

Training the Next Generation

Residency and Fellowship Programs
for Nurse Practitioners in
Community Health Centers



CO-AUTHORS:

**Margaret Flinter, APRN, PhD, c-FNP, FAAN, FAANP
and Kerry Bamrick, MBA**

EDITOR:

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Kerry Bamrick, MBA

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ABOUT THE AUTHORS



Dr. Margaret Flinter is the Senior VP and Clinical Director of the Community Health Center, Inc. (CHCI), a state-wide federally qualified health center serving 150,000 patients from its primary care centers across Connecticut, while leading practice transformation initiatives across the country. A family nurse practitioner since 1980, she has held progressive roles in the organization as both a primary care provider and executive leader as CHCI transformed from a free clinic to one of the country's largest and most innovative FQHCs. In 2005, she founded CHCI's Weitzman Center for Innovation, now the Weitzman Institute, which is CHCI's research, innovation, and quality improvement arm. Margaret served

as the national co-director of the Robert Wood Johnson Foundation's Primary Care Teams: Learning from Effective Ambulatory Practices (LEAP) project, which is studying exemplar primary care practices across the country. Margaret has led the national development of a model of post-graduate residency training programs for new nurse practitioners and established the National Nurse Practitioner Residency and Fellowship Training Consortium. Margaret is the Principal Investigator for HRSA's National Cooperative Agreement on Clinical Workforce Development. Since 2009, she has co-hosted, along with CHCI's CEO Mark Masselli, a weekly radio show, "Conversations on Health Care", which connects people with issues of health policy, reform, and innovation, and speaks widely on topics related to primary care transformation.

Margaret received her BSN from the University of Connecticut, her MSN from Yale University, and her PhD at the University of Connecticut. She is a fellow of the American Academy of Nursing and the American Academy of Nurse Practitioners, and served in the U.S. National Health Service Corps.

—Margaret M. Flinter, APRN, PhD, FAAN, FAANP, c-FNP
Senior Vice President and Clinical Director, Community Health Center, Inc.
Founder Emeritus, Weitzman Institute, Community Health Center, Inc.



Kerry Bamrick is the Program Director for the Community Health Center, Inc. (CHCI) and its Weitzman Institute's Postgraduate Residency Training Programs. In this role, she oversees the management of all CHCI Postgraduate Residency Training Programs. CHCI's residency programs include: the Nation's First Family Nurse Practitioner Residency Training Program, Postdoctoral Clinical Psychology Residency Program, Psychiatric Mental Health Nurse Practitioner Residency Program and Center for Key Populations Fellowship. Future plans include implementing a Dental Public Health Residency Program.

Kerry is also responsible for overseeing and managing all aspects of CHCI's remotely-hosted nurse practitioner residency programs across the country. Currently, CHCI is remotely hosting nurse practitioner residency programs in the states of California, Hawaii, Indiana, New York, Oregon, Rhode Island, and Washington. In addition to ensuring the successful operation of CHCI's various residency training programs and remotely hosted nurse practitioner residency programs, she also serves as CHCI's Institutional Review Board (IRB) Administrator and Co-Principal Investigator for HRSA's National Cooperative Agreement (NCA) on Clinical Workforce Development.

Kerry completed the Clinical Microsystems training at the Dartmouth Institute and is a certified coach. She is a CT AHEC Advisory Board Member and a member of the Connecticut Institute for Clinical and Translational Science (CICATS) IRB Administrators. Kerry has an undergraduate degree from Merrimack College and a Master's Degree in Business Administration from Western New England College.

—Kerry Bamrick, MBA
Director, Postgraduate Training Programs
Community Health Center, Inc., Weitzman Institute

For more information please contact: nca@chc1.com.

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Maria A. Alonso, MBA **Shelby Lee Freed, FNP-BC**

Rich Bettini, MPH, MA **Pat McKenzie, MSN, WH-BC**

Elizabeth Bezos, BS, BA **Sara Mertz, MS, RN**

Mary Blankson, DNP, APRN, FNP-C **Jonathan Muther, PhD**

Robert Block, CPA **Rebecca Norwick, FNP, DNP(c)**

Tom Bush, DNP, FNP-BC, FAANP **Grace O'Shaughnessy, LMSW**

Veena Channamsetty, MD **Diana Paris, MSN, FNP-BC, RN**

Beverly Coleman, MA **Candice S. Rettie, PhD**

Sheryl Cosme, MSN, RN-BC, MSN **Kathryn Rugen, PhD, FNP-BC, FAANP**

Patti Feeney, MS **Mark Splaine, MD, MS**

Ann Marie Hart, PhD, FNP-BC **Todd Wallenius, MD**

Erica Hastings, MIHMEP **Deb Ward, RN**

DoQuyen Huynh, DNP, FNP **Dan Wilensky, MD**

CONTRIBUTING AUTHORS

Charise Corsino, MA

Candice S. Rettie, PhD

Kathleen Thies, PhD, RN

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From the Co-Authors

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Margaret Flinter, APRN, PhD, c-FNP, FAAN, FAANP

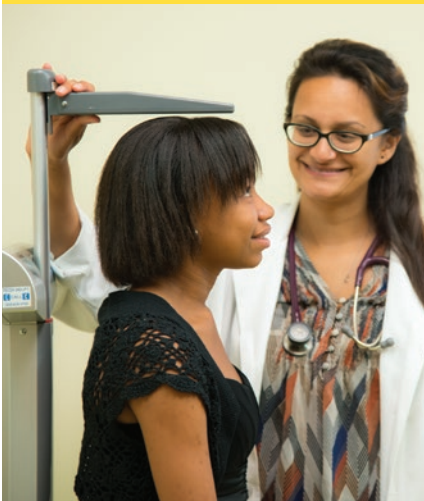
Kerry Bamrick, MBA

Contents

INTRODUCTION	9
CHAPTER 1 Introduction to the Origins of the Movement for Postgraduate Training for New Nurse Practitioners	11
CHAPTER 2 What Does it Mean to Train to a High-Performance Model of Care?	29
CHAPTER 3 Building the Case for Starting a Nurse Practitioner Residency Program	43
CHAPTER 4 Nurse Practitioner Residency Program Structure and Curriculum	59
CHAPTER 5 Clinical and Financial Resources	91
CHAPTER 6 Operations and Administration	109
CHAPTER 7 Evaluation: Real Impact Verified	131
CHAPTER 8 Accreditation: Anchoring Credibility and Trust	157
AFTERWORD	170



Pictured below: CHCI 2012–2013 NP resident, Krishna Kothary, with her patient.



Shown above: American Association of Nurse Practitioners (AANP) Annual Conference; Las Vegas, NV; October 2011. Standing, left to right: Caitlin Erickson, Hao Pham, and Sarah Eichenberger. Seated, left to right: Anna Olivier, Martha Trevey, Margaret Flinter, and Kristie Quarles.



Above: CHCI's 2014–2015 NP Residency Orientation led by Margaret Flinter, APRN, PhD, c-FNP, FAAN, FAANP, Senior Vice President/Clinical Director and Mark Masselli, President/CEO; Middletown, CT; September 2014.

INTRODUCTION

We are deeply committed to the premise of healthcare as a right, not a privilege, and to the ongoing transformation of primary care that will improve health outcomes and build healthier communities. Our organization, the Community Health Center, Inc., is committed to excellence in the delivery of primary care through our clinical services, but also to supporting the transformation of primary care across the U.S. through the research, innovation, and training work of our Weitzman Institute. For more than a decade, we have been engaged in creating, testing, and spreading a model of postgraduate residency and fellowship training for new nurse practitioners who are committed to practice as primary care providers in community health centers. This book represents our efforts to share our knowledge and experience with others in the field who are interested in learning more about the model, and perhaps implementing and leading a program in their community and state. We have provided the conceptual framework, history of the development of postgraduate NP training in health centers, and the core operational tools and strategies to support organizations in creating a program in their organizations. We are grateful to the United States Department of Health and Human Services (HHS) and its Health Resources and Services Administration (HRSA) for their support of the Community Health Center's National Cooperative Agreement on Clinical Workforce Development, and in particular, to our Project Officer David Bates, for his leadership.

Margaret Flinter, APRN, PhD, c-FNP, FAAN, FAANP
Senior Vice President and Clinical Director
Community Health Center, Inc.

Kerry Bamrick, MBA
Director, Postgraduate Training Programs
Community Health Center, Inc., Weitzman Institute

Introduction to the Origins of the Movement for Postgraduate Training for New Nurse Practitioners

Margaret Flinter, APRN, PhD, c-FNP, FAAN, FAANP

In the summer of 2002, I was driving down Rte. 9 in Middletown, Connecticut and contemplating the meta-question **“What’s wrong with this picture?”** The picture I had in mind was that of the best and brightest new nurse practitioners (NPs) who came into Community Health Center, Inc. (CHCI) brilliantly educated and burning with passion to serve as primary care providers for the vulnerable populations who are at the core of community health center practice everywhere. For years I had observed these remarkable individuals, well prepared with the competencies for entry level practice, confront the complex realities of clinical systems in the setting of community health centers. These new NPs found that our “entry level patients”, in terms of complexity, are few and far between. Furthermore, the weight of adverse social determinants of health, coupled with disproportionate burdens of behavioral health and substance abuse issues, create challenges for the most sophisticated and expert primary care providers.

With the Connecticut River languidly flowing by under a hot summer haze, I faced the reality that CHCI, the tremendous community health center that I had devoted most of my professional life to help build, had at that time only a handful of nurse practitioners in its primary care centers while the medical staff had grown several times in size. I knew that I was finding it hard to recruit, and even harder to retain, NPs after their first or second year into practice—exactly the kind of NPs our patients needed. I had already figured out with the help of two new NPs, that our best chance of success was to create a very intensive, highly structured, individualized “ramp up” for each NP, with tremendous time for individual teaching, feedback, and clinical coaching. CHCI and the new NPs would need to work together to build confidence and competence, all the while reassuring the new NPs that their feeling of being unprepared for this practice was normal, and to be expected. But was it? And could I do this over and over, one NP at a time? Could my health center colleagues across the country, more than a thousand organizations strong, do this? Was there a better way?



Community Health Center, Inc.’s 2016–2017 Nurse Practitioner Residency Class

Standing, left to right: Jeannie McIntosh, Jessica Horstmann, Carla Paredes, Suelen DeOliveira, Jason Richard. Seated, left to right: Mickaela Marichal, Sally Sudell, Kathryn O’Donnell, Kristin Finigan, Huma Hussain.



Waianae Coast Comprehensive Health Center (WCCHC) 2015–2016 Nurse Practitioner Residency Class and Program Staff

From left to right: Alessandra Luchesi, WCCHC NP resident; Pat McKenzie, APRN, WCCHC NP Residency Program Director; Rich Bettini, WCCHC President & CEO; Sayoko Hackler, WCCHC NP resident; Danielle Kuulei Naahielua, WCCHC NP resident.



And why, I further asked, was the experience of other new providers, in multiple disciplines, often so different from that of new NPs coming to practice in the role of primary care providers? Other new providers were also far from expert in the management and care of our CHCI patients—patients who are disproportionately poor, likely to suffer from adverse social determinants of health, and living with multiple chronic health problems. These new providers too required an extended period of “ramping up” as they developed their panels and practices, mastered the electronic health record, and learned the art of practice in the community health center system. Yet, they did not seem to evidence the same level of difficulty in their transition to practice.

I had a lot of questions, and needed to find some answers. In this chapter, we will describe how our questions and answers led us to create a nurse practitioner postgraduate residency training program, which will be referred to as the residency program throughout this book, for new NPs who aspired to be primary care providers in safety net settings—and in the process, launched a movement for postgraduate training for new NPs across the country and in all practice settings.

Asking the Right Questions

Asking the right question—and avoiding the wrong one—is an art when you set off to create an innovation or disrupt a traditional pattern. The right question was to ask: **What do new NPs want and need to be successful at transitioning to clinical practice in the safety net setting after completing the educational requirements for licensure and board certification? How can that need be met?**

The answer seemed obvious: a highly structured, intensive year of clinical training, and at the same time, training to a high performance model in the service delivery setting of the community health center. The problem was neither a shortcoming in educational preparation, nor a shortcoming in the new NP. To put it another way, new NPs committed to clinical practice careers as primary care providers deserve the opportunity for postgraduate training in a formal residency program.

Key Questions

Was this a good idea? Why hadn't this been done before? After all, physicians, dentists and clinical psychologists, to name a few, all had either the mandate or the option for postgraduate residency training. It wasn't as if nobody had thought about postgraduate training for NPs. As I quickly found and summarized in my first article on the subject (Flinter, 2005), nurse practitioners have been suggesting for

a long time that postgraduate training—a bridge between academia and practice, between possessing the knowledge of clinical skills for entry level practice and the depth of clinical experience needed as an NP and primary care provider—should be available to new NPs who seek it based on their personal career aspirations and the type of setting in which they wished to practice.

Further research confirmed the difficult transition that new NPs underwent and the desire of new NPs to have access to postgraduate training (Brown & Olshansky, 1997; Brown & Olshansky, 1998; Draye & Brown, 2000; Hart & Macnee, 2007). As is so often the case, the answer seemed to lie in policy, practice, and professional considerations. By policy, the generous funding available to training other health professions under federal graduate medical education known as “GME” was exclusive, by statute, as it did not reference NP training. By practice, the driving concern of the nursing profession was continuing our long held quest to advance legislatively to independent practice, and educationally, to the doctor of nursing practice, and not postgraduate training. And tied to both, perhaps, was the concern of professional organizations that any indication from the profession that new NPs might need, deserve, and want postgraduate training would be perceived as a deficiency that could weaken the argument for independent practice.

