edu or call 701.793.4556. You may also contact my advisor, Dr. Mykell Barnacle, by email at mykell.barnacle@ndsu.edu or by phone at 701.231.7730. You have rights as a research participant. If you have questions about the rights of human participants in research, or to report a problem, contact the North Dakota State University IRB Office by telephone at 701.231.8995 or toll-free at 1.855.800.6717, by e-mail at NDSU.IRB@ndsu.edu, or by mail at North Dakota State University, Research 1, 1735 NDSU Research Park Drive, NDSU Dept. #4000, PO Box 6050, Fargo, ND 58108-6050

Thank you again for your participation in this practice improvement project.

Sincerely,
Kari Hektner, RN, BSN
Doctoral Student in the Department of Nursing

Transition to practice- Needs Assessment

EE   Erickson, Christie E. <christiee.erickson@essentiahealth.org>

👍 ↩ Reply | ⌄

Wed 3/23/2016, 3:25 PM

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NP transition

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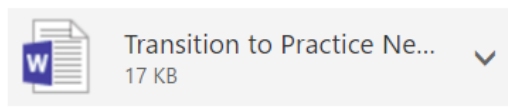
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🛍 | Action Items   🔒

Please take a moment to look at the attached document. As a relatively new APRN or PA hire to Essentia, we would like to learn more about your experience as you transitioned to practice. Essentia is partnering with UND and DNP student Kari Hektner to better understand the educational and support needs of new APCs. The information you provide will help guide development of practice seminars for current and future new APRNs and PAs within the organization. Your time and input is greatly appreciated!

_____
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APPENDIX E. NEEDS ASSESSMENT TOOL

Q1 The following needs assessment is being collected to better understand the educational and support needs of new APCs within the Essentia Health organization. The findings of the needs assessment will be used identify content for development of practice seminars for current and future new primary care APCs within the organization.

Q2 What is your age?

Q3 Are you currently in your first advanced practice position?
○ Yes (1)
○ No (2)

Q4 How long have you practiced as an advanced practice clinician (APC- NP or PA)?   (Specify months or years after number)

Q5 At what college or university did you complete schooling for your NP or PA degree?

Q6 What is your practice degree?
○ Diploma (1)
○ Bachelor's degree (2)
○ Master's degree (3)
○ Doctoral degree (DNP, PhD) (4)

Q7 What is your certification and certifying body? Ex) AANP, FNP or NCCPA, PA-C

Q8 Did you work in a healthcare role prior to obtaining your advanced practice degree?
○ Yes (1)
○ No (2)

Display This Question:
    If Did you work in a healthcare role prior to obtaining your advanced practice degree? Yes Is Selected

Q9 If yes, in what role? (Select all that apply)
❑ Registered Nurse (1)
❑ EMT/Paramedic (2)
❑ Respiratory Therapy (3)
❑ Other Allied Health (4)
❑ Other: (5) _____

Display This Question:
    If Did you work in a healthcare role prior to obtaining your advanced practice degree? Yes Is Selected

Q10 If yes, for how long? (Specify months or years)

Q11 On a scale of 1 to 4, how prepared for practice did you feel upon completion of your education/certification?
❍ 1- Very unprepared (1)
❍ 2- Somewhat prepared (2)
❍ 3- Generally well prepared (3)
❍ 4- Very well prepared (4)

Q12 Did you take part in a defined orientation period, mentorship, or residency program after completing school?   This may have been prior to or within the first year of starting your first job. (Select all that apply)
❑ Defined orientation period (1)
❑ Mentorship (2)
❑ Residency program (3)
❑ Fellowship program (4)
❑ Other (5) _____
❑ Not applicable (6)

Q13 If yes to any of the above responses, was this experience helpful in increasing your feelings of preparation and competence for independent practice?
❍ Yes (1)
❍ No (2)
❍ Not applicable (3)

Q14 What is the community size of your current practice setting?
❍ < 5,000 (1)
❍ 5,001-15,000 (2)
❍ 15,001-50,000 (3)
❍ >50,001 (4)

Q15 How many clinicians are available for mentoring/consult in your practice site?

Q16 At what level would you currently rate your clinical preparedness for independent practice?
❍ 1- Very unprepared (1)
❍ 2- Somewhat prepared (2)
❍ 3- Generally well prepared (3)
❍ 4- Very well prepared (4)

Q17 How would you rate the level of organizational support for your transition to independent practice?
❍ 1- Very unsupportive (1)
❍ 2- Somewhat supportive (2)
❍ 3- Generally supportive (3)
❍ 4- Very supportive (4)

Q18 At what level would you rate your familiarity with utilizing organizational resources? Ex) Electronic references, Interdisciplinary referral, human resources, APC council
❍ 1- Very unfamiliar (1)
❍ 2- Somewhat familiar (2)
❍ 3- Generally familiar (3)
❍ 4- Very familiar (4)

Q19 What practice content would you have liked more education on when beginning independent practice? Examples may include management of diabetic patients, mental health, coding & billing, etc.   Please list the 5 foci you consider most important for additional coverage as a new provider.
    Focus area 1 (1)
    Focus area 2 (2)
    Focus area 3 (3)
    Focus area 4 (4)
    Focus area 5 (5)

Q20   What clinical skill & procedure areas would you have like more education on when beginning independent practice?   Examples may include: Dermatologic procedures (skin closure- suturing, punch biopsy, abscess- incision & drainage, skin tag removal), Musculoskeletal procedures (joint injection, splinting, casting, trigger point injection) Gynecologic procedures (IUD insertion, pessary insertion)HEENT (foreign body removal- eye, tooth avulsion & fracture) CV (Holter monitor application, venipuncture)Respiratory (peak flow meter, x-ray interpretation)   Please list the 5 skills you consider most important for additional coverage as a new provider.
    Skill 1 (1)
    Skill 2 (2)
    Skill 3 (3)
    Skill 4 (4)
    Skill 5 (5)

Q21 If a transition program had been available to you including seminars covering clinical practice topics, how frequently would you be interested in attending?
❍ Never (1)
❍ Once a Week (2)
❍ Once every 2 weeks (3)
❍ Once a Month (4)
❍ Less than Once a Month (5)
❍ Other: (6) _____

Q22 What format would you have preferred these seminars?
❍ In person (1)
❍ Via telecommunication (2)
❍ Online modules (3)
❍ Other: (4) _____

Q23 What is a reasonable duration to spend in/on each seminar?
- ○ 1 hour (1)
- ○ 2 hours (2)
- ○ 4 hours (3)
- ○ Other: (4) _____

Q24 When would you have preferred the seminar to be offered?
- ○ During the work day- morning or afternoon (1)
- ○ During the work day- over lunch (2)
- ○ Evening hours following work (3)
- ○ Weekend hours (4)

Q25 If the seminar had been available to you, what would have been a reasonable form of compensation?   (select all that apply)
- ❑ Meal provided during seminar (1)
- ❑ Continuing education hours (2)
- ❑ Monetary (3)
- ❑ Other: (4) _____

Q26 Of the above compensation measures, which would be most preferred?
- ○ Meal provided during seminar (1)
- ○ Continuing education hours (2)
- ○ Monetary (3)
- ○ Other: (4) _____

Q27 Any additional comments in regard to your initial practice experiences?

Drawing Entry
Q1 As a token of appreciation you can be entered to win 1 of 2 $50 gift cards. Please provide a name and contact number/email if you are interested in being entered in this drawing. You will be contacted using the information provided if your name is selected.

APPENDIX F. BRIEF SEMINAR EVALUATION

Seminar Participants: Please take a moment to fill out this brief evaluation form to help identify positive aspects of the seminar as well as ways in which it can be improved. Your time is appreciated in filling out this evaluation form to provide input for ongoing improvement of future seminar offerings.

SEMINAR DATE: XX-XX-2016	Completely dissatisfied (1)	Somewhat dissatisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat satisfied (4)	Completely satisfied (5)
1. Please rate your overall satisfaction with today's seminar content	Completely disagree (1)	Disagree somewhat (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Completely agree (5)
2. The speaker was knowledgeable of subject matter covered in the seminar	(1)	(2)	(3)	(4)	(5)
3. The seminar content supported meeting the following objectives: 1) List objectives developed for each seminar 2) Objective 3) ……	(1)	(2)	(3)	(4)	(5)
4. I would recommend this seminar to others.	(1)	(2)	(3)	(4)	(5)
5. What was the most helpful part of today's seminar?					
6. How will seminar content be applied to practice?					
7. What information would you like to see covered in future seminars?					
8. Additional comments:					

APPENDIX G. LONG SEMINAR EVALUATION TOOL

Q1 The following evaluation has questions that relate to your training and background for advanced practice. It also pertains to practice seminars that you will participate in, allowing you to provide feedback on seminar content and its role in your transition to practice. Information gathered will be used to improve future seminars and provide support for or against continuing practice seminars for new clinicians.

Q2 What is your age?

Q3 What is your practice degree?
○ Diploma (1)
○ Bachelor's degree (2)
○ Master's degree (3)
○ Doctoral degree (DNP, PhD) (4)

Q4 What is your certification & certifying body? Ex) FNP, ANCC or PA-C, NCCPA

Q5 How long have you practiced as an APC (Advanced Practice Clinician)? (Specify months or years)

Q6 Is this your first advanced practice job?
○ Yes (1)
○ No (2)

Q7 If no, in what area did you practice previously and for how long? Ex) specialty care, 12 months

Q8 Did you work in healthcare prior to obtaining your advanced practice degree?
○ Yes (1)
○ No (2)

Q9 If yes, in what role?
❑ Registered Nurse (1)
❑ EMT/Paramedic (2)
❑ Respiratory Therapy (3)
❑ Other Allied Health (4)
❑ Other: (5) _____

Q10 If yes, for how long? (Specify months or years)

Q11 What is the community size of your current practice setting?
- ○ < 5,000 (1)
- ○ 5,001-15,000 (2)
- ○ 15,001-50,000 (3)
- ○ >50,001 (4)

Q12 How many clinicians are available for mentoring/consult in your practice site?

Q13 On a scale of 1 to 4, how prepared for practice did you feel upon completion of your education/certification?
- ○ 1- Very unprepared (1)
- ○ 2- Somewhat prepared (3)
- ○ 3- Generally well prepared (4)
- ○ 4- Very well prepared (5)

Q14 At what level would you currently rate your clinical preparedness for independent practice?
- ○ 1- Very unprepared (1)
- ○ 2- Somewhat prepared (3)
- ○ 3- Generally prepared (4)
- ○ 4- Very prepared (5)

Q15 At what level would you rate your familiarity with utilizing organizational resources? Ex) Electronic references, Interdisciplinary referral, human resources, APC council
- ○ 1- Very unfamiliar (1)
- ○ 2- Somewhat familiar (3)
- ○ 3- Generally familiar (4)
- ○ 4- Very familiar (5)

Q16 How would you rate the level of organizational support for your transition to independent practice?
- ○ 1- Very unsupportive (1)
- ○ 2- Somewhat supportive (3)
- ○ 3- Generally supportive (4)
- ○ 4- Extremely supportive (5)

Q17 How would you rate your current peer support? (This refers to having a group of peer providers who you can seek out for advice and/or support)
- ○ 1- Very undeveloped (1)
- ○ 2- Somewhat developed (3)
- ○ 3- Generally well developed (4)
- ○ 4- Very well developed (5)

Q18 Do you feel clinical practice seminar participation has impacted your role transition and independent practice in a positive way?

❍　Yes (1)

❍　No (2)

Q19 If yes, please describe how seminar participation has impacted your practice.

Q20 Please share any further comments that you would like to share about the APC seminars.

APPENDIX H. PRACTICE RESOURCE/SEMINAR CONTENT

Sample Practice Resources/Seminar Content	
Link	Citation
General clinical decision making resource	
Choosing Wisely	http://www.choosingwisely.org/
Asthma	
Advances in asthma management	Brill, T. & Mosnaim, G.S. (2016). Advances in asthma management: Using technology to improve outcomes. Retrieved from http://www.medscape.org/viewarticle/864141
Asthma care quick reference	National Heart, Blood, and Lung Institute. (2012). Asthma care quick reference: Diagnosing and managing asthma. Retrieved from https://www.nhlbi.nih.gov/files/docs/guidelines /asthma_qrg.pdf
Coding & Billing	
Evaluation and management services	Centers for Medicare and Medicaid. (2016). Evaluation and management services. Retrieved from https://www.cms.gov/ Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/ eval-mgmt-serv-guide-ICN006764.pdf
Learn more about medical coding Medical coding vocabulary and key terms ICD-9 & ICD-9-CM codes Using ICD-9-CM ICD-10-CM Using ICD-10-CM Intro to CPT coding Using CPT CPT modifiers Medical terminology & human anatomy HCPCS codes HCPCS modifiers Crosswalking Electronic vs. paper coding Medical coding review	Medicalbillingandcoding.org. (2016). Everything you need to get started in medical billing & coding. Retrieved from http://www.medicalbilling andcoding.org/coding-training/
NP billing, coding, and reimbursement	National Association of Pediatric Nurse Practitioners. (2016). NP billing, coding, and reimbursement. Retrieved from http://www.napnapcareerguide.com/np-billing-coding-reimbursement/