Historical perspective is always interesting. In 2002, when I began pondering this issue, the Affordable Care Act was still seven years in the future, and with its signing, the acknowledgement of the nation's critical need for and shortage of expert primary care providers. Instead, in 2005, the focus of the nursing profession was on the development of the clinical Doctorate of Nursing Practice (DNP) (Mundinger, 2005). At the same time, in medicine, the focus was on early evidence and standards for something that would soon become a norm of practice in primary care, the *Patient-Centered Medical Home* (Davis, 2005). In community health centers across the country, we were focused on issues of access, growth, and expansion to meet the growing demand to provide care to patients who were typically low income, uninsured or publicly insured, and adversely affected by social determinants of health.

Today in 2017, we write from the perspective of having made great progress on many fronts: the movement for postgraduate residency training for NPs is growing, primary care has been renewed and strengthened through innovations in practice, technology, and science, and community health centers have expanded to care for 24 million Americans (HRSA, 2017). Although the course ahead is uncertain in terms of federal legislation that may dramatically impact this progress, the number of Americans who are uninsured has fallen by 13 million since 2013 (Kaiser Family Foundation, 2016).



Another fundamental “right question” was this: **Who wants to be a primary care provider and how can we support them?** This stands in contrast to the question we had been asking for decades about why so few physicians choose primary care. My answer was **“nurse practitioners do.”** NPs historically and still today overwhelmingly choose primary care as their specialty (HRSA, 2014). Community health centers need expert primary care providers who are committed to and are passionate about primary care, and who are committed in particular to underserved patients. Nurse practitioners serving as primary care providers in Patient-Centered Medical Homes (PCMH) that are also Federally Qualified Health Centers (FQHC) are the backbone of the nation’s primary care system. We need to find a way to support their transition to practice and, equally importantly, retain them as primary care providers throughout their career.

Questions about terminology: There continues to be a healthy debate about the correct terminology for the model of NP postgraduate residency training that we have developed, with proponents of both “residency” and “fellowship.” While numerous definitions of the two, and their differences, are put forth by various practice professions, we choose to present the following: 1. Residency is done after graduation and internship while Fellowship is done after residency. 2. Residency is additional training in an individual’s chosen field of specialization while Fellowship is further training on this specialization (2017, June 23. <http://www.differencebetween.net/science/health/difference-between-fellowship-and-residency/>)

Our observation of programs developing across the country is that the structure and content of programs, particularly in primary care, are far more similar than different whether designated by their leaders as fellowship or residency. We respect the prerogative of organizations to make this decision for themselves in this still formative period of the movement towards postgraduate training for new NPs.



Should postgraduate residency training be required for new NPs? On this, we, the leadership of the CHCI program and NCA Clinical Workforce Development initiative express solely our opinion at this time. We do not believe it is wise to require postgraduate training at this time but believe it is critical to expand the opportunities for postgraduate training, particularly in primary care, and most especially in the nation’s community health centers.



How can we improve access to high quality healthcare? As we will discuss further in **Chapter 3**, as leaders in a community health center, we have been driven by the question of not just access to healthcare, but access to high quality, effective healthcare. The population of patients in community health centers needs access to care

that is transformational as we seek to improve health and build healthier communities. We want to create access to care that incorporates prevention in every element of care, and that motivates behavioral change, self-care, and healthier lifestyles at the patient level. We want to organize and implement care that eliminates waits and delays, drives improvement with data, and integrates behavioral health and primary care. We want every patient to have a team that engages with individuals and panels of patients, shares decision making with them, and respects their diversity of language, culture, race/ethnicity and healthcare preferences.

Thus, postgraduate training for new NPs is equally engaged in training to clinical complexity, and training to a high performance model of care. From our roots in community-oriented primary care, with its focus on consumer engagement and control, we were and still are in the business of transforming primary care from the ground up.

How We Started

It so happened that in 2002, I joined the Robert Wood Johnson Executive Nurse Fellows program, a three year journey that promised to stretch/expand and challenge its Fellows to take on big leadership challenges. With access to great minds in nursing, healthcare, politics and beyond, I launched my campaign to learn everything there was to know about what thought leaders had studied, proposed, and recommended in this area. I wanted to learn about the barriers that had been identified in the area of creating NP residency training, how to overcome them and to learn where collaboration and support might lie. I quickly learned that the barriers were abundant; the support was less so.

Reviewing Funding Mechanisms

A legal brief commissioned with some of my Robert Wood Johnson Foundation (RWJF) funds quickly confirmed that the statutory language of Medicare GME clearly precluded use of these funds for residency training for nurse practitioners (Direct GME payments: General requirements, 42 C.F.R. § 413.75, 2010). Reading the many Council on Graduate Medical Education (COGME) reports to Congress over the years, it was clear that the Council members were aware of the compelling need to promote primary care practice among new physicians as a viable alternative to the growing preference for specialty practice, to revamp training for a new era in healthcare, and to recognize the increased number of healthcare professionals such as nurse practitioners and physician assistants. Over the subsequent decade COGME

would devote significant attention to questions of revision and reform of GME but without substantial changes (Institute of Medicine [IOM], 2014). As I reached out to leaders in nursing practice, education, and policy, I encountered a diversity of opinions, both supportive and opposed, regarding postgraduate training.

Early Support

I am indebted to leaders such as Dr. Loretta Ford, founder of the NP role; the late Dr. Donna Diers, former Dean of the Yale School of Nursing; Dr. Margaret Fitzgerald, legendary NP leader and educator for their interest and support. Along with colleagues at CHCI, we began to lay out a conceptual framework for an NP postgraduate residency training program specifically designed to prepare new primary care NPs for practice in the safety net setting. As a senior executive leader in a large organization, I have influence over what we choose to invest our margin in—staff, services, programs, facilities, innovations. But the truth is, it's hardest to make the decision to invest in something which also happens to be your particular passion, especially when that precludes investing in other very deserving projects. I am fortunate that Founder, President and CEO of CHCI, Mark Masselli, and the CHCI Board of Directors, have provided unwavering support to both the concept and the reality of an NP postgraduate residency training program. In 2006, with no funding on the horizon, but the structure of the model designed, we decided it was time to move from concept to pilot so that we could test and evaluate the effectiveness of our design.

Initial Cohort

In 2007, with the help of a very talented Yale University School of Public Health recent graduate and young entrepreneur, Ming Cheung, we defined the essential/core elements of a new NP postgraduate program. We identified qualifications, a strategy for recruiting and selecting candidates, and a plan to recruit internal and external preceptors and master lecturers. In addition to the CEO and Board, we had the enthusiastic support of the key clinical and business leaders in the organization. Recognizing the time it takes after graduation to sit for certifying exams and become licensed as an advanced practice registered nurse (APRN), we set a yearly calendar for the program, starting the day after the Labor Day holiday and ending on August 31st of the following year. We accepted four individuals for the initial cohort; we educated colleagues within and outside of CHCI about the initiative; and we even had a bill passed by the Connecticut legislature applauding the creation of the program (Public Act No. 07-219, 2007). Rachel Demarco, a member of the cohort, joined us for the bill signing, and read from her application essay her reasons for applying to the program.



Ming Cheung (far left) and Dr. Nwando Olayiwola (center) with the initial CHCI NP resident cohort.

“Growing up in a family of Traditional Chinese Medicine (TCM) practitioners in NYC’s China Town has taught me so much in terms of community health and care coordination across various disciplines and cultural settings. But my first formal community health project in Connecticut was when I was a student at Yale University’s Masters in Public Health program doing assessment on unmet behavioral health for

the children in the state. This was when I first realized the shortage of community health providers has caused an inefficient healthcare model and poor quality of care.

When Margaret first introduced me to the concept of an NP residency program, I was troubled by the fact that such an important component of community healthcare providers, especially Family Practice NPs, did not have the systematic practical training available to them. To embark on such a program as a private institution we faced many challenges such as training operating costs, trainee and preceptor’s productivity measures, and evaluation of quality of rotations and didactics. All of the challenges we faced didn’t have a source of reference because we were the first ones to do such a thing. Under Margaret’s support and guidance, we eventually came up with the rotations, didactics, calculated the proper teaching time-adjusted performance measurements, and even created an online evaluation tool for feedback and evaluations. As the person who managed the first year of the program, I felt indebted to all the people who had made sacrifices to support the program. There are a few components that we couldn’t do without:

- 1. CHCI at the time had a very diversified group of specialists to support the program and a pool of preceptors from whom we could choose.**
- 2. CHCI had various sites and community programs (homeless outreach, school-based health centers, mobile health vans) to provide various settings for the NP training. We only had to seek outside CHCI for two rotations: the community hospital for rounding in the newborn nursery, and a senior-living facility for geriatric care.**
- 3. Leadership’s commitment was absolutely important. Mark, Margaret, the clinical site directors, and medical directors, all believed in this vision.”**

— MING CHEUNG, President/CEO

Shanghai Pu Kang Health Management Limited, China Primary Care Co., Ltd

"I knew from a young age that my career would focus on helping those in need. My passion lies in providing high quality healthcare for underprivileged populations. I became a family nurse practitioner because I believe that in caring for patients from birth to death I will form strong bonds and serve a diverse community. In building my patient panel post-residency as a full-time practitioner in the community, I am eager to establish and nurture meaningful and trusting relationships with my clients, and to become immersed in care at the essential level of the patient-provider relationship. It is this personal and respectful dialogue that is the heart of nursing and provides the foundation for patient trust, compliance, and improved clinical outcomes.

The residency is an ideal opportunity to collaborate with experienced clinicians, build and refine skill base, hone clinical judgement. Mentoring and support has prepared me to be a leader among APRNs in the community and in larger professional organizations.

I have a hunger for evolving clinical information, a continual drive to improve my abilities, and a high level of responsiveness to preceptor feedback."

—RACHEL (GOLLNICK) DEMARCO



The ceremonial bill signing on July 3, 2007. Standing behind Governor M. Jodi Rell are (left to right): Dr. Robert Galvin, Commissioner of the Department of Public Health; Rachel Gollnick, member of the inaugural NP residency class; Angela Anthony, Board member of CHCI; Margaret Flinter, Senior Vice President and Clinical Director at CHCI; Daren Anderson, MD, Chief Medical Officer at CHCI; Mike Starkowski, Commission of the Department of Social Services; State Senator John Kissel; and State Representative Faith McMahon.

That first cohort took a giant leap of faith born of nothing but their fierce and unrelenting desire to provide the best and most effective primary care to people who needed it most, to do that in the context of family and community, and to diminish however possible the impact of poverty on health. Their love of nursing, of community, of the science and art of healthcare coupled with their clear-eyed assessment of the gap between their readiness to practice as primary care providers and the needs of their patients led them to be part of this brand new innovation. We salute them for their courage and their willingness to be co-creators in this endeavor and continue to admire them to this day.

The experience and evaluation data from that first year strengthened our working hypothesis that residency training was the bridge between entry to practice and the advanced competencies required to care for patients with complex and often multi-co-morbid conditions. We witnessed the impact of the support of dedicated preceptors, mentors, and experiences as facilitating factors in mitigating the distress common among new NPs, and observed that distress gradually gave way to sustained progress towards confidence and mastery of the role of primary care provider. This transition was very consistent with the transition theory advanced by Dr. Afaf Meleis, which shows that the hallmarks of a successful transition are mastery of new skills and development of a fluid yet integrative identity (Meleis, Sawyer, Im, Messias, & Schumacher, 2000).

CHCI NP residents have submitted weekly reflective journals since the beginning of the NP Residency Program. These journals became a cornerstone of the program, yielding rich insights into the NP residents' experience over time. They illuminated a journey towards competence, mastery, and confidence in being an NP in the role of a primary care provider. A rigorous qualitative analysis of 1,200 journal entries submitted by 24 CHCI NP residents over a five year period provided primary scholarly confirmation of successful transition experience (Flinter & Hart, 2016).

Figure 1.1 (shown on page 20) illustrates the results of that study. Study authors Flinter and Hart (2016) were able to capture an overarching sequence of thoughts and emotions during the NP residents' transition to providing care to complex patients in a safety net setting. In the first three months, the NP residents transitioned from "gratitude" for the opportunity to be in the residency to "shock and awe", followed by "exhaustion", and then a feeling of having their "heads above water" by the middle of the residency year. As NP residents began the second half of their year, they began to "manage complexity" well enough to have an "awareness of emerging competence." By the end of the year, they reflect the confidence, competence and mastery that will position them for success as primary care providers in community health centers.

The pace and milestones of the transition experience will be different for each resident as they progress through the program year, and this ongoing, real-time feedback provides a valuable perspective on what each individual needs to maximize their progress to.

A Year in the Nurse Practitioner Residency Program

Based on Analysis of 1,200 Journal Entries from 2008 through 2013



Figure 1.1: A Year in the Nurse Practitioner Residency Program

Building and Seeking Federal Support

We have continued to innovate and advance the model locally as well as nationally, supporting other organizations in developing programs, advocating on Capitol Hill by sharing successes and need for these programs, and continuing the dialogue with

our healthcare colleagues and organizations. As we were preparing to welcome the third cohort (2009–2010), and as the country began its journey towards passage of the Patient Protection and Affordable Care Act, 42 U.S.C. § 18001 (2010), we were invited to host a briefing on Capitol Hill attended by congressional staffers, policy makers, representatives of HRSA and the National Health Services Corps (NHSC), and representatives of professional organizations and academia. Monica O'Reilly of the initial cohort joined us and spoke of the impact of CHCI's NP postgraduate residency training program on her development as a primary care provider.

"With only one year of extra support and mentorship, we can prepare nurse practitioners to thrive in community health centers. As we all know there is a shortage of primary care providers in this country. Nurse practitioners bring a unique philosophy and tradition to the front lines



Monica O'Reilly, FNP, a graduate of CHCI's inaugural NP residency class, speaking at the Nurse Practitioner Residency Briefing on May 28, 2008. Seated at the table are (left) Kandree Hicks, an incoming resident to the 2009–2010 cohort, and Nwando Olayiwola, MD, Chief Medical Officer at CHCI.

of community health. We excel in disease prevention and health promotion, empowering our patients to make lifestyle changes before the development of chronic diseases that expend an enormous amount of healthcare dollars. Founded in holism and compassion, we approach our patients with a special kind of care...a nurse's care...one that addresses the human experience of illness...one that understands the profound impact of poverty on wellness. People like and trust nurses...we are an invaluable and complementary asset to the world of primary care.

We need to provide the tools and skills to new nurse practitioners who desire to serve in community health, but are thwarted by fear of patient complexity and inadequacy. A year of extra training to these committed NPs, may yield decades of high quality care in an underserved area. It was an honor to be part of the first

residency class...through the program I established a solid foundation of skills that remain the backbone of my clinical practice. My continued commitment to community health and my sense of professional confidence and fulfillment speak to the value of this program...and the role it could serve in nurse practitioner education and improved access to healthcare. I am a primary care provider and I love it."

—MONICA O'REILLY, FNP

The discussion that day led to support from the late Senator Daniel Inouye and Senator Christopher Dodd, and inclusion of Section 5316, *An Act Authorizing Nurse Practitioner Training Programs* in the final version of the Affordable Care Act, 42 U.S.C. § 296j-1 (2010), which authorized a three year funding program establishing NP training programs in FQHCs and Nurse Managed Health Centers. Although never appropriated, Section 5316 stands as the first congressional legislative support for postgraduate nurse practitioner training programs.

Growth and Spread of the Model

With the proof of concept established, CHCI continued its focus on its own program development along with national replication and spread. From the very beginning, CHCI's intent had been to build a model for the country and the health center movement. Even as we more than doubled the size of the CHCI program, expanding from four to ten NP residents per year, we were strategizing about a model of scalability beyond CHCI. We found our inspiration for that scalability in the work of the Lutheran Medical Center, now NYU Langone Health, and their national dental residency program.

The team at NYU Langone had also looked at the issue of clinical preparation for dentists in the safety net setting and opportunities to train new dentists in this setting. Like NPs, there was no requirement for postgraduate residency training for dentists when we started down this path, although two states, New York and Delaware, now require completion of a dental residency for licensure. Unlike NPs, GME provides funding for dentists. The brilliance of the Lutheran model is that they could centralize and remotely support the service delivery and training sites with the expert training support and infrastructure. Today, they are the largest dental residency program in the world. Using this model as an exemplar, CHCI laid the groundwork for a similar model, and in 2014 established a model of remotely hosted NP Residency Programs, starting with two health centers in the state of Washington, the Yakima Valley Farmworkers Clinic and Columbia Basin Health Association. CHCI now remotely hosts programs at six organizations in Rhode Island (Thundermist Health Center), Indiana (HealthLinc), California (Open Door Community Health Centers), Hawaii (Waianae Coast Comprehensive Health Center), and New York (HRHCare Jeannette J. Phillips Health Center at Peekskill) as well as the original program at Yakima Valley Farmworkers Clinic.

Across the United States, we have seen a steady march forward of this movement. Our initial vision—that we were building a model for replication that could make a



HRHCare
Jeannette
J. Phillips
Health Center
at Peekskill
(HRHCare)
Nurse
Practitioners
Residency
Program

From left to right: Jaslyn Mesa, Operations Manager, HRHCare; Charise Corsino, NP Residency Program Manager, CHCI; Kenneth Sax, FNP, HRHCare; Dr. Daniel Miller, Chief of Clinical Integration and Graduate Medical Education, HRHCare; Kerry Bamrick, Senior Program Manager, CHCI; Dr. Dan Wilensky, Chief Preceptor, CHCI; Maria De Borba-Silva, NP Residency Program Manager, HRHCare; La-Keisha Hudson, Internal Medicine Nurse Manager, HRHCare.



Open Door Community
Health Centers
Nurse Practitioners
Residency Program

From left to right: 2016-2017 Inaugural cohort, Gina Silveira and Beth Spellmeyer, Nurse Practitioner residents with Open Door President and CEO Hermann Spetzler.

major contribution to the future of health and healthcare in this country—is being realized. In the absence of a national registry for programs, we make a strong effort to track all NPs completing a primary care postgraduate residency training program by contacting their program directors annually. There has also been growth and development in specialty focused NP postgraduate residency and fellowship programs, which is beyond the scope of this book but can be explored here: <https://apgap.enpnetwork.com/page/24301-program-master-list>. We have been inspired by the common understanding of the imperative to develop NP residency training programs for new primary care providers. We have continued to answer the question: Who wants to be a primary care provider and how can we support them? Nurse practitioners do, and postgraduate residency training programs, particularly in FQHCs, is how we can support them.

Primary Care Nurse Practitioner Postgraduate Training Programs Across the Country

NP Postgraduate Training Programs and Start Dates

Nurse Practitioner (NP) Postgraduate Training Programs

CALIFORNIA

- 2011: Glide Health Services and UCSF/UCLA NP Residency*; San Francisco
- 2012: San Francisco VA Medical Center; San Francisco
- 2012: Santa Rosa Community Health Centers; Santa Rosa
- 2015: Lifelong Medical Care; Berkeley
- 2015: Shasta Community Health Center; Redding
- 2016: Open Door Community Health Center; Arcata
- 2016: Greater Los Angeles VA Medical Center; Los Angeles
- 2017: Avenal Community Health Center; Lemoore
- 2017: Asian Health Services; Oakland

COLORADO

- 2015: Peak Vista Community Health Centers; Colorado Springs

CONNECTICUT

- 2007: Community Health Center, Inc.; Middletown
- 2011: VA Connecticut Healthcare System; West Haven

DELAWARE

- 2017: Christiana Care; Wilmington

FLORIDA

- 2016: West Kendall Baptist Hospital; Miami
- 2016: Baycare Health System; South Bay

HAWAII

- 2015: Waianae Coast Comprehensive Health Center; Waianae

IDAHO

- 2012: Boise VA Medical Center; Boise

ILLINOIS

- 2016: OSF Healthcare; Peoria

INDIANA

- 2016: HealthLinc; Valparaiso

MAINE

- 2011: Penobscot Community Health Care*; Bangor

MASSACHUSETTS

- 2009: Family Health Center of Worcester; Worcester
- 2016: Reliant Medical Group; Leominster

MISSISSIPPI

- 2013: North Mississippi Medical Center Clinic; Tupelo

MISSOURI

- 2017: Saint Luke's Health System; Kansas City

NEW HAMPSHIRE

- 2017: Lamprey Health Care; Newmarket

NEW YORK

- 2015: Morris Heights Health Center*; Bronx
- 2015: Community Health Care Network; New York
- 2016: Highland Family Medicine; Rochester
- 2017: The Institute of Family Health; Bronx
- 2017: HRHCare Jeannette J. Phillips Health Center at Peekskill; Peekskill

NORTH CAROLINA

- 2014: The Western North Carolina Community Health Services; Asheville
- 2014: The Center for Advanced Practice—Carolinas Health Care System; Charlotte
- 2014: University of Rochester; Rochester

OHIO

- 2013: Louis Stokes Cleveland VA Medical Center; Cleveland

OREGON

- 2015: PeaceHealth; Eugene
- 2016: Yakima Valley Farm Workers Clinic; Salem

PENNSYLVANIA

- 2012: Puentes de Salud; Philadelphia

RHODE ISLAND

- 2015: Thundermist Health Center; Woonsocket

SOUTH CAROLINA

- 2016: Lexington Medical Center; West Columbia
- 2017: Spartanburg Regional Healthcare System; Spartanburg

TEXAS

- 2011: CommUnityCare and the University of Texas at Austin School of Nursing; Austin
- 2016: Michael E. DeBakey VA Medical Center; Houston

VIRGINIA

- 2016: Bon Secours Richmond Health System; Midlothian

WASHINGTON

- 2012: Community Health Care; Tacoma
- 2013: VA Puget Sound Health Care System; Seattle
- 2014: Columbia Basin Health Association*; Othello
- 2014: International Community Health Services; Seattle
- 2014: Yakima Valley Farm Workers Clinic; Yakima
- 2015: The Everett Clinic; Everett
- 2015: Primary Care Advanced Practice Fellowship—MultiCare Health System; Puyallup
- 2015: Sea Mar Community Health Centers; Seattle
- 2017: CHAS Health; Spokane

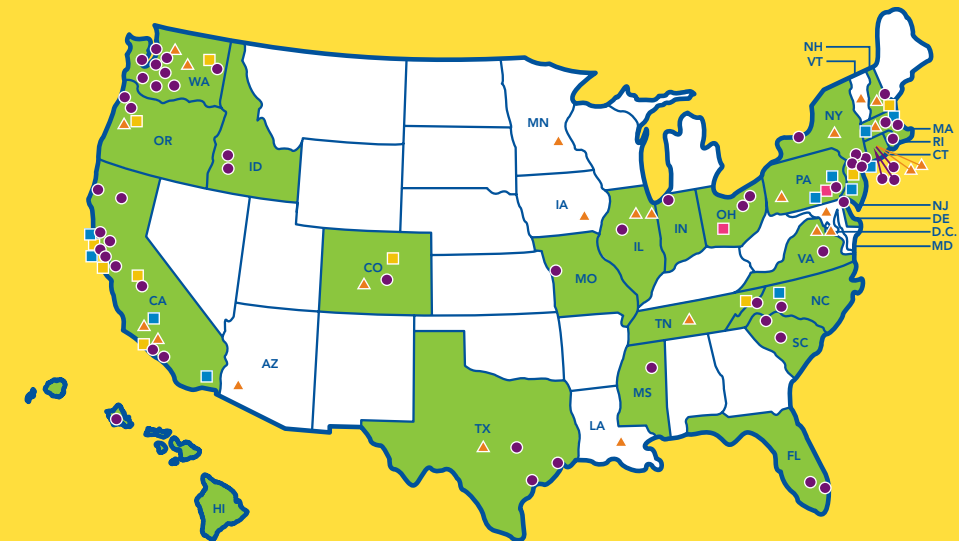
U.S. Department of Veterans Affairs Centers of Excellence in Primary Care Education (CoEPCE)

Primary Care Nurse Practitioner (NP) Postgraduate Residencies

- CALIFORNIA:** Los Angeles; San Francisco
- CONNECTICUT:** West Haven
- IDAHO:** Boise
- OHIO:** Cleveland
- TEXAS:** Houston
- WASHINGTON:** Seattle

* Not currently active.

Primary Care Nurse Practitioner Postgraduate Training Programs Across the Country (continued)



- Currently active Nurse Practitioner Postgraduate Training Programs
- Family Nurse Practitioner (FNP) NCA Learning Collaborative sites for 2017–2018
- Psychiatric Mental Health Nurse Practitioner (PMHNP) NCA Learning Collaborative sites for 2017–2018
- Family Nurse Practitioner (FNP) NCA Learning Collaborative sites for 2016–2017
- ▲ Locations where graduates of the CHCI Nurse Practitioner Residency Program are practicing

NCA Learning Collaborative Sites

2017–2018

CALIFORNIA

- Clinica Sierra Vista; Bakersfield
- Clinicas de Salud del Pueblo, Inc.; Brawley
- County of Santa Cruz; Santa Cruz
- Salud Para La Gente; Watsonville

MASSACHUSETTS

- Charles River Community Health; Brighton
- Holyoke Health Center; Holyoke

NEW JERSEY

- Henry J. Austin Health Center; Trenton

NEW YORK

- Callen-Lorde; New York

NORTH CAROLINA

- Mountain Area Health Education Center (MAHEC); Asheville

OHIO

- Nationwide Children's Hospital; Columbus

PENNSYLVANIA

- Public Health Management Corporation (PHMC); Philadelphia
- SouthEast Lancaster Health Services, Inc.; Lancaster

2016–2017

CALIFORNIA

- Avenal Community Health Center; Lemoore
- The Children's Clinic—Long Beach; Long Beach
- Health Right 360 (Lyon Martin Health Services); San Francisco
- Petaluma Health Center, Inc.; Petaluma

COLORADO

- Montbello Health Center; Denver

NEW HAMPSHIRE

- Lamprey Health Care; Newmarket

NEW JERSEY

- Rutgers Community Health Center; Newark

OREGON

- Central City Concern Old Town Clinic; Portland

TENNESSEE

- Johnson City Community Health Center; Johnson City

WASHINGTON

- CHAS Health; Spokane

List current as of November 27, 2017.

Conclusion

Ahead of us are great challenges. We have not found the key to unlocking a sustainable funding stream which contributed to the close of two programs. Most of the programs that have started have done so out of the same imperative that drove CHCI: a recognition that it was incumbent on us to make this happen, and that clinical workforce development must be a top priority for delivering on the promise of excellent healthcare in America.