Chronic Obstructive Pulmonary Disease (COPD)	
Treatment of stable chronic obstructive pulmonary disease: the GOLD guidelines	Donohue, J.F. & Make, B.J. (2016). COPD treatment selection: Challenges and opportunities. Retrieved from http://www.medscape.org/ viewarticle/ 864145
2017 GOLD guidelines	Global Initiative for Chronic Obstructive Lung Disease (GOLD). (2017). Global strategy for the diagnosis, management, and prevention of COPD: 2017 Report. Retrieved from http://goldcopd.org/gold-2017-global-strategy-diagnosis-management-prevention-copd/
COPD treatment selection: Challenges and opportunities	Lee, H., Kim, J., & Tagmazyan, K. (2013). Treatment of stable chronic obstructive pulmonary disease: the GOLD guidelines. *American Family Physician, 88*(10), 655-663. Retrieved from http://www.aafp.org/ afp/2013/1115/ p655.html
Dermatology	
Essential of Dermatology for the PCP	Maiberger, M.P. & Nunley, J.N. (2015). Essentials of dermatology for the primary care provider. *Consultant 360, 55*(10)
Diabetes Mellitus	

Risk Factors:

- BMI ≥ 25
- Physical Inactivity
- 1st ° relative w/ diabetes
- Ethnicity: African Amer., Latino, Native Amer., Asian Amer., Pacific Islander
- A1C > 5.7%, Impaired fasting glucose, or impaired glucose tolerance
- History of GDM or baby > 9 lbs
- HTN ≥ 140/90 mm Hg in adults or therapy for HTN
    - HDL ≤ 35 mg/dl and/or triglyceride level ≥ 250 mg/dl

ADA recommended glycemic goals			
	Normal	Goal	Additional action suggested
Average preprandial glucose	< 100	70-130	< 70 or > 130
Average bedtime glucose	< 120	110-150	<110 or > 180
Peak postprandial glucose		< 180	
A1C	< 6%	< 7%	> 8%

Screen for T2DM in:	Criteria for Diagnosis of T2DM
Individuals with BMI ≥ 25 with one or more of above risk factors	A1C > 6.5%
	Fasting plasma glucose > 126 mg/dl (no calories for at least 8 hours)
beginning at 45 years old	Two-hour plasma glucose > 200 mg/dl during an oral glucose tolerance test (75 g glucose load)
Repeat every 3 years	Classic symptoms of hyperglycemia or hyperglycemic crisis (random plasma glucose > 200 mg/dl)

Patient and provider resources	http://professional.diabetes.org/content/diabetes-educator-resources
Multiple AFP resource for Type 2 Diabetes	American Academy of Family Physicians. (2016). Diabetes: Type 2. Retrieved from http://www.aafp.org/afp/topicModules/viewTopic Module.htm?topicModuleId=7
Physical activity/exercise and diabetes Brief overview	Colberg, SR, Sigal RJ, Yardley JE, et al. Physical activity/exercise and diabetes: a position statement of the American Diabetes Association. *Diabetes Care*. 2016; 39(11): 2065-2079. doi:10.2337/dc16-1728.
Algorithm: Management of blood glucose in noninsulin therapies in type 2 diabetes	George, C.M., Bruijn, L.L., Will, K., Howard-Thompson, A. (2015). Management of blood glucose with noninsulin therapies in type 2 diabetes. *American Family Physician, 92*(1), 27-34
Case Challenges: Early and Intensive T2D Treatment with Modern Agents	Inzucchi, S.E., Peters, A.L., & Henry, R.R. (2016). Case challenges: Early and intensive T2D treatment with modern agents. Retrieved from http://www.medscape.org/viewarticle/866887
GLP-1 receptor agonists: Which one do I choose?	Peters, A.L. & Anderson, J.E. (2016). GLP-1 receptor agonists: Which one do I choose? Retrieved from http://www.medscape.org/ viewarticle/862157
Diagnosis and Treatment Algorithm	Redmon, B., Caccamo, D., Flavin, P., Michels R, O'Connor P, Roberts J, Smith S, Sperl-Hillen J. (2014). Institute for Clinical Systems Improvement. Diagnosis and Management of Type 2 Diabetes Mellitus in Adults. Retrieved from https://www.icsi.org/_asset/3rrm36 /Diabetes.pdf

Diabetic neuropathy	
TABLE 5. Level A and level B recommendations from the American Academy of Neurology for the treatment of painful diabetic neuropathy[15] **Level A** — Recommended drugs and doses and other treatments: Pregabalin, 300–600 mg/d — Drugs and other treatments not recommended: Oxcarbazepine **Level B** — Recommended drugs and doses and other treatments: • Gabapentin, 900–3600 mg/d • Sodium valproate, 500–1200 mg/d • Venlafaxine, 75–225 mg/d • Duloxetine, 60–120 mg/d • Amitriptyline, 25–100 mg/d • Dextromethorphan, 400 mg/d • Morphine sulfate, titrated to 120 mg/d • Tramadol, 210 mg/d • Oxycodone, mean of 37 mg/d, maximum of 120 mg/d • Capsaicin cream, 0.075% 4 times daily • Isosorbide dinitrate spray • Electrical stimulation, percutaneous nerve stimulation, 3–4 wk Drugs and other treatments not recommended: • Lamotrigine • Lacosamide • Clonidine • Pentoxifylline • Mexiletine • Magnetic field treatment • Low-intensity laser therapy • Reiki therapy	Some of the medications can take up to 12 weeks to achieve effect. Continue to encourage weight loss (if indicated) and blood sugar control to decrease chances of worsening neuropathy. These have not been shown to reverse neuropathy.
• See table above	Grenell, J.A. & Turner, A.E. (2016). Diabetic peripheral neuropathy: An overview. Retrieved from http://www.clinicaladvisor.com/diabetes-resource-center/diabetic -peripheral-neuropathy/article/571729/

Diagnostics	
Cardiology	
Choosing Wisely-American College of Cardiology • also see appropriate use resource below- in *Radiology* • ECG interpretation 12 lead ECG interpretation ECG practice strips and drills	Choosing Wisely. (2017). American College of Cardiology: Five things physicians and patients should question. Retrieved from http://www.choosingwisely.org/societies/american -college-of-cardiology/ Dubin, D. (1998). *Rapid interpretation of EKG's* (5[th]ed). Tampa, FL: Cover Publishing Company. Kapphahn, S. (2014). Tips and tricks to demystify 12 lead ECG interpretation. Retrieved from https://www.heart.org/idc/groups/heart-public/@wcm/@mwa/documents/downloadable/ucm_465012.pdf Medical Training and Simulation LLC. (2016). ECG interpretation: ECG practice strips and drills. Retrieved from https://www.practicalclinical skills.com /ecg-interpretation
PFTs/spirometry	
PFT testing and interpretation	McCarthy, K. (2016). Clinical procedures: Pulmonary function testing. Retrieved from http://emedicine.medscape.com/article/303239-overview

Radiology	
[Appropriateness Criteria- Radiology by topic](#)	American College of Radiology. (2016) Appropriateness criteria. Retrieved from https://acsearch.acr.org/list
[Chest x-rays: 16 subtle but key findings you need to know](#)	Grimm, L. (2015). Chest x-rays: 16 subtle but key findings you need to know. Retrieved from http://reference.medscape.com/features/slideshow/miss-findings-radiographs
[Introduction to Radiology: Online Tutorial](#)	University of Virginia Health Systems. (2013) Introduction to radiology: An online interactive tutorial. Retrieved from https://www.med-ed.virginia.edu/ courses/rad/index.html

End-of-Life Counseling
Effective January 1, 2016, the Centers for Medicare & Medicaid Services (CMS) began paying practitioners for optional end-of-life discussions with Medicare patients. Two Current Procedural Terminology (CPT) billing codes for end-of-life discussions, also called "advance-care planning," have been added to the physician fee schedule. CPT code 99497 covers a discussion of advance directives with the patient, a family member, or surrogate for up to 30 minutes. The add-code of 99498 covers an additional 30 minutes of discussion. CMS provides specific information about correctly billing using these codes on their website.