References

- Brown, M.; Olshansky, E. F. (1997). "From Limbo to Legitimacy: A Theoretical Model of the Transition to the Primary Care Nurse Practitioner Role." *Nursing Research*, 46(1), 46–51.
- Brown, M.; Olshansky, E.F. (1998). "Becoming a Primary Care Nurse Practitioner: Challenges of the Initial Year of Practice." *Nurse Practitioner*, 23(7), 46.
- Davis, K.; Schoenbaum, S. C.; Audet, A. (2005). "A 2020 Vision of Patient-Centered Primary Care." *Journal of General Internal Medicine*, 20(10), 953-957. doi:10.1111/j.1525-1497.2005.0178.x
- DifferenceBetween.Net. Difference between fellowship and training. Retrieved from <http://www.differencebetween.net/science/health/difference-between-fellowship-and-residency/>
- Direct GME payments: General requirements, 42 C.F.R. § 413.75, CFRU.S.C. (2010).
- Draye, M.A.; Brown, M.A. (2000). "Surviving the Proving Ground: Lessons in Change from NP Pioneers." *Nurse Practitioner*, 25(10), 60.
- Flinter, M. (2010). *From New Nurse Practitioner to Primary Care Provider: A Multiple Case Study of New Nurse Practitioners Who Completed a Formal Postgraduate Residency Training* (PhD). Available from Doctoral Dissertations. (AAI3411460).
- Flinter, M.; Hart, A.M. (2016). "Thematic Elements of the Postgraduate NP Residency Year and Transition to the Primary Care Provider Role in a Federally Qualified Health Center." *Journal of Nursing Education and Practice*, 7(1), 95.
- Public Act No. 07-219—SHB 5751,Ct., "An Act Establishing a Pilot Family Nurse Practitioner Training Program." (2007).
- Hart, A.M.; Macnee, C.L. (2007). "How Well are Nurse Practitioners Prepared for Practice: Results of a 2004 Questionnaire Study." *Journal of the American Academy of Nurse Practitioners*, 35–42.

HRSA. (2014). "HRSA Study Finds Uptick of Nurse Practitioners Working in Primary Care." Retrieved from <https://www.hrsa.gov/about/news/press-releases/2014-05-07-nurse-practitioner-survey.html>

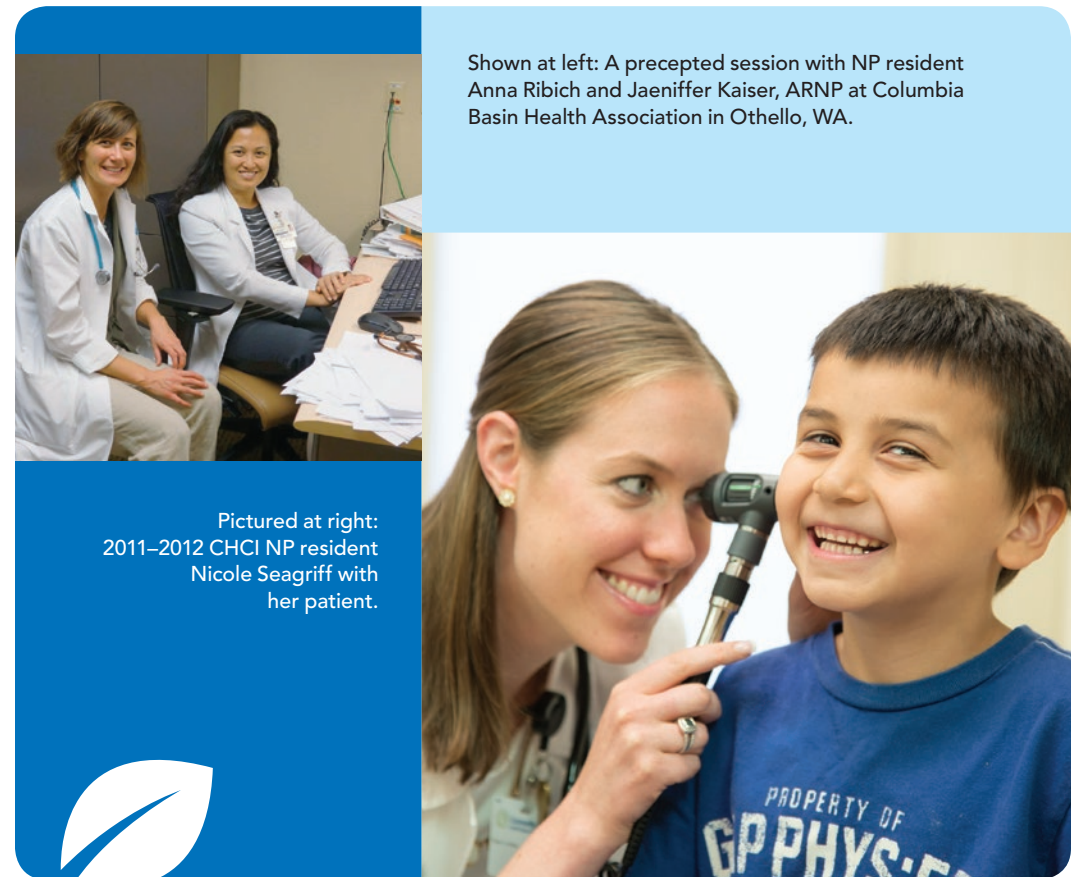
HRSA. (2017). "Human Resources and Services Administration (HRSA)." Retrieved from <https://www.hrsa.gov/index.html>

IOM (Institute of Medicine). (2014). *Graduate Medical Education that Meets the Nation's Health Needs*. Washington, DC: The National Academies Press.

Kaiser Family Foundation. (2016). "Key Facts About the Uninsured Population." Retrieved from <http://kff.org/uninsured/fact-sheet/key-facts-about-the-uninsured-population/>

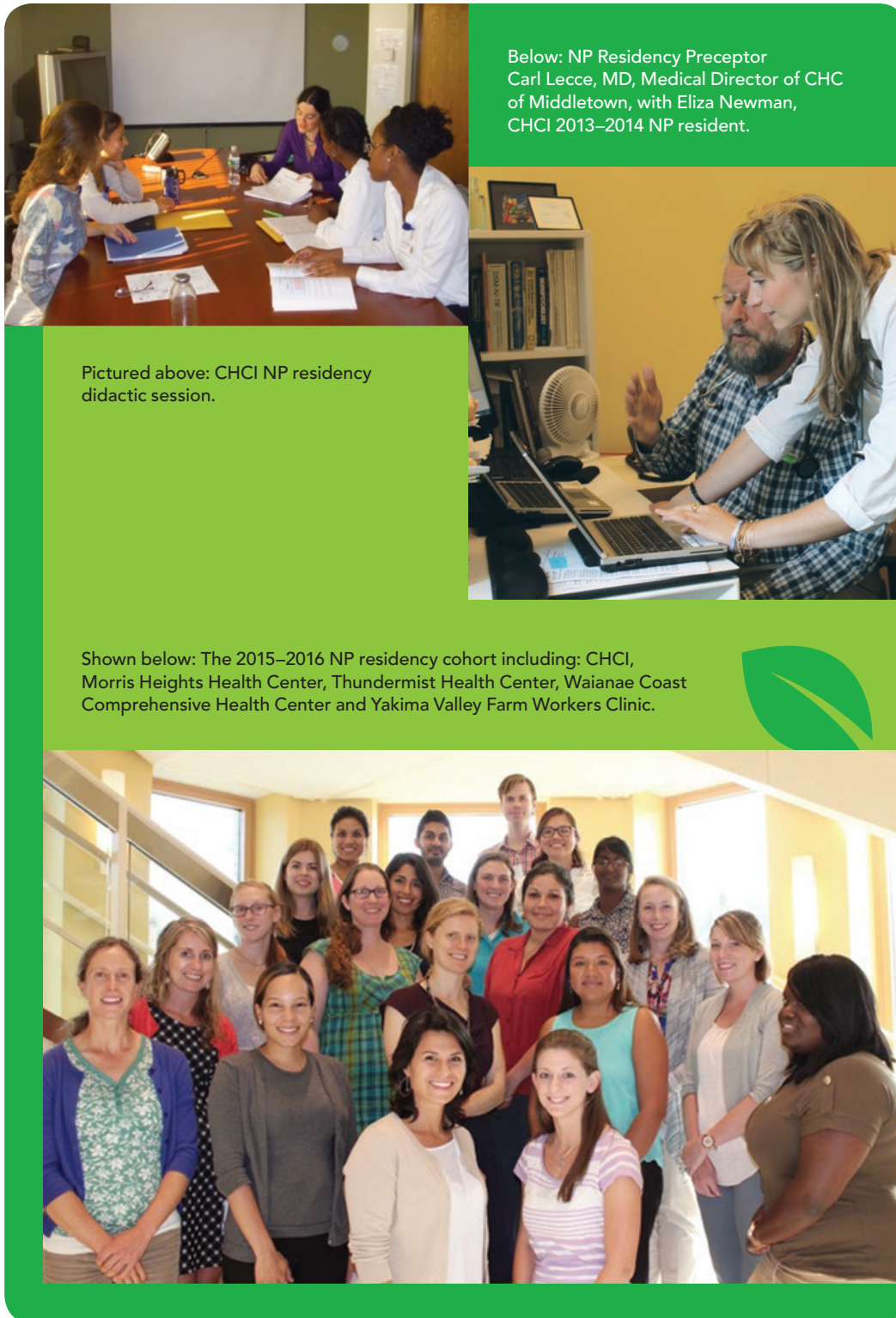
Meleis, A.I.; Sawyer, L.M.; Im, E., Messias, D.; Schumacher, K. (2000). "Experiencing Transitions: An Emerging Middle-Range Theory." *Advances in Nursing Science*, 23(1), 12–28.

Mundinger, M.O. (2005). "Who's Who in Nursing: Bringing Clarity to the Doctor of Nursing Practice." *Nursing Outlook*, 53(4), 173–176. doi:10.1016/j.outlook.2005.05.007



Shown at left: A precepted session with NP resident Anna Ribich and Jaeniffer Kaiser, ARNP at Columbia Basin Health Association in Othello, WA.

Pictured at right: 2011–2012 CHCI NP resident Nicole Seagriff with her patient.



Below: NP Residency Preceptor Carl Lecce, MD, Medical Director of CHC of Middletown, with Eliza Newman, CHCI 2013–2014 NP resident.

Pictured above: CHCI NP residency didactic session.

Shown below: The 2015–2016 NP residency cohort including: CHCI, Morris Heights Health Center, Thundermist Health Center, Waianae Coast Comprehensive Health Center and Yakima Valley Farm Workers Clinic.



CHAPTER 2

What Does it Mean to Train to a High-Performance Model of Care?

The original drivers in creating Community Health Center, Inc.'s (CHCI) nurse practitioner (NP) postgraduate training program were almost entirely focused on training new NPs to the clinical complexity of patients cared for in the nation's community health centers. We did not initially appreciate how much new NPs also would benefit from intensive additional training to the model of care in practice. Postgraduate training provides an opportunity to **train to a high performance model of care** that is satisfying to patients and providers alike; one that addresses and removes systemic barriers to providing excellent care to complex patients, leads to quality outcomes, and arms the next generation with the tools and skills available to us from the science of quality improvement. In this way, we will continually improve the practice environment.



What is a high performance model of care? Dr. Karen Davis is a Professor of Public Health at Johns Hopkins University, former head of the Commonwealth Fund and served as a federal health economist in the early days of the health center movement. She has focused on identifying, and studying, high performance health systems. In a study published in 2005, she identified seven attributes of high performance, patient centered primary care that is likely to yield cost and quality outcomes that are valued by patients, providers, and policy makers (Davis, 2005). These include:

- Superb access to care;
- Patient engagement in care;
- Clinical information systems;
- Care coordination;
- Integrated, comprehensive care;
- Ongoing, routine patient feedback; and
- Publicly available information about practices.

In 2017, with another decade of innovation, research and policy changes behind us in the United States, CHCI would agree with each of the attributes identified by Dr. Davis but expand the list to include the following:

Elements of a High Performance Model of Care

- **Team-based care in which patients are empaneled with a primary care provider (PCP) and team of individuals with clearly defined roles, skills, and training; and are armed with the data that allow each team member to make their fullest contribution;**
- **Fully integrated behavioral health and primary care, characterized by physical co-location, integrated clinical data, coordination of care, access by “warm hand-offs” for initial contact, a program of both individual and group therapy, co-led medical/behavioral groups to enhance chronic illness care, and access to psychiatric specialty care as needed;**
- **Complex/intensive care management that intensifies services to the individual and their family during periods of great need, such as transitions in care or at times when healthcare needs are exacerbated or conditions poorly controlled, often working in collaboration with a circle of care involving others in the community to address social as well as clinical needs;**
- **Consultation and collaboration with specialists, through either traditional referral mechanisms or, increasingly, through electronic, asynchronous consults through “eConsults”;**
- **Ongoing training and mastery of new knowledge and skill by primary care teams through strategies such as Project ECHO® and ongoing learning collaboratives such as those offered by HRSA’s National Cooperative Agreement (NCA);**
- **Quality improvement support and training for live-time, ongoing process improvement, redesign, and management of change in primary care; and**
- **Opportunity for engagement in one or more elements of education, training, research, innovation, or QI by every member of the team.**

In CHCI’s NCA on Clinical Workforce Development’s first year (2016–2017), we developed a series of eight webinars designed to educate and support the health center movement in advancing their model of team-based care through training on each element of this high performance model of care. Each of the webinars, along with tools for implementation, such as sample policies and job descriptions, are available at www.chc1.com/nca. Additional tools and resources can be found at www.ImprovingPrimaryCare.org, the website of the Primary Care Teams: Learning From Effective Ambulatory Practices or “LEAP” project that studied 30 exemplary team-based primary care practices between 2012 and 2017, which was co-chaired by Dr. Margaret Flinter, PI of CHCI’s NCA, and by Dr. Ed Wagner of the MacColl Center for Health Care Innovation.

The following is a brief overview of each element of the model as listed above, with additional focus on emerging changes to specific roles. We will describe the roles of team members practicing in a high performance model of care, and strategies to provide postgraduate NP trainees as well as students and trainees of all the health professions an opportunity to learn, model, and train in a high performance model of primary care appropriate to the challenge and complexity of the patient population.