[Interpreting End-of-Life Documents](#), see above	Mirarchi, F.L. (2016). Interpreting end-of-life documents. Retrieved from http://www.medscape.com/features/slideshow/end-of-life-documents

Heart Failure
[2013 ACCF/AHA Guideline for the Management of Heart Failure](#)	Yancy, C.W., Jessup, M., Bozkurt, B., Butler, J., Casey, D.E., Drazner, M.H., …Wilkoff, B.L. (2013). 2013 ACCF/AHA guideline for the management of heart failure. *Journal of the American College of Cardiology, 62*(16), e147-e239.

Hyperlipidemia	
Statin intolerance defined: "the inability to take least two statins, at least one at the lowest starting dose, with confirmed intolerable adverse effects not attributable to drug-drug interaction, with prompt improvement in symptoms on discontinuation." (Blaha, 2016)	Blaha, M.J. (2016). Diagnostic errors in patients with cardiac symptoms. Retrieved from http://www.medscape.com/features/slideshow/diagnostic-errors/cardiac-symptoms
[2013 ACC/AHA Guideline on Treatment of Blood Cholesterol](#)	Stone, N.J., Robinson, J., Lichtenstein, A.H., Bairery Merz, C.N., Blum, C.B., Eckel, R.H., …Wilson, P.W.F. (2013). 2013 ACC/AHA guideline on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults: A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. Retrieved from http://circ.ahajournals.org/content/early/2013/11/11/01.cir.0000437738.63853.7a

Hypertension	
JNC-8 Guidelines JNC 8 Hypertension Guideline Algorithm	James, P.A., Oparil, S., Carter, B.L., Cushman, W.C., Dennision-Himmelfarb, C., Handler, J., … Ortiz, E. (2014). 2014 Evidence-based guideline for the management of high blood pressure in adults: Report from the panel members appointed to the Eighth Joint National Committee (JNC 8). *JAMA, 311*(5), 507-520.

Blood Pressure Goals, JNC-8

General Population (no DM or CKD)

- Age ≥ 60 → SBP < 150 mm Hg, DBP < 90 mm Hg
- Age < 60 → SBP < 140 mm Hg, DBP < 90 mm Hg

Diabetes or CKD present

- All ages, Diabetes present, No CKD → SBP < 140 mm Hg, DBP < 90 mm Hg
- All ages, CKD present w/ or w/o diabetes → SBP < 140 mm Hg, DBP < 90 mm Hg

Mental Health	
General resource General pharmacology resource	https://www.nimh.nih.gov/index.shtml www.nami.org/Learn-More/Treatment/Mental-Health-Medications

Depression	
Treating major depressive disorder: A quick reference guide	American Psychiatric Association. (2010). Treating major depressive disorder: A quick reference guide. Retrieved from http://psychiatryonline. org/pb/assets/raw/sitewide/practice_guidelines/guidelines/mdd-guide.pdf
Depression- Guideline Summary	Institute for Clinical Systems Improvement. (2016). Depression, adult primary care: Guideline summary. Retrieved from https://www.icsi. org/guidelines__more/catalog_guidelines_and_more/catalog_guidelines/catalog_behavioral_health_guidelines/depression/
Primary care doctors: Treat or refer depressed patients?	Starr, C. (2011). Primary care doctors: Treat or refer depressed patients? Retrieved from http://www.medscape.com/viewarticle/746112
Adult Depression in Primary Care- Interactive Guideline	Trangle, M., Gursky, J., Haight, R., Hardwig, J., Hinnenkamp, T., Kessler, D., …Myszkowski, M. (2016). Adult Depression in Primary Care. *Institute for Clinical Systems Improvement*. Retrieved from https://www.icsi.org/_ asset/fnhdm3/Depr-Interactive0512b.pdf

Anxiety	
Diagnosing anxiety disorder in primary care	Farginde, A. (2015). Diagnosing anxiety disorder in primary care. *Clinical Advisor*. Retrieved from http://www.clinicaladvisor.com/features/diagnosing-anxiety-disorders-in-primary-care/ article/441714/
GAD/PD in Adults	Locke, A.B., Kirst, N., Shultz, C.G. (2015). Diagnosis and management of generalized anxiety disorder and panic disorder in adults. American Family Physician, 91(9), 617-624. Retrieved from http://www.aafp.org/afp/ 2015/0501/p617.html
DSM 5 diagnostic criteria for GAD	Reynolds, C.R. & Kamphaus, R.W. (2013). Generalized anxiety disorder. Retrieved from http://images.pearsonclinical.com/images/assets/bas-3/basc3resources/DSM5_Diagnostic Criteria_GeneralizedAnxietyDisorder.pdf
Substance Use Disorders	
Medication and counseling treatment-substance use and opioid overdose prevention	Substance Abuse and Mental Health Services Administration. (2015). Medication and counseling treatment. Retrieved from https://www.samhsa.gov/medication-assisted-treatment/treatment
Obesity/Metabolic syndrome	
Metabolic Syndrome Clinical Reference Page	American College of Preventative Medicine. (2009). Metabolic syndrome clinical reference page. Retrieved from http://www.acpm.org/? Metabolic_ClinRef
Metabolic Syndrome: patient resources	American Heart Association. (2017). Metabolic syndrome. Retrieved from https://www.heart.org/HEART ORG/Conditions/More/MetabolicSyndrome/Metabolic-Syndrome_UCM_002080_SubHomePage.jsp

Metabolic syndrome is diagnosed if a patient has at least 3 of 5 metabolic risk factors, including:

- Large Waist circumference
    - $\geq$ 35 inches in a woman or $\geq$ 40 inches in a man
- High Triglyceride Level
    - 150 mg/dL or higher (or being on medicine to treat high triglycerides)
- Reduced HDL Cholesterol Level
    - Less than 50 mg/dL for women or less than 40 mg/dL for men (or being on medicine to treat low HDL cholesterol)
- Increased Blood Pressure
    - 130/85 mmHg or higher
- Elevated Fasting Blood Sugar
    - Level of 100 mg/dL or higher (or being on medicine to treat high blood sugar)

Source: National Heart, Blood, & Lung Institute. (2016). How is metabolic syndrome diagnosed? https://www.nhlbi.nih.gov/health/health-topics/topics/ms/diagnosis

Orthopedics (see also, Procedures, orthopedic)	
General resources/texts AAOS Ortho Bullets Ortho Guidelines (AAOS) Knee exam Shoulder exam	aaos.org http://www.orthobullets.com/default http://www.orthoguidelines.org/ Anderson, B.C. (2016). *Office orthopedics for primary care: Treatment* (3rd ed.). Philadelphia, PA: Saunders Elsevier Boonan, B. (2015). Knee examination. Retrieved from http://emedicine.medscape.com/ article/1909230-overview Rothaermel, B.J. (2015). Shoulder examination. Retrieved from http://emedicine.medscape. com/article/1909254-overview
Osteoarthritis	
OA- Conservative treatment options, See below	Lee, T. (2016). Osteoarthritis: Conservative treatment options. *Clinical Advisor*. Retrieved from http://www.clinicaladvisor.com/features/conservative-treatment-options-for-osteoarthritis/article/489425/2/

Discuss total joint replacement for osteoarthritis of the hip, knee, or shoulder if the steps below are unsuccessful.