Team-Based Care

Whether a practice is made up of a single “teamlet” of primary care provider and medical assistant or a large, multi-site organization with multiple core and extended teams, the evidence base for the advantages of team-based care is well established. Such care improves outcomes, expands access, and contributes to satisfaction (Carter, Rogers, Daly, Zheng, & James, 2009; Coleman, Austin, Brach, & Wagner, 2009; Willard-Grace et al., 2014). The team-based model has been a particular focus in community health centers and the U. S. Department of Veterans Affairs Health Administration, both of which were early adopters of the chronic care model for the management of chronic illness, with adaptation for prevention, health promotion, and routine care (Wagner, 2000).

However, change is difficult. This was acknowledged in a discussion paper published by the Institute of Medicine (IOM) in 2012 based on a roundtable addressing “Core Principles and Values of Effective Team-Based Health Care” (Mitchell et al., 2012). The paper is a thoughtful treatment of this important topic, and openly acknowledged some of the difficulties involved in the transition to team-based care, noting “Health care has not always been... a team sport” (Mitchell et al., 2012, p. 1).

The results of the LEAP project point to an emerging consistency in the design, structure, roles and functions of teams in primary care. The teamlet of a primary care provider and dedicated, well-trained medical assistant (MA) is at the core, supporting a full panel of patients. The core team often includes a nurse supporting one to three panels of patients, engaged with patient-facing care in patient education, chronic illness care, prevention, acute care, and care transitions using protocols and standing orders. The figure below lists the trends identified by the LEAP project in high performing practices that have embraced a model of team-based primary care (Wagner et al., 2017).

Table 2.1: Primary Care Staff Organization, Roles and Activities in LEAP Practices (Wagner et al., 2017)

Innovation Area	Major Trends	Promising Innovations
Primary Care Team Structure	<ul style="list-style-type: none"> Providers and their panels are supported by a core team built around strong provider-MA partnerships. Multi-provider core teams often include, RNs, and front desk staff. Core team members including PCPs share offices and work spaces. Extended practice teams often include RN care managers, behavioral health specialists, and pharmacists. 	<ul style="list-style-type: none"> Each PCP works with 2 MAs, who remain with each patient throughout their visit—doing intake, scribing for the PCP, and handling post-visit questions and issues.
Enhanced Role of Medical Assistants	<ul style="list-style-type: none"> MAs review charts of scheduled patients and lead core team huddles to plan care. MAs arrange or deliver most preventive care procedures. MAs often involved in outreach to patients with care gaps or needing follow-up. MAs are actively involved in Quality Improvement and play leadership roles. 	<ul style="list-style-type: none"> MAs with additional training in self-management support and diabetes care conduct individual and small group visits with diabetic patients.
Roles of Registered Nurses	<ul style="list-style-type: none"> Core team RNs provide follow-up care, skills training, and self-management support to chronically ill patients in nurse encounters or conjoint visits. Team RNs use nurse visits and standing orders to manage common acute illnesses. RN care managers work with small panels of high risk patients. 	<ul style="list-style-type: none"> RNs use delegated order sets to titrate medications for patients with common chronic conditions—e.g., warfarin, anti-hypertensive drugs.
Layperson Patient Care Roles	<ul style="list-style-type: none"> Laypersons help patients address needs for information, community resources, and coordination of their care. 	<ul style="list-style-type: none"> Laypersons trained in self-management counseling serve as health coaches. Layperson EMR experts make changes to the EMR supportive of quality improvement.

Innovation Area	Major Trends	Promising Innovations
Managing Complex Illness	<ul style="list-style-type: none"> RN Care Managers work with small panels of sicker patients, including those discharged from hospital. Behavioral Health Specialists, other social workers, and lay care coordinators/community health workers address psychosocial needs. Pharmacists provide Medication Therapy Management services to multi-problem patients. 	<ul style="list-style-type: none"> Weekly or bi-weekly case conferences convene multi-disciplinary clinic staff to discuss challenging patients and develop a comprehensive care plan, and review progress of previously discussed patients.
Behavioral Health Integration	<ul style="list-style-type: none"> Core team (MAs and RNs) involved in depression screening and follow-up. On-site Behavioral Health Specialists facilitate warm hand-offs and provide short-term therapy and crisis management. Advice on psychotropic drugs is obtained from on-site or consulting Psychiatrists or Psychiatric NPs. 	<ul style="list-style-type: none"> Patients on chronic opioid therapy are tracked, asked to sign contracts, and offered in-clinic buprenorphine therapy if warranted.
Clinic-Community Connections	<ul style="list-style-type: none"> Practices hire staff from populations served by the clinic. Designated practice team members help patients identify and access community services. Practice actively cultivates partnerships with community organizations to address social and environmental issues. 	<ul style="list-style-type: none"> The practice works with other agencies in the community to address social determinants of health.

Practice in the very busy and demanding setting of a FQHC calls for explicit training in the expectations, communications, workflow, and mutual support that underlies a highly effective team. Therefore, the NP postgraduate residency training program should allow time for residents to shadow the MA and the RN, review policies, protocols and procedures for their work and a discussion of the scope of practice and legal authority for both MAs and RNs in their state. If the practice utilizes clinical dashboards or “huddles” to plan the day, provide an opportunity for the NP residents to see the perspective of team members beyond only the primary care pro-

viders. Different practices will be at different levels in the advancement of the MA role and the transforming role of the RN in primary care. It is critical to understand these roles, and to work together in partnership for the success of the team and the care of the patient (Bodenheimer, Ghorob, Willard-Grace, & Grumbach, 2014a; Flinter, Hsu, Cromp, Ladden, & Wagner, 2017). See NCA Webinar #2 (<https://vimeo.com/157767744>) and #3 (<https://vimeo.com/161711534>) for further detail on the role of MAs and RNs in primary care.

Integrated Behavioral Health and Primary Care

Health centers are leaders in the implementation of integrated behavioral health and primary care. The core team has expanded to include a master's or doctoral level behavioral health clinician. Ideally, the behavioral health clinician is there to accept immediate "warm hand-offs" from the primary care provider, but also to "in-reach" into the panel(s), looking to identify individuals with characteristics that suggest behavioral health intervention might be desired and beneficial. The core team behavioral health provider then provides follow-up individually as well as through group care to patients with primary behavioral health diagnoses. Patients living with chronic illness such as diabetes, tobacco cessation, or opioid addiction, to name a few, are also included. NP residents training in a practice that has adapted this model recognize the vital role of the behavioral health provider both in the care of the patient and in supporting the work of the entire team.

This is an area in which there has been tremendous progress in the years since the CHCI NP postgraduate residency training program model was first developed. Increasingly, substance abuse treatment, particularly for opioid addiction, is also part of this integration. The NP postgraduate residency training program should include an explicit review of the role, protocols, and scope of the behavioral health provider in the practice. This should include training on the use of warm hand-offs, the flow of communication among team members, crisis management, and how to access psychiatrists and/or psychiatric/mental health nurse practitioners (directly or via telehealth options) for diagnostic support, psychiatric emergencies, and support in managing psychotropic medications as needed.

"I learned how multidisciplinary collaboration within a shared space could be extremely beneficial and also efficient for both patients and providers. I was able to get an expert opinion from the psychiatrist regarding medication and we were all on the same page with a quick 5-minute meeting."

— Former CHCI NP resident

The team-based care model with behavioral health integration is enhanced by formal case review and discussion, such as in integrated care team meetings, or through regular sharing of updated information. The behavioral health providers(s) can provide invaluable support through these means of communication which amplify and augment medical treatment. They can also provide patients with the robust education, support, and counseling that is challenging for medical providers to deliver in the primary care visit. We strongly encourage that you take advantage of any opportunity for the NP resident to co-lead or participate in a group with a behavioral health clinician.

Complex Care Management

Complex care management by RNs or social workers has evolved to become a key function in team-based primary care. Our experience is primarily in RN-led care management. While team RNs in primary care are always engaged in a level of care coordination and chronic illness management, the trend towards value-based insurance contracts has led to an expectation that the primary care practice will also target high risk, high complexity, or high cost patients for intensive care management, coordination, and transition management. These patients may be identified or flagged at the level of the covering health plan, which has access to all of the patient's claim data on utilization, source of care, and cost. Therefore, the health plan can assign actual and predicted risk scores, identify gaps in care, and target very high risk sub-groups, with notification to the practice of patients requiring intensive care management.

These high risk patients may also be identified at the practice level. In the CHCI practice, for instance, we define criteria that suggest which patients would benefit from RN care management and give the team the ability to "admit" patients to active care management. Criteria include recent hospital admission, one or more poorly controlled chronic illnesses, frequent ER visits, or simply recognition by someone on the team that the patient needs the help. In some practices, the primary care RN's role on the team has been transformed to integrate care management with all of the other responsibilities of the RN role. In other practices, the role of the RN is transformed into a dedicated care manager, a highly specialized role supporting multiple teams or an entire practice. Of note, patients at highest risk, such as those enduring chronic homelessness, may be the least engaged in care and thus require the most intensive outreach by the RN or other staff. The NP residents should receive explicit instruction regarding the scope, protocols, and procedures for accessing RN complex care

management for their patients, and be encouraged to utilize this important resource fully, exploring the contributions and strategies used by the RN care manager to positively impact care. Strategies such as sharing information through a common care plan will build the NP resident's understanding and expertise in sharing the care of complex patients with others on the core team.

Expanded Role of the Medical Assistant

Across the country, medical assistants (MA) are advancing their knowledge, skills, and contributions to primary care. Inspired by the work of Dr. Tom Bodenheimer and colleagues, MAs in some high performing practices are now well versed in motivational interviewing, health coaching, and the use of clinical dashboards to drive adherence to standards for routine prevention, health promotion, and chronic illness monitoring (Bodenheimer, Willard-Grace, & Ghorub, 2014b). Two health centers, CHCI and Salud Health Center in Colorado, have combined efforts to create a new national medical assistant training program, the National Institute for Medical Assistant Advancement (NIMAA) (<http://nimaa1.org/>). Using an innovative approach to integrated online didactic education combined with clinical training in high performance health centers, NIMAA is educating new medical assistants to an advanced level of participation in team-based care.

From its initial pilot classes in two health centers in 2016–2017, the program is expanding nationally, focused on training tomorrow's medical assistants to contribute fully to patient care and practice operations in a high performance primary care organization.

Other team members: Beyond the core team members, today's health centers may include a pharmacist, chiropractor, physical therapist, dietician/nutritionist, diabetes educator, community health worker, scribe, and more as practices respond to the needs of their patients and local environment. In addition, larger health centers may have on-site specialists to address particularly high volume specialty needs.

Consultation and Referral to Specialist Care

For clinicians new to practice in health centers, it can be a shock to realize how challenging accessing specialty care can be for your patient population based on geography, insurance type, and specialist availability. Although on-site specialist care is not a required service that FQHCs must provide, all primary care providers refer to specialists and have a process for referrals in place. The orientation for the NP

residents should include discussing the availability of specialist care, the processes of accessing specialist care, and the bi-directional communication pathway to coordinate that care and follow up. We encourage, wherever possible, that the NP postgraduate residency training program look for opportunities to directly connect the NP residents at the beginning of the program with community specialists who are formally or informally the principal specialist providers to the practice.

Increasingly there is a new strategy for accessing specialist consultant services that we term *Moving the Knowledge, Not the Patients*. Also known as eConsults, or "eReferrals," this strategy was originally conceived by Dr. Mitch Katz and colleagues at San Francisco General Hospital and Trauma Center, which is part of the San Francisco County Health Department. Using simple faxing technology initially, this model allowed primary care providers to electronically submit the consult question, along with pertinent data (recent labs, diagnostic images, and history) to a designated specialist for consultation and advice (Sheridan & Howard, 2013).

Studies have confirmed that these electronic referrals and consultations between primary care providers and specialists could accomplish the goals of reducing wait time for specialty appointments as well as the need for in-person specialty visits, and that they allowed primary care providers to access the specialty knowledge they needed to care for their patients (Barnett, Yee, Mehrotra, & Giboney, 2017; Chen & Yee, 2011; Chen, Kushel, Grumbach, & Yee, 2010; Chen, Murphy, & Yee, 2013). The asynchronous nature of the eConsult, in which the primary care provider submits the consult question and relevant data, and the receiving specialist reviews and returns within a mutually agreed upon time period, maximizes flexibility and convenience on the part of both primary care and specialty providers.

Similar outcomes were reported at the University of California San Francisco Hospital (UCSF) (DiGiorgio et al., 2015), CHCI (Olayiwola et al., 2016) and in the largest study of eConsults to date, published in *Health Affairs* in 2017 (Barnett et al., 2017) which found that eConsults yielded positive clinical outcomes, reduced costs and unnecessary or duplicative diagnostic testing, and were satisfying to providers as well as patients.

This model is scalable and replicable, and use of this innovation is spreading. NP residents in organizations with access to eConsults should receive training by the clinical leadership on when and how to request or create an eConsult, the framing of the consult question, and the protocols for informing the patient of the request, as well as the results.

Ongoing Training to Address New and Emerging High Complexity Challenges

Today's practicing primary care providers, including postgraduate NP residents and fellows, have access to an innovation that collectively advances our ability to secure timely consultation from a team of specialists in a high complexity area while advancing our knowledge and mastery in caring for patients with complex conditions. At the same time, primary care providers become part of a community, learning from other primary care practices. Project ECHO® (Extension for Community Healthcare Outcomes) (<http://weitzmaninstitute.org/project-echo>), like eConsults, provides a different experience of moving knowledge, not patients. Where eConsults is a one to one asynchronous communication between primary care provider and specialist regarding a single patient, Project ECHO® brings together multiple primary care providers with a team of multi-disciplinary specialists with expertise in a particular clinical area.