Consider hyaluronic acid injection for persistent osteoarthritis of the knee.

Consider corticosteroid injection for acute exacerbation of osteoarthritis of the knee.

Consider opioid therapy, but monitor carefully for dependence and abuse.

Add a combination of glucosamine and chondroitin for moderate to severe osteoarthritis of the knee; discontinue if no change after 3 months, but continue if effect is noted.

Start NSAID therapy, beginning with over-the-counter ibuprofen or naproxen. Switch to a different NSAID if the initial choice is not effective. Use generics if possible.

Begin with acetaminophen and continue if effective. Otherwise, step up to NSAID.

Encourage regular exercise throughout treatment and encourage weight loss if the patient is overweight or obese. Consider physical therapy referral for supervised exercise (land- or water-based). Consider bracing and splinting.

| MILD OSTEOARTHRITIS | MODERATE OSTEOARTHRITIS | SEVERE OSTEOARTHRITIS |

NSAID, nonsteroidal anti-inflammatory drug

Source: Sinusas K. Osteoarthritis: diagnosis and treatment. *Am Fam Physician.* 2012;85(1):49-56.

Pediatrics	
Bright Futures Guidelines	Hagan, J.F., Shaw, J.S, & Duncan, P.M. (Eds.). (2017) *Bright futures: Guidelines for health supervision of intants, children and adolescents* (4th ed.) Elk Grove Village, IL: American Academy of Pediatrics
Schedule & Age-related screening standards	Minnesota Department of Health. (2016). Minnesota child and teen checkups (C&TC) schedule of of age-related screening standards. Retrieved from https://edocs.dhs.state.mn.us/lfserver/ Public/DHS-3379-ENG
MN Child & Teen Checkups Resources	Minnesota Department of Human Services. (2017). Child and teen checkups (C&TC). Retrieved from http://www.dhs.state.mn.us/main/idcplg ?IdcService=GET_DYNAMIC_CONVERSION& RevisionSelectionMethod=LatestReleased&dDoc Name=dhs16_150092#cs
Help me grow; birth to 5 years- Early Intervention Program- MN	http://helpmegrowmn.org/HMG/index.htm
ND EPSDT – now called Health Tracks	Child and North Dakota Department of Health and Human Services. (2015). North Dakota health tracks early periodic screening, diagnosis and treatment (ESPDT). Retrieved from https://www.nd.gov/ dhs/info/mmis/docs/health-tracks.pdf
ND Screening Resources	North Dakota Depeartment of Health Children's Special Health Services. (2015). Early and continuous screening. Retrieved from https://www.ndhealth.gov/cshs/Screening.htm
Right Track; birth to 3 years- Early Intervention Program- ND	North Dakota Department of Human Services. (2016). Parent information: Right track program. Retrieved from https://www.nd.gov/dhs/ services/disabilities/earlyintervention/parent-info/right-track.html
Pharmacology, general	
Beers Criteria	American Geriatric Society. (2012). Identifying medications that older adults should avoid or use with caution: The 2012 American Geriatric Society updated Beers Criteria. Retrieved from http://www.americangeriatrics. org/files/documents/beers/BeersCriteriaPublicTran slation.pdf
Beers criteria: Considering diagnoses/conditions	Farinde, A. (2014). Beers criteria: Considering diagnoses or conditions. Retrieved from http://emedicine.medscape.com/article/2172148-overview

Procedures	
Disclaimer: These are simply resources to become more familiar with the process. Follow your facilities policies on obtaining privileges and completing different procedures.	
Foreign body removal, ear	
Mechanical extraction, irrigation, & suction	On-kee Kwong, A. (2016). Ear foreign body removal procedures. Retrieved from http://emedicine. medscape.com/article/80507-overview#a1
Incision & Drainage	
Incision & drainage- Written	Brookside Associates. (2015). 1-03. Abscess incision and drainage. *Surgical methods: Distance learning for medical & nursing professionals*. Retrieved from http://brooksidepress.org/ surgery/lessons/lesson-1-minor-surgical-procedures/1-03-abscess-incision-and-drainage/
Incision & drainage- Video	Mubarak, G.S. (2010). Incision and drainage. Retrieved from https://www.youtube.com/ watch?v= LTuFz1RkS9s
Incision & drainage	Singhal, H. (2016). Medscape clinical procedures: Skin and soft tissue infection- incision, drainage, and debridement. Retrieved from http://emedicine. medscape.com/article/1830144-overview
Procedures, gynecologic	
IUD insertion	Hagood Milton, S. (2015). Medscape clinical procedures: Intrauterine device insertion. Retrieved from http://emedicine.medscape. com/article/1998022-overview
IUD extraction	Hagood Milton, S. (2015). Medscape clinical procedures: Intrauterine device extraction. Retrieved from http://emedicine.medscape. com/article/1997999-overview
Skin biopsy	
Skin biopsy- Punch Skin biopsy- Shave	Prather, C.L. (2016). Medscape clinical procedures: Skin biopsy. Retrieved from http://emedicine. medscape.com/article/1997709-overview
Suturing	
Basic laceration repair- Written Introduction to knot tying and suturing- Video	Brookside Associates. (2015). 2-6. Basic laceration repair: C. technique for the simple skin suture. *Surgical methods: Distance learning for medical and nursing professionals*. Retrieved from http://brooksidepress.org/surgery/ lessons/lesson-2-wound-closure-and-suturing/2-6-basic-laceration-repair-c-technique-for-the-simple-skin-suture/
Suture removal- Written	Brookside Associates. (2015). 2-8. Suture removal. *Surgical methods: Distance learning for medical and nursing professionals*. Retrieved from http://brooksidepress.org/surgery/ lessons/lesson-2-wound-closure-and-suturing/2-8-suture-removal/
Suturing techniques	Mackay-Wiggan, J. (2016). Medscape clinical procedures: Suturing techniques. Retrieved from http://emed icine.medscape.com/ article/1824895-overview

Toenail removal	
Ingrown toenail removal	Schraga, E.D. (2016). Medscape clinical procedures: Ingrown toenail removal. Retrieved from http://emedicine.medscape.com/article/149627-overview
Procedures, orthopedic	
Splinting	
Volar splinting	Baecher, N.B. (2016). Medscape clinical procedures: Volar splinting. Retrieved from http://emedicine. medscape.com/article/109769-overview
Ankle splinting technique	Grimm, L.J. (2015). Medscape clinical procedures: Ankle splinting. Retrieved from http://emedicine. medscape.com/article/80070-overview
Radial gutter splinting	McCullough, L. (2016). Medscape clinical procedures: Radial gutter splinting. Retrieved from http://emed icine.medscape.com/article/ 80108-overview
Sugar-tong forearm splinting	Mills, C.G. (2015). Medscape clinical procedures: Sugar-tong forearm splinting. Retrieved from http://emedicine.medscape.com/article/80127-overview
Short arm splinting	Nelles, D. (2015). Medscape clinical procedures: Short arm splinting. Retrieved from http://emedicine. medscape.com/article/1997886-overview
Thumb spica splinting	Patel, D. (2015). Medscape clinical procedures: Thumb spica splinting. Retrieved from http://emedicine. medscape.com/article/80146-overview
Ulnar gutter splinting	Patel, D. (2015). Medscape clinical procedures: Ulnar gutter splinting. Retrieved from http://emedicine. medscape.com/article/80165-overview
Joint Injections & Joint Aspiration	
Joint aspiration technique	Berney, S.N. (2015). Medscape clinical procedures: Joint aspiration. Retrieved from http://emedicine.med scape.com/article/2094114-overview
Joint injections in primary care	Geier, K.A. (2015). Musculoskeletal injections in primary care. *Journal for Nurse Practitioners, 11*(10), 968-978. Retrieved from http://www.medscape.com/ viewarticle/857131
Trigger Point Injections	
Trigger point injection	Kishner, S. (2015). Medscape clinical procedures: Trigger point injection. Retrieved from http://emedicine.medscape.com/article/1997731-overview

APPENDIX I. NDSU IRB APPROVAL LETTER

NDSU NORTH DAKOTA
STATE UNIVERSITY

March 15, 2016

Dr. Mykell Barnacle
Nursing

Re: IRB Certification of Exempt Human Subjects Research:
Protocol #PH16220, "Easing the transition to practice: Needs assessment & seminar development for novice advanced practice clinicians in primary care"

Co-investigator(s) and research team: Kari Hektner

Certification Date: 3/15/2016   Expiration Date: 3/14/2019
Study site(s): various Essentia Health locations
Sponsor: n/a

The above referenced human subjects research project has been certified as exempt (category # 1, 2b) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, Protection of Human Subjects). This determination is based on the original protocol submission (received 3/9/2016).

Please also note the following:
• If you wish to continue the research after the expiration, submit a request for recertification several weeks prior to the expiration.
• The study must be conducted as described in the approved protocol. Changes to this protocol must be approved prior to initiating, unless the changes are necessary to eliminate an immediate hazard to subjects.
• Notify the IRB promptly of any adverse events, complaints, or unanticipated problems involving risks to subjects or others related to this project.
• Report any significant new findings that may affect the risks and benefits to the participants and the IRB.

Research records may be subject to a random or directed audit at any time to verify compliance with IRB standard operating procedures.

Thank you for your cooperation with NDSU IRB procedures. Best wishes for a successful study.
Sincerely,

Kristy Shirley

Digitally signed by Kristy Shirley
DN: cn=Kristy Shirley, o=NDSU,
ou=Institutional Review Board,
email=kristy.shirley@ndsu.edu,
c=US
Date: 2016.03.15 10:16:35 -05'00'

Kristy Shirley, CIP, Research Compliance Administrator

For more information regarding IRB Office submissions and guidelines, please consult
http://www.ndsu.edu/research/integrity_compliance/irb/. This Institution has an approved FederalWide Assurance with the Department of Health and Human Services: FWA00002439.

INSTITUTIONAL REVIEW BOARD
NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8995 | Fax 701.231.8098 | ndsu.edu/irb

Shipping address: Research 1, 1735 NDSU Research Park Drive, Fargo ND 58102

NDSU is an EO/AA university.

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APPENDIX J: SPONSORING ORGANIZATION PROJECT APPROVAL LETTER

Professor Barnacle
NDSU – School of Nursing
Via email to: Mykell.Barnacle@ndsu.edu

March 9, 2016

Dear Professor Barnacle:

I have been asked to review Kari Hektner's DNP project proposal. Ms. Hektner has proposed a project to identify opportunities for improvement in role transition of primary care Advanced Practice Clinicians (APC) within the Essentia Health system. She has proposed to accomplish this through a needs assessment, followed by development of education to fill the gaps identified during the needs assessment. This project has strong support of our APC leaders, and Christie Erickson, APRN, DNP, has agreed to be the Essentia Health sponsor of this project.

Per our Student Learner Policy this project is a quality improvement project. As such, a submission to Essentia Health's Internal Review Board is not necessary.

If you have any further questions, please feel free to contact me at 218.786.3008 or kdean@eirh.org. We look forward to learning the results of Ms. Hektner's project and appreciate the opportunity to continue to work with students from your program.

Sincerely,

Kate Dean, MBA
Director, Education
Essentia Institute of Rural Health

Ph: 218-786-3008
Email: kdean@eirh.org

APPENDIX K: NDSU AMENDMENT TO PREVIOUS IRB APPROVAL

Date Received
3/21/2016

IRB Protocol #:
PH16220

NDSU NORTH DAKOTA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
office: Research 1, 1735 NDSU Research Park Drive, Fargo, ND 58102
mail: NDSU Dept. #4000, PO Box 6050, Fargo, ND 58108-6050
p: 701.231.8995 f: 701.231.8098 e: ndsu.irb@ndsu.edu w: www.ndsu.edu/irb

Protocol Amendment Request Form

Changes to approved research may not be initiated without prior IRB review and approval, except where necessary to eliminate apparent immediate hazards to participants. Reference: SOP 7.5 Protocol Amendments.

Examples of changes requiring IRB review include, but are not limited to changes in: investigators or research team members, purpose/scope of research, recruitment procedures, compensation strategy, participant population, research setting, interventions involving participants, data collection procedures, or surveys, measures or other data forms.

Protocol Information:

Protocol #: **PH16220**   Title: **Easing the transition to practice: Needs assessment and seminar development for novice advanced practice clinicians in primary care**

Review category: ☒ Exempt   ☐ Expedited   ☐ Full board

Principal investigator: **Mykell Barnacle**   Email address: **Mykell.Barnacle@ndsu.edu**
Dept: **Nursing**

Co-investigator: **Kari Hektner**   Email address: **kari.hektner@ndsu.edu**
Dept: **Nursing**

Principal investigator signature, Date: *Mykell Barnacle (email) 3/21/2016*

In lieu of a written signature, submission via the Principal Investigator's NDSU email constitutes an acceptable electronic signature.