The creator of the Project ECHO® model, Dr. Sanjeev Arora at the University of New Mexico, defines it this way: "Project ECHO® is a lifelong learning and guided practice model that revolutionizes medical education and exponentially increases workforce capacity to provide best-practice specialty care and reduce health disparities. The heart of the ECHO® model is its hub-and-spoke knowledge-sharing networks, led by expert teams who use multi-point videoconferencing to conduct virtual clinics with community providers. In this way, primary care doctors, nurses, and other clinicians learn to provide excellent specialty care to patients in their own communities" (Arora et al., 2011) (<http://echo.unm.edu/>).

The model has been embraced by primary care organizations focusing on vulnerable populations. The Weitzman Institute of CHCI has developed a Project ECHO® model that engages clinicians in 28 states through Project ECHO® programs focused on caring for patients with chronic pain, opioid addiction, HIV, and Hepatitis C, as well as LGBTQ care, RN complex care management, and complex pediatrics. Participation in Project ECHO®, also offered by many academic medical centers across the country along with the Weitzman Institute and the University of New Mexico, is a highly valuable component of the CHCI NP Residency Program and an excellent source of specialty didactic training.

The Art and Science of Performance and Quality Improvement

All health professional students learn throughout their academic preparation and in practice that we must be champions of quality and safety, responsible not just to deliver care but to improve it. The NP residency program year provides an ideal opportunity to teach and practice the science and tools of quality improvement (QI). A high performance health system is one in which quality improvement knowledge, skills, and activities are prominent, distributed throughout the practice or organization, and brought to bear on issues of interest and concern to the primary care team and practice. We need our primary care providers to have the skills to participate in data-driven performance improvement in a meaningful way; to lead and coach practice teams in identifying areas in need of improvement and systematically addressing them; and to use the concepts of change management and organizational effectiveness to implement tested and verified improved processes and practices. The NP postgraduate residency training year provides a superb opportunity to accomplish this.

In the CHCI NP Residency Program, a highly interactive quality improvement seminar meets every other week as part of the yearlong program. In this seminar, teams of NP residents produce a quality improvement project, working inter-professionally with other trainees such as postdoctoral clinical psychology residents and using the science and tools mastered throughout the course of the year to identify, address, and hopefully resolve a problem or improve a process or clinical outcome. In addition, the NP residents attend and participate in the organizational Performance Improvement Committee meetings, as well as the more specific medical QI, Pharmacy and Therapeutics, and Infection Control Committees all of which utilize rigorous QI tools for their work (<http://clinicalmicrosystem.org/>).



Dr. Mary Blankson, DNP, CNO of CHCI, leads a Project ECHO® RN Complex Care Management session by videoconference. Faculty includes Dan Bryant (behavioral health), Kit McKinnon (nursing), Kara Ellis (nutrition), Dan Wilensky (medicine) and Maria Salvo (pharmacy).

Conclusion

Every community health center is on a path towards higher performance in service to our patients and communities, and as stewards of federal resources invested in the health center program. Progress has been dramatic over the past decade. More than 95% of all health centers use an electronic health record, 68% have achieved Patient-Centered Medical Home (PCMH) designation, and Uniform Data System (UDS) measures of quality in outcomes of care have been steadily improving (HRSA, 2017). Postgraduate NP residency training in community health centers gives us an opportunity to train our next generation of NPs to be generational leaders in advancing a model of high performance healthcare throughout the country.

References

- Arora, S.; Thornton, K.; Murata, G.; Deming, P.; Kalishman, S.; Dion, D.;...Qualls, C. (2011). "Outcomes of Treatment for Hepatitis C Virus Infection by Primary Care Providers." *The New England Journal of Medicine*, 364(23), 2199–2207. doi:10.1056/NEJMoa1009370 [doi]
- Barnett, M.L.; Yee, H.F., Jr.; Mehrotra, A.; Giboney, P. (2017). "Los Angeles Safety-Net Program eConsult System was Rapidly Adopted and Decreased Wait Times to See Specialists." *Health Affairs (Project Hope)*, 36(3), 492–499. doi:10.1377/hlthaff.2016.1283 [doi]
- Bodenheimer, T.; Willard-Grace, R.; Ghorub, A. (2014b). "Expanding the Roles of Medical Assistants. Who Does What In Primary Care?" *JAMA Internal Medicine*, 174(7), 1025–1026.
- Bodenheimer, T.; Ghorob, A.; Willard-Grace, R.; Grumbach, K. (2014a). "The 10 Building Blocks of High-Performing Primary Care." *The Annals of Family Medicine*, 12(2), 166–171. doi:10.1370/afm.1616
- Carter, B.L.; Rogers, M.; Daly, J.; Zheng, S.; James, P.A. (2009). "The Potency of Team-Based Care Interventions for Hypertension: A Meta-Analysis." *Archives of Internal Medicine*, 169(19), 1748–1755.
- Chen, A.H.; Yee, H.F. (2011). "Improving Primary Care–Specialty Care Communication: Lessons from San Francisco's Safety Net": Comment on "Referral and Consultation Communication Between Primary Care and Specialist Physicians". *Archives of Internal Medicine*, 171(1), 65–67.
- Chen, A.H.; Kushel, M.B.; Grumbach, K.; Yee, H.F., Jr. (2010). "Practice Profile. A Safety-Net System Gains Efficiencies Through 'eReferrals' to Specialists." *Health Affairs (Project Hope)*, 29(5), 969–971. doi:10.1377/hlthaff.2010.0027 [doi]

Chen, A.H.; Murphy, E.J.; Yee, H.F., Jr. (2013). "eReferral—A New Model for Integrated Care." *The New England Journal of Medicine*, 368(26), 2450–2453. doi:10.1056/NEJM1215594 [doi]

Coleman, K.; Austin, B.T.; Brach, C.; Wagner, E.H. (2009). "Evidence on the Chronic Care Model in the New Millennium." *Health Affairs (Project Hope)*, 28(1), 75–85. doi:10.1377/hlthaff.28.1.75 [doi]

Davis, K. (2005). "Toward a High Performance Health System: The Commonwealth Fund's New Commission." *Health Affairs*, 24(5), 1356–1360.

Davis, K.; Stremikis, K. (2010). "Family Medicine: Preparing for a High-Performance Health Care System." *Journal of the American Board of Family Medicine : JABFM*, 23 Suppl 1, S11–6. doi:10.3122/jabfm.2010.S1.090286 [doi]

DiGiorgio, K.; Anderson, W.G.; Cannesson, M.; Gleason, N.; O'Neill-Page, E.; Ong, M.K. (2015). "University of California Center for Health Quality and Innovation: Experiences from a System Approach to Scaling Up Effective Interventions." *Implementation Science*, 10(1), A16. doi:10.1186/1748–5908–10–S1–A16

Flinter, M.; Hsu, C.; Crompt, D.; Ladden, M.D.; Wagner, E.H. (2017). "Registered Nurses in Primary Care: Emerging New Roles and Contributions to Team-Based Care in High-Performing Practices." *The Journal of Ambulatory Care Management*, doi:10.1097/JAC.000000000000193 [doi]

HRSA. (2017). 2015 Health center data—national program grantee data. Retrieved from <https://bphc.hrsa.gov/uds/datacenter.aspx>

Mitchell, P.; Wynia, M.; Golden, R.; McNellis, B.; Okun, S.; Webb, C.;...Kohorn, I. (2012). *Core Principles & Values of Effective Team-Based Health Care*. (Discussion Paper). Institute of Medicine.

Olayiwola, J.N.; Anderson, D.; Jepeal, N.; Aseltine, R.; Pickett, C.; Yan, J.; Zlateva, I. (2016). "Electronic Consultations to Improve the Primary Care-Specialty Care Interface for Cardiology in the Medically Underserved: A Cluster-Randomized Controlled Trial." *Annals of Family Medicine*, 14(2), 133–140. doi:10.1370/afm.1869 [doi]

Sheridan, R.; Howard, K. (2013). *Mission Possible: Implementing eConsult in the Los Angeles County Healthcare System*. ().Informing Change. Blue Shield of California Foundation.

Wagner, E.H. (2000). "The Role of Patient Care Teams in Chronic Disease Management." *BMJ : British Medical Journal*, 320(7234), 569–572.

Wagner, E.H.; Flinter, M.; Hsu, C.; Crompt, D.; Austin, B.T.; Etz, R.;...Ladden, M. D. (2017). "Effective Team-Based Primary Care: Observations from Innovative Practices." *BMC Family Practice*, 18(1), 13. doi:10.1186/s12875–017–0590–8

Willard-Grace, R.; Hessler, D.; Rogers, E.; Dube, K.; Bodenheimer, T.; Grumbach, K. (2014). "Team Structure and Culture are Associated with Lower Burnout in Primary Care." *J Am Board Fam Med*, 27 doi:10.3122/jabfm.2014.02.130215

Shown below, top photo: Joan Christenson Legay leads a didactic session on vaccines and immunizations via Zoom videoconferencing. Bottom photo: Procedural skills review and practice comes early in the residency year.



CHAPTER 3

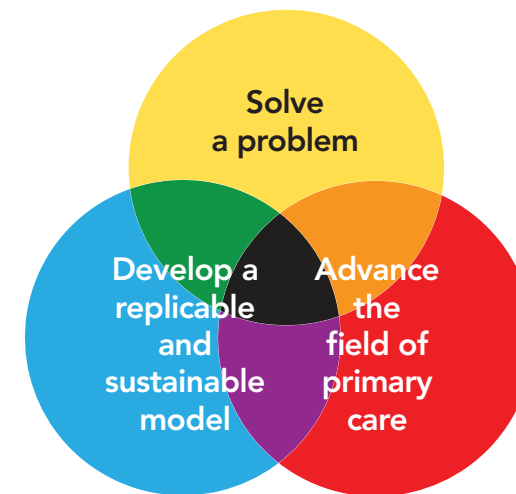
Building the Case for Starting a Nurse Practitioner Residency Program

The idea of starting a postgraduate training program for NPs can feel overwhelming. There are so many moving parts: how the program is administered and structured within your organization; the financial implications; the program's curriculum and clinical schedule; identifying and making available preceptors; assessing the residents' performance, and evaluating the program outcomes.

But first, you need to ask this critical question: ***WHY should YOU start an NP Residency Program?***

If you don't understand "why," then you can't get to "how." In this chapter, we will address the crucial first steps to building your case for starting an NP postgraduate residency training program: identify your drivers and secure support from your organization's leadership

and Board of Directors. We will present our own experience at CHCI and provide guidance for how to build the case for your organization.



Program Drivers

It is important for your organization to identify its drivers for implementing an NP postgraduate residency training program before pitching the idea to your leadership, or if you are the leadership, to your Board of Directors. These drivers will ground you as you move forward with developing your case for why such a program would benefit your organization. Your organization may also take a more expansive view of how postgraduate training for new NPs would benefit the larger community or healthcare in general. The drivers will also inform the structure and content of the program itself, because the program should be designed to resolve the drivers. In

the early planning stages for CHCI we had three main drivers: 1. Solve a problem; 2. Develop a sustainable, replicable model of postgraduate training for new NPs; and 3. Advance the field of primary care, particularly in safety net settings.

Solve a Problem

Our first driver was to solve not just one problem but two problems that we shared with many of our colleagues in community health centers around the country. First, we wanted to address the shortage of primary care providers, as true today as it was a decade ago, at both national and organizational level (Bodenheimer & Smith 2013; Green, Savin & Lu 2013; Health Resources and Services Administration, National Center for Health Workforce Analysis, 2013; Petterson et al., 2012). We anticipated that providing new NPs with an additional year of intensive training as a primary care provider, with very in-depth and specific structured support, would help with recruitment and retention of NPs in our health center, and in health centers around the country if the intervention model was successful.

Develop a Model that was Replicable and Sustainable

From the beginning, CHCI saw NP postgraduate training as a national issue. Having identified the problem, our second driver was to develop a program model that was sustainable for CHCI, but also potentially replicable by other organizations. Our focus on replicability took us in the direction of developing a significant portfolio of materials and making them available to other FQHCs. We took on the work of informing professional associations, policy leaders, Congress, and other constituencies about the need for and value of NP postgraduate training and our building body of experience gleaned from our program. Whether your organization is interested in tackling this as a national issue, or just addressing your specific organizational goals and needs, is entirely up to your organization. We have been impressed by the acceleration of development of these programs both in the primary care space, but also in the specialty space.

CHCI's second driver—to create a nationally replicable model—has been further boosted by the formation of a new national organization. To further advance a replicable and sustainable model of NP postgraduate training, CHCI led the formation of an informal consortium of current NP postgraduate residency training programs, primarily community health centers interested in launching programs but inclusive of other healthcare organizations and systems, and other supporters of the movement. This group was committed to sharing knowledge freely but its members also chal-

lenged each other to assure a level of rigor, quality, and consistency across the programs being developed. In 2015, CHCI incorporated a new, non-profit organization, the National Nurse Practitioner Residency & Fellowship Training Consortium (www.nppostgradtraining.com) to advance the model of NP postgraduate residency training, and in particular, assure quality and rigor through developing an accreditation program. Its mission and programs, including accreditation, will be discussed in future chapters.



Five Founders
Initial Members of
the Consortium

Community Health Center, Inc., Middletown, CT
Family Health Center of Worcester, Worcester, MA
Penobscot Community Health Care, Penobscot, ME
Glide Health Services, San Francisco, CA
Community Health Care, Tacoma, WA

Advance the Field of Primary Care

Our third driver was to not just advance the field of primary care but transform it, especially in safety net settings. The transformation of primary care from episodic “sick care” to a more holistic team-based approach including preventive care, management of chronic illness, and integration of behavioral health has been underway for 20 years (Bodenheimer, Wagner, and Grumbach 2002a, 1775–1779; Bodenheimer, Wagner, and Grumbach 2002b, 1909–1914; Bodenheimer and Bauer 2016; Bodenheimer et al. 2014a, 166–171; Crabtree et al. 2011). As discussed in **Chapter 2**, we asked: Can we train the next generation to both a higher level of clinical complexity, but also to practice in a high performance health system? If we embed our postgraduate NP residents in pods, where they practice as part of an interdisciplinary/inter-professional team, with access to eConsults and ongoing training through Project ECHO® as well as actionable data to drive population health and individual health outcomes—might we transform the future of the practice of primary care? At CHCI, we have seen our postgraduate NP residents as both expert primary care providers, but also agents of change and transformation, whether they stay at CHCI or move on to practices across the country.

How to Identify Your Drivers

What are your reasons for starting a postgraduate program?

In dialogue with colleagues across the country, the most frequent drivers that emerge are:

- build a workforce to better meet the needs of patients/communities;
- increase access to care;
- reduce attrition, burnout, and distress during the initial postgraduate year;
- improve inter-professional education and practice;
- increase satisfaction and retention of an expert, highly skilled primary care workforce.

The questions below help you to collect the information that you need to make the case for why your organization should start an NP postgraduate training program.

Asking the Right Questions

As we saw in [Chapter 1](#), innovation often starts not with a new idea but by asking the right questions (Satell 2013). This helps you to frame the specific problems you want to solve so that you can develop solutions tailored to those problems. Your answers may be different from that of other organizations; but then, you need to build the right program for you.



Who are we and why are we here? Start with your organization's mission statement. For most health centers, the mission will include some focus on meeting the needs of the underserved, creating access to primary care, and improving health and healthcare—all consistent with developing a postgraduate training program. Perhaps it even includes a specific focus on "professional education" or "workforce development"? Your organization's mission statement will be the critical foundation for your NP postgraduate training program because the outcomes of the program should help you to make the leap from a written mission statement to how your mission can be attained with an expert and committed primary care workforce.



Who are our patients? Understanding your patient population is the key driver of the curriculum that is part of postgraduate residency training. You want to prepare NPs to take care of your population to your standard of care. Is your organization particularly focused on key populations such as the homeless, migrant farmworkers, or

patients living with HIV? Is it weighted towards pediatrics, adult, or family practice? Review the demographics of your population, the most common diagnoses, and the outcomes that you measure. An excellent starting place for Federally Qualified Health Centers and FQHC Look-Alikes is your own organization's annual Uniform Data System (UDS) report where organizations report on their service, utilization, financial, and clinical quality performance measures to HRSA annually.



Do we have the current and future staff that we need? Review your organizational data about current workforce needs, recruitment and retention, and your current and projected ability to meet the demand for care. Do you have enough primary care providers to meet the demand? What is your experience with recruiting and retaining primary care providers by provider type? What are the contributors to retention and turnover? Will an NP postgraduate training program provide you with a recruitment pipeline?



Are our clinical outcomes on track? Contributing factors to strong clinical outcomes include a balance between demand and access, robust quality improvement, meaningful use of data, well trained staff, strong clinical leadership and well defined roles for all team members. An NP postgraduate training program may provide you with an opportunity to train these new providers to the high performance model of care we outlined in [Chapter 2](#).



What is the strategic value to our organization of having a postgraduate residency program for NPs? Consider how adding a residency program complements the strategic plan of your organization. Does it give you a competitive edge in the marketplace? Does it create a career opportunity as faculty for current senior staff?

Stakeholders

The interests and commitment of stakeholders will be critical to the success of your NP postgraduate training program. Without them, you cannot move forward. A Stakeholder Analysis ([Figure 3.2](#)) helps you to assess the groups or individuals that will be affected by the program, and group them according to the impact the program will have on them.

Begin by Identifying Your Stakeholders

At CHCI, stakeholders included our Board of Directors, executive leadership team, clinical leadership, and the key operational departments whose support is essential:

Human Resources (HR), Information Technology/Business Intelligence (IT), Finance, as well as the primary care providers and other clinical staff who would become our faculty. It is also critical to engage the front line staff who work in teams with the residents and have a profound impact on their experience. Stakeholders may also include others in your community with a vested interest in your organization, such as university schools of nursing and other healthcare or professional organizations. Other stakeholders might include your local, regional, or statewide legislative supporters, advocacy groups, and foundations.

You will use information from your stakeholder analysis in different ways. It will help build your case for an NP postgraduate training program by identifying the relationship of stakeholders to the program's drivers and the program's mission (Figure 3.1) (more on program mission statements below). You will also use this information when you develop your program: stakeholders typically have access to the information and resources that you will need. Finally, this information allows you to develop your communication strategy about the advantages of an NP postgraduate training program for your organization that will support your case for developing one.

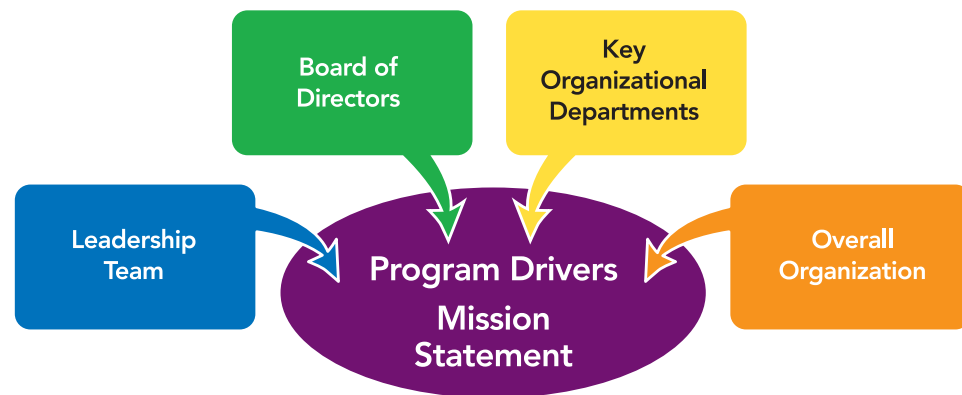


Figure 3.1: Relationship of Stakeholders to Program Drivers and Program Mission

Power and Influence

Once you have made a list of your stakeholders, consider sorting them into spheres of influence, to clarify your communication strategy. **Figure 3.2** shows a grid with two axes: power and interest. Power refers to the influence a stakeholder has in the organization and to what degree that stakeholder can help achieve or hinder the desired change. Interest refers to the degree the stakeholder is likely to be impacted by the project, and that stakeholder's level of interest in and concerns about it.

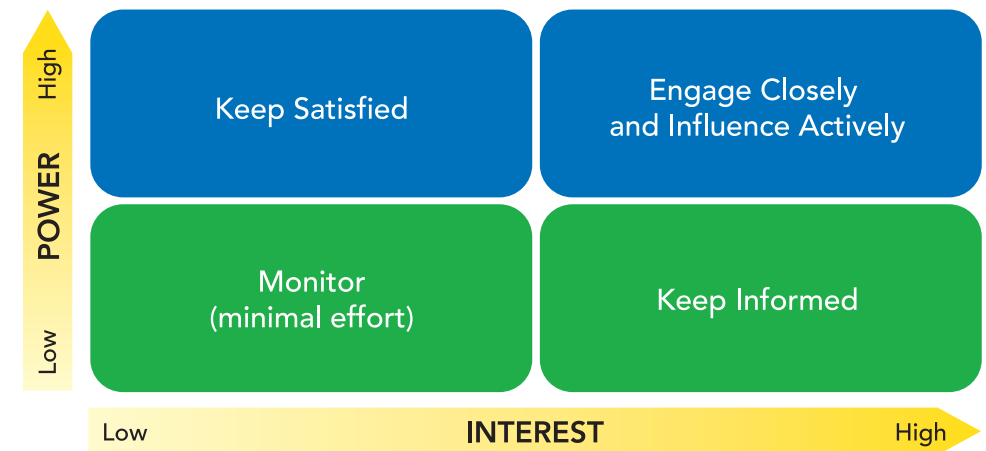


Figure 3.2: Stakeholder Analysis. Adapted from Mendelow's Stakeholder Power-Interest Matrix (1991)

Stakeholders with high power and high interest are your leadership. They need to be fully engaged and actively influenced. Communicate with them early and often. High power, low interest people need to know enough to keep them satisfied. Keep them in the loop, but don't wear out your welcome. Low power, high interest people will want to be adequately informed. They can often be very helpful with the details in which they have expertise. Providers may fall into this category. Low power, low interest people need some monitoring, but do not tax them with excessive communication.

Consider how your stakeholders will react to a proposal for an NP residency program. What they think they stand to gain or lose will have a powerful bearing on whether you launch the program, as well as how successful it will be. What motivates your stakeholders? What has been your relationship with them on other projects? Who influences them? Anticipate their questions and how you will answer them. Then develop your communication strategy based on your overall assessment of stakeholders.

Communication Strategy

It has been said that the biggest problem with communication is the illusion that it has occurred at all. An NP postgraduate training program will represent a change in your culture, and will introduce new structure and processes. There will be questions about finances, clinical responsibilities, and administrative resources. In order to have a successful program you will need the support at all levels in your organiza-

tion, top to bottom. Therefore, you need a communication plan that will provide all stakeholders with a common, consistent and clear message about the program that can be linked to your program drivers, your organization’s mission and the mission of the program itself. Think about it this way: **You are not only asking the organization for buy-in: you are asking the organization to build it as well.**

Program Vision and Mission

Before you can secure organizational support, you need to be clear about your vision for and the mission of an NP postgraduate training program. Once you and a small team have identified your drivers, and completed your stakeholder analysis, you should prepare your case for implementing an NP residency program in writing. This should be short, one to two pages, and should clearly lay out the problem you are trying to solve, the drivers for starting a program, and any data to support your message. In addition, you need to establish your vision and mission statements. These will help when you develop your program’s goals. More importantly, they will become the messaging that you will use in securing the support of your organization.

Vision statement for the program. Your vision statement reflects your ideal future. Perhaps your organization wants to be known for its innovative approach to professional education and training. Or the “go to” site for recent graduates of nurse practitioner education programs.

Vision Statement Example from CHAS Health, Spokane, WA:

CHAS Health envisions a program that will provide the clinical training to new family nurse practitioners in order for them to competently and confidently serve as a primary care provider in a Federally Qualified Health Center. Our desired outcomes for this program include job satisfaction of new nurse practitioners as well as current healthcare providers as they are able to participate in the educational process with the residents. Most importantly we intend for this program to ultimately improve the overall health of the communities we serve by expanding access to quality health and wellness services.

Mission statement for the program. The mission statement for the program is what you want it to accomplish for your organization. Therefore, it should align with the mission of your organization. Perhaps your program’s mission will be to train new nurse practitioners to the highest standards of care or to improve patient outcomes.

Mission Example from CHCI, Middletown, CT:

The mission of CHCI’s Nurse Practitioner Residency Program is to provide new nurse practitioners with the depth, breadth, and intensity of training to clinical complexity and high performance primary care in the service delivery setting of a community health center that leads to competence, confidence and mastery as a primary care provider and to improved health outcomes for the patients they care for and the health system as a whole.

Develop a Communication Plan

For all of your communication you should use the guiding principles in Figure 3.3 to inform your key stakeholders. These are the top three questions most people will have. You will want to communicate a consistent message across the board. However, further conversation and presentations should be adapted for each stakeholder.



Figure 3.3: Guiding Principles for Communication

Develop a communication plan modeled on **Figure 3.4** for who will deliver what message to which stakeholders and when. Start with your leadership first.

- **What are your objectives in communicating with them about the project?**
- **What are the key messages you want to communicate?**
- **How will it be communicated?**
- **When and how often will you communicate?**

Communication Plan					
Stakeholder	Objectives	Message(s)	Media & Methods	Timing & Frequency	Who/When/Where

Figure 3.4: Stakeholder Communication Plan

What Your Leadership and Board of Directors Want to Know

Start your communication plan by focusing on decision-makers in your organization. If you are not part of your organization’s formal leadership, get their support first. If you are a leader in your organization, be sure to engage other members of the leadership team. Once leaders are on board, work together to plan a presentation to the Board of Directors. As your Board of Directors will need to approve the program, communicate with them early and often so that they understand the NP residency program, and what it can accomplish for the organization. This is what your leadership and Board of Directors want to know:



Mission Statement and Program Drivers. Make the case for what an NP residency program would contribute to the organization. Include data.



National Landscape. Explain what the national landscape looks like for NP postgraduate training programs as well as for postgraduate professional training in other disciplines. Include history, growth, and future opportunities.



Outcomes. Present current research demonstrating the impact and effectiveness of existing programs. Effectiveness outcomes can include improvements in retention of staff and clinical outcomes of patients, as well as an increase in patient visits and well-being as well as revenue from improved access to care.



Program Structure. Details about program structure will be addressed in the remaining chapters. Your leadership and Board of Directors will have many questions. How will the NP residency program fit within your organizational structure? Who is accountable for the program and the NP residents? Where will the NP residents get their clinical training?