Description of proposed changes:

1. Date of proposed implementation of change(s)*: **Upon IRB approval**
   * *Cannot be implemented prior to IRB approval unless the IRB Chair has determined that the change is necessary to eliminate apparent immediate hazards to participants.*

2. Describe proposed change(s), including justification:
   Question order in needs assessment (Appendix D) and long evaluation form (Appendix F) was altered slightly. On Likert-scale questions, selection was decreased to 4 selections from 5 as the additional selection did not add to insight. On needs assessment, added questions present on long evaluation; these are questions #16 & #17 on Appendix D, pertaining to perceptions of organizational support and familiarity with organizational resources. Questions seeking practice setting designation

and number of clinicians in practice setting available for support was also added. See question #13 & 14 on Appendix D and questions #10 & 11 on Appendix F. These questions will add to the understanding of factors that may impact transition to practice. Also included is a letter of approval received from Essentia Health, where the project will take place.

3. Will the change(s) increase any risks, or present new risks *(physical, economic, psychological, or sociological)* to participants?
    ☒ No
    ☐ Yes: *In the appropriate section of the protocol form, describe new or altered risks and how they will be minimized.*

4. Does the proposed change involve the addition of a vulnerable group of participants?
    Children: ☒ no ☐ yes – include the *Children in Research* attachment form
    Prisoners: ☒ no ☐ yes – include the *Prisoners in Research* attachment form
    Cognitively impaired individuals: ☒ no ☐ yes*
    Economically or educationally disadvantaged individuals: ☒ no ☐ yes*

    *Provide additional information where applicable in the revised protocol form.

5. Does the proposed change involve a request to waive some or all the elements of informed consent or documentation of consent?
    ☒ no
    ☐ yes – 📎 Attach the *Informed Consent Waiver or Alteration Request.*

6. Does the proposed change involve a new research site?
    ☒ no
    ☐ yes

📎 **If information in your previously approved protocol has changed, or additional information is being added, incorporate the changes into relevant section(s) of the protocol. Draw attention to changes by using all caps, asterisks, etc. to the revised section(s) and attach a copy of the revised protocol with your submission.** *(If the changes are limited to addition/change in research team members, research sites, etc. a revised protocol form is not needed.)*

Impact for Participants (future, current, or prior):

1. Will the change(s) alter information on previously approved versions of the recruitment materials, informed consent, or other documents, or require new documents?
    ☐ No
    ☒ Yes - 📎 attach revised/new document(s)

2. Could the change(s) affect the willingness of *currently* enrolled participants to continue in the research?

Protocol Amendment Request Form
NDSU Institutional Review Board
Form revised May 2015

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☒ No
☐ Yes - describe procedures that will be used to inform current participants, and re-consent, if necessary:

3. Will the change(s) have any impact to *previously* enrolled participants?
☒ No
☐ Yes - describe impact, and any procedures that will be taken to protect the rights and welfare of participants:

- - - - - - - - - -FOR IRB OFFICE USE ONLY - - - - - - - -

Request is: ☒ Approved   ☐ Not Approved
Review: ☒Exempt, category#: 1.2b ☐Expedited method, category # _____ ☐Convened meeting, date: _____   ☐Expedited review of minor change

IRB Signature: *Kristy Shirley*   Date: 3/22/2016
Comments:

Protocol Amendment Request Form
NDSU Institutional Review Board
Form revised May 2015

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If you have not yet had a chance to fill out the new Advanced Practice Clinician needs assessment to help identify transition needs of new providers for Essentia Health please do so. The deadline to fill out the survey has been extended to **Friday, April 8** to allow more time for completion by busy providers.

For those providers who have completed the needs assessment already, your input is greatly appreciated! You will be contacted if your name is selected for one of two Visa gift cards

Your time and input is greatly appreciated! Full project details and project consent information are available below.

Follow this link to the Survey:
Take the Survey

Or copy and paste the URL below into your internet browser:
https://ndstate.co1.qualtrics.com/SE?SID=SV_0IdSpYO3L9qmV5X&Preview=Survey&Q_CHL =preview

Follow the link to opt out of future emails:
Click here to unsubscribe

Project details

NDSU School of Nursing
Dept 2670
PO Box 6050
Fargo, ND 58108-6050
701.231.7395

Essentia Health Advanced Practice Clinician:

My name is Kari Hektner. I am currently a Doctor of Nursing Practice student at North Dakota State University. As part of my degree requirements, I am partnering with Christie Erickson, DNP, APRN at Essentia Health to collect a needs assessment to better understand the educational and support needs of new APCs within the Essentia Health organization. This is part of a larger clinical improvement project titled "Easing the transition to practice: Needs assessment and seminar development for novice advanced practice clinicians in primary care". The findings of the needs assessment will be used identify content for development of practice seminars for current and future new primary care APCs within the organization.

You are being invited to take part in this survey as you are an APC within the first two years of independent practice at Essentia Health.

Information gathered will include basic demographics, educational and transition experiences, and recommendations for ongoing educational seminars for APCs. Questionnaire responses will be kept anonymous and confidential. Your participation is entirely voluntary and your completion of the online survey with submission of responses implies your consent to participate in this project. You may change your mind or quit participating at any time. No physical or legal risks exist in completing the survey. A small risk of emotional distress may exist do to survey content, including reflection on previous feelings of practice preparedness. IRB approval from North Dakota State University has been obtained. Approval for the project was also received from Kate Dean in Medical Education at Essentia Health.

The link below will take you to the survey questions, which will take roughly 10-15 minutes to complete. The survey will be available from March 23, 2016 through April 2, 2016.

https://proxy.qualtrics.com/proxy/?url=https%3A%2F%2Fndstate.co1.qualtrics.com%2FSE%2F%3FSID%3DSV_0IdSpYO3L9qmV5X&token=KES3uTonHeHoKQhVhd7IPnarCUqjj4O0EatFSTIU3jg%3D

Upon completion of the needs assessment, you will be taken to another survey link. This will provide you the opportunity to send in contact information separate from you survey responses, to be entered in drawing for one of two $50 Visa giftcards. This is completely optional.

Thank you in advance for your participation in this important project. Input on your experiences during this transition into practice is valuable in identifying needs and common experiences during this exciting and stressful time. Again, completion of the survey will constitute your consent to participate in the survey.

If you have any questions or comments, please feel free to contact me at kari.hektner@ndsu.edu or call 701.793.4556. You may also contact my advisor, Dr. Mykell Barnacle, by email at mykell.barnacle@ndsu.edu or by phone at 701.231.7730. You have rights as a research participant. If you have questions about the rights of human participants in research, or to report a problem, contact the North Dakota State University IRB Office by telephone at 701.231.8995 or toll-free at 1.855.800.6717, by e-mail at NDSU.IRB@ndsu.edu, or by mail at North Dakota State University, Research 1, 1735 NDSU Research Park Drive, NDSU Dept. #4000, PO Box 6050, Fargo, ND 58108-6050

Thank you again for your participation in this practice improvement project.