Resource Assessment. We will discuss resource assessment in detail in [Chapter 5](#). Key resources include:

- 1. Patients:** Do you have a sufficient, ongoing demand for care from new patients to support the development of panels by the NP residents?
- 2. Faculty:** Do you have expert primary care providers (NPs, MDs, and/or PAs) who are qualified and willing to become faculty for the program and both precept and mentor the NP residents?
- 3. Specialty Rotations:** Do you have access, internally or externally, to specialty training in the areas identified as necessary and desirable for NP practice in a Federally Qualified Health Center (FQHC)?
- 4. Space and Equipment:** To train to a model of high performance care, the NP resident(s) need access to the same resources as other primary care providers on the team: hardware, software, exam rooms, conference space, and space within the pod/team.
- 5. Program Leadership:** Even a small program requires program leadership and direction. Ideally, this will be an NP who can guide curriculum, program design, and evaluation and who has the ability to network effectively within the organization to assure the smooth functioning of a complex program. You will want to identify an NP to serve in a leadership capacity, particularly if you will be pursuing accreditation. Based on the size of your program, this individual may be able to combine this role with other responsibilities.
- 6. Finances:** As will be discussed further in [Chapter 5](#), an NP postgraduate residency training program has specific direct and indirect costs, and transparency in identifying those costs for your stakeholders is important. Equally important is to make transparent the return on investment. It is essential that the Board of Directors have a very realistic understanding of the costs, potential risks, and potential return on the investment. It may be helpful for your stakeholders to have at least a basic understanding of the fundamentals of Graduate Medical Education (GME) and Teaching Health Center (THC) legislation, and the reasons why such funding is not an option for NP postgraduate training.

What Key Departments and Clinical Staff Want to Know

Key organizational departments, such as Finance, Human Resources, IT, as well as clinical departments and operations staff, will need to understand how this program will intersect with their work, and what support, resources and services the NP postgraduate residency training program will need from them. Also talk with them about what the program can provide to their teams. Using the communication guiding principles, you will want to tell them why, what, and how. Identify leads in each department that your team can work with to implement key program components, and to develop or revise any policies and procedures that address how the program and residents will function.

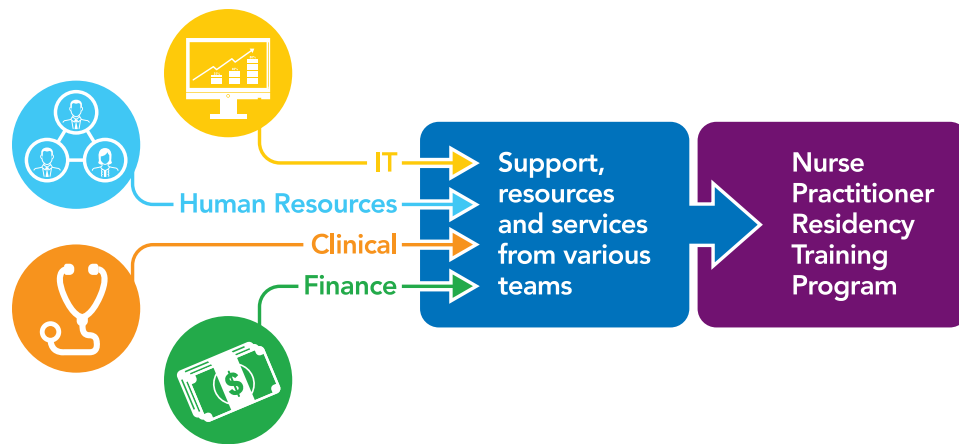


Figure 3.5: Resources for NP Postgraduate Residency Training Program

Communicate, Communicate, Communicate ...and Listen

You can communicate with these groups in a variety of ways, such as small group meetings, all staff meetings, grand rounds, or formal and informal presentations. Using your common message, you will want everyone to understand why the organization is starting the program and what it will look like so that they can fully engage with and support the NP residents and program. Also, make sure that you listen and respond to the concerns, suggestions, and opinions of your stakeholders.

Conclusion

At CHCI, we sought to increase and strengthen our primary care workforce so that our patients would receive the highest quality of care from their providers. We have provided new NPs committed to primary care practice with an intensive training experience focused on training to the clinical complexity of underserved communities and special populations, and to a high performance model of care. Finally, we wanted to create a nationally replicable, sustainable model of FQHC-based postgraduate training for new NPs. We built our case for the NP residency program, and asked the organization to support us, which it has done with enthusiasm and great pride! Our leadership and NP Residency Program graduates are our greatest champions.

To build your case for starting an NP Residency Program, you need to do the following:

1. Identify your drivers.
2. Complete a stakeholder analysis.
3. Develop vision and mission statements for the program that align with and enhance the mission of your organization.
4. Develop a communication plan with a common message: why develop a program, what does it look like, and how will it affect stakeholders?
5. Engage with your leadership early. Once they are on board, work together to plan a presentation to the Board of Directors.
6. Communicate the message to key departments and clinical staff in multiple forums, multiple times. Listen to what they have to say.



CHCI's Board of Directors

Lessons Learned

Let's hear from three CEOs on what their key drivers were for starting a nurse practitioner residency program:



Chuck Jones, President and CEO of Harbor Health Services, Inc. and former President and CEO of Thundermist Health Center

"At Thundermist, our decision to start a nurse practitioner residency program was about fulfilling our mission. We struggled to serve the increasing numbers of complex patients seeking care in our communities with the very limited and extremely competitive physician training pipeline. We have had success recruiting nurse practitioners right out of school, but they lacked the front line experience that even our younger physicians had obtained through their residencies. The newer nurse practitioners at Thundermist frequently formed informal mentoring relationships with physicians who cared about their success, but both struggled because the time demands exceeded what either had time to request or contribute through good will. We experimented with carving out precepting time between physicians and NPs, but this was expensive, unstructured and achieved only spotty success.



Shown above, left to right: CHCI's Director, Postgraduate Training Programs, Kerry Bamrick; Thundermist (2015–2016) NP residents Kezia Testa and Heather Orton; Margaret Flinter, CHCI's Senior Vice President and Clinical Director; Chuck Jones, former President/CEO of Thundermist.

The nurse practitioner residency program has created an opportunity for new nurse practitioners to gain experience caring for extremely challenging patients in a safe and controlled environment. We've had top-notch candidates apply for the residency, confirming for us the value to NPs of this service. The quality of the residents and the program has also been validated by our staff and patients. One resident, upon graduation, moved to a Thundermist site closer to her home, about an hour from her residency site. Despite the inconvenience of transportation challenges and the need for regular, frequent care, some of her patients have actually followed her to the new site.

We view the NP residency program as a key contributor to our future growth.

Currently graduating three new NPs per year, most of whom will remain with Thundermist after graduation, we expect to be able to serve thousands more patients each year for the foreseeable future."



Carlos Olivares, CEO Yakima Valley Farm Workers Clinic

"The NP residency program has been one of the most successful programs we have implemented in our organization.

Our retention rate has been extraordinary and having residents be familiar with our program and patients has been the best program we have today. We have expanded the number of residents and will continue to do so in the future."



Shown above, left to right: Carlos Olivares, Yakima Valley Farmworkers Clinic CEO with the 2014–2015 NP residents Corinna Michels, Shawn Marie Fox and Darin Principe along with Graciela Villanueva, Yakima Valley Farm Workers Clinic, Recruiting Director.



Beth Wrobel, CEO HealthLinc

"I heard the constant comments from HealthLinc's staff regarding the challenges facing newly graduated nurse practitioners. They have excellent academic training but their hands on clinical training did not provide the background that is needed to provide care for our high acuity patients at HealthLinc. We were looking for something (we did not know exactly what) and we stumbled upon the residency training program with CHCI. It is exactly what is needed to give that extra hands on training for newly graduated nurse practitioners. The first year of the program has been so successful we are interviewing for next year's residents.



2016–2017 NP residents Jamie Ail (on left) and Lauren Reisberg (on right) with Beth Wrobel, HealthLinc CEO.

**Our goal is to have a pipeline of well-trained nurse practitioners.
The residency program is the solution to our goal!"**

References

- Bodenheimer, T.; Wagner, E.H.; Grumbach, K. (2002a). "Improving Primary Care for Patients with Chronic Illness." *Journal of the American Medical Association*, 288(14), 1775–1779.
- Bodenheimer, T.; Wagner, E.H.; Grumbach, K. (2002b). "Improving Primary Care for Patients with Chronic Illness: The Chronic Care Model, Part 2." *Journal of the American Medical Association*, 288(15), 1909–1914.
- Bodenheimer, T.; Bauer, L. (2016). "Rethinking the Primary Care Workforce—An Expanded Role for Nurses." *N Engl J Med*, 375 doi:10.1056/NEJMp1606869
- Bodenheimer, T.; Ghorob, A.; Willard-Grace, R.; Grumbach, K. (2014a). "The 10 Building Blocks of High-Performing Primary Care." *The Annals of Family Medicine*, 12(2), 166–171. doi:10.1370/afm.1616
- Bodenheimer, T.S.; Smith, M. D. (2013). "Primary Care: Proposed Solutions to the Physician Shortage Without Training More Physicians." *Health Affairs (Project Hope)*, 32(11), 1881–1886. doi:10.1377/hlthaff.2013.0234 [doi]
- Crabtree, B.F.; Nutting, P.A.; Miller, W.L.; McDaniel, R.R.; Stange, K.C.; Jaén, C.R.; Stewart, E. (2011). "Primary Care Practice Transformation Is Hard Work: Insights from a 15-Year Developmental Program of Research." *Medical Care*, 49 (Suppl)(S28)
- Green, L.V.; Savin, S.; Lu, Y. (2013). "Primary Care Physician Shortages Could Be Eliminated Through Use of Teams, Nonphysicians, and Electronic Communication." *Health Affairs (Project Hope)*, 32(1), 11–19. doi:10.1377/hlthaff.2012.1086 [doi]
- Health Resources and Services Administration, National Center for Health Workforce Analysis. (2013). *Projecting the Supply and Demand for Primary Care Practitioners Through 2020*. (). Rockville, Maryland: U.S. Department of Health and Human Services.
- Petterson, S.M.; Liaw, W.R.; Phillips, R.L., Jr.; Rabin, D.L.; Meyers, D.S.; Bazemore, A.W. (2012). "Projecting U.S. Primary Care Physician Workforce Needs: 2010–2025." *Annals of Family Medicine*, 10(6), 503–509. doi:10.1370/afm.1431 [doi]
- Satell, G. (2013). "Before You Innovate, Ask the Right Questions." *Harvard Business Review*. Retrieved from <https://hbr.org/2013/02/before-you-innovate-ask-the-ri>
- Mendelow, A. (1991) "Stakeholder Mapping", Proceedings of the 2nd International Conference on Information Systems, Cambridge, MA (Cited in Scholes,1998)

CHAPTER 4

Nurse Practitioner Residency Program Structure and Curriculum

Postgraduate training is a bridge between formal education and practice that enables new practitioners to apply acquired knowledge, skills and professional values, and to further develop expertise while working under the supervision of seasoned preceptors and mentors. The goal is for new practitioners to function both independently and collaboratively at the conclusion of the training period at a level of competence and expertise that effectively provides the intended services to the intended population. This goal needs to be clearly articulated so that it has real meaning in the setting to which it applies, and it must be readily identifiable when it has been achieved.

The learning experiences and the program are designed to achieve that goal. Developing that training program requires a systematic approach, clarity of purpose, a deliberate structure, and achievable results that can be measured at the level of the individual trainee and for the program as a whole, results which are then used to improve the program further.

In this chapter we will present the structure and curriculum of the NP postgraduate residency training program for new family nurse practitioners that was originally developed at CHCI in Middletown, Connecticut and has been used as a model for the development of many other programs around the country. As the Health Resources and Services Administration (HRSA) designated National Cooperative Agreement (NCA), this is the model that has been used by CHCI as the basis for the NCA's webinars and intensive learning collaborative on starting such programs. By "curriculum," we mean the components of a health professions training program as defined by Grant (2010): mission, goals and objectives, direct and indirect clinical learning activities, the knowledge, skills and attitudes the residents will achieve, and how these are assessed, measured and evaluated (Grant, 2010).

By "structure," we mean how the direct and indirect clinical learning activities in which the residents engage are organized. In **Chapter 5**, we will describe the resources—personnel, space, and equipment—that support these activities. In upcoming chapters, we will address assessment of the residents' performance, program evaluation,

and the infrastructure of the residency program, such as administration, operations, and the finances of program development. We will use the term “program” holistically to refer to the structured activities, curriculum, infrastructure, and the assessment of resident performance and evaluation of program effectiveness.

It is important to remember two things as you read this chapter. First, the structure and curriculum of the residency program are **NOT** designed to re-teach content that NPs have learned during their graduate education, which prepared them for entry level practice, as well as licensure and certification. Rather, the purpose is to apply that content to the population of patients cared for in your organization and in health centers nationally. Second, there is no one way to develop a curriculum, a process that often has multiple iterations. We can only provide general guidance based on our own experience and the literature. The details of the curriculum for your organization will look different from that of other organizations, including the one at CHCI, because your needs, patient populations, and resources will be different.

Finally, as we noted in [Chapter 2](#), we are continuously training to clinical complexity and a high performance model of care, and our NP residents are immersed in that model. While not required, we believe that organizations that host a primary care focused NP postgraduate residency training program should have Level II or III PCMH accreditation from the National Committee for Quality Assurance (NCQA, n.d.), or comparable accreditation or recognition, because the values and standards of PCMHs represent the forward looking high performance model of primary care in which NPs not only should practice, but also should lead.

Structure of the NP Postgraduate Residency Training Program: Direct and Indirect Clinical Activities

CHCI’s NP Postgraduate Residency Training Program is a 12-month program beginning in September of each year, during which the NP residents are full-time employees and are fully integrated into all aspects of the organization. It starts with an orientation to the NP