Sincerely,

Kari Hektner, RN, BSN
Doctoral Student in the Department of Nursing

APPENDIX M: EXECUTIVE SUMMARY

The practice improvement project, Easing the transition: Needs assessment and seminar development for novice advanced practice clinicians in primary care, included completion of a needs assessment and compilation of practice resource content. Further project intentions were to evaluate practice seminars upon initiation at the RHS, though this process is still underway. Results are being used to inform and support the development of a transition program for new nurse practitioners (NPs) and physician assistants (PAs) currently under development within a regional healthcare system (RHS). Understanding and supporting the needs of these clinicians has grown increasingly important as their use in primary care roles continues to grow with changes in healthcare delivery and patient access.

Needs Assessment

A needs assessment was distributed to NPs and PAs within their first two years of advanced practice, at primary care settings within the sponsoring RHS, using Qualtrics survey software. A total of 29 respondents were included in response analysis. The goals of the needs assessment were to identify perceptions of practice preparedness, organizational support, familiarity with organizational resources, and content areas for ongoing educational coverage.

Results showed many surveyed clinicians rated current practice preparedness at generally well (60.7%) or very well prepared (14.3%), echoing reports that current educational programs produce safe and effective NPs and PAs (Boyar, 2015; AAPA, n.d.). Organizational support for transition showed varied results with 37.9 percent of respondents feeling either very unsupported or somewhat supported. These results offer an area for improvement from the employer perspective through transition programming, a concept well-supported in previous literature. Another important piece of the orientation to a new practice setting is familiarization with

organizational resources. A fair number of respondents selected being very unfamiliar (10.3%) or only somewhat familiar (24.1%) with organizational resources. These perceptions again suggest an area of transition that could be improved upon through ongoing coverage with practice seminars. The desire for increased employer support was offered by many needs assessment participants in response to an open-ended question seeking comments on their transition experience. The responses highlighted the desire for use of ongoing education and mentorship in supporting transition to practice.

Seminar Content and Characteristics

Educational topics identified in the needs assessment were utilized in the development of an electronic practice resource for novice clinicians. Key topics identified and covered in the resource included coding and billing, mental health/pharmacology, chronic disease management, and procedural topics in the areas of dermatology, gynecology, and orthopedics. Key areas identified specific to organizational processes were abundant including daily workflows, system protocols, referral processes, interdisciplinary/collaborative communication, and facility navigation among others. This suggests a need to improve onboarding processes currently used to cover organizational practice content at the sponsoring RHS. Characteristics of a hypothetical practice seminar were solicited with most respondents desiring a seminar occurring once monthly, with an in-person format, for 1 hour duration, in the morning or afternoon during the workday. The most desired compensation for seminar attendance was continuing education hours.

Transition Program Evaluation

The focus of seminar evaluation included two primary areas: to prompt participant feedback to guide future seminars, supporting an andragogical approach to learning, and to

identify if an increase in individual perceptions of preparedness for clinical practice and organizational support from the beginning of participation to the end of participation in practice seminars, and as compared to seminar non-participant recollections, occurred. Seminar evaluation forms have not been collected to date due to unanticipated delays in organizational support and development of transition programming for new APCs.

Recommendations

The sponsoring organization has chosen to develop a program with three major emphases including individualized orientation based on self-assessment of learning needs, formal mentorship, and didactic sessions during the first year of practice. Areas identified in the needs assessment for ongoing coverage and the seminar content developed based on these areas were provided to the director of NP and PA transition programming of the RHS. She plans to let this information guide the initial didactic sessions that will be offered to novice clinicians upon transition program initiation. If coverage of practice content needs to be limited for any reason, topics most frequently identified as important for additional education by needs assessment respondents included chronic disease management, coding and billing, orthopedics exams and procedures, dermatology procedures, and diagnostics interpretations (specifically, x-ray). Key seminar characteristic recommendations based on needs assessment findings include a seminar occurring once a month, in an in-person format, for one hour, during the workday, either in the morning or afternoon. If these characteristics need to be adjusted to meet organizational constraints, avoidance of any weekend hours for seminar is a secondary recommendation. Recommended compensation based on needs assessment results is to provide participants with continuing education hours with secondary consideration of monetary compensation.

Further recommendations include use of the already-developed brief evaluation and long evaluation forms at set points during the pilot transition program. The brief form was designed to identify areas for improvement of seminars, gain input from participants on content covered, and evaluate if seminar objectives have been met. The long evaluation was designed to provide data for comparison to seminar non-participants which may help elucidate the impact of transition programming on areas including practice preparedness, organizational support, and familiarity with organizational resources. It also seeks qualitative input from participants on the impact of seminars on their practice. Collection of brief and long evaluation data could be conducted by the program director, support staff, or by recruitment of another student to undertake completion of the intended project. Other areas that should be considered for evaluation are comparison of measures including: use of evidence-base practices, quality metrics, productivity measures, and resource utilization. Finally, from an organizational standpoint it would be important to consider cost of programming, cost savings that may be realized due to improvements in care and efficiency of clinicians, and turnover and retention rates. Transition program participant rates should be compared to rates prior to program implementation to assess impact.

A final recommendation for inclusion in seminars is to provide an environment of peer support and allow discussion among the newly hired APCs to acknowledge common difficulties and successes during the transition into independent practice. This was discussed in the literature review, and is well supported in registered nurse residency programs, but did not materialize in any of the needs assessment data. Open discussion could be encouraged at each session by a group facilitator who is guiding the seminar for the day. This approach is meant enhance an environment of collegiality and socialization to the APC role and peers within the organization.

Implications for Practice

The practice improvement project helped to highlight needs and knowledge gaps of advanced practice clinicians in primary care in the region, mirroring findings already identified in the literature. Content areas identified by respondents provide areas of focus not only for employing facilities to expand in the onboarding process. Unfortunately, delays in implementation within the sponsoring organization did not allow evaluation of transition programming during the project timeline. Evaluation would allow for comparison of transition program pilot participants with non-participants (needs assessment respondents) to help further elucidate the impact of formal transition programs for novice clinicians.

Conclusion

As the number of NPs and PAs increase to meet demand for primary care providers it is imperative that key components to successful role transition for these two clinicians are understood. A literature review supports that several forms of structured transition programming help to decrease stress and anxiety associated with the transition to independent practice in novice NPs, including residency and mentorship. The practice improvement project included completion of a needs assessment to help identify perception of new APCs within a regional healthcare organization, with findings reflecting literature and highlighting a desire for increased organizational support during the transition period through ongoing education and mentoring. Foci selected for ongoing education also reflected areas identified in the literature, supporting common knowledge gaps of novice clinicians that can inform transition programming currently under development for NPs and PAs. Delays in program development and implementation limited evaluation of the impact of transition programming of novice APCs, which would help to expound upon findings currently available in the literature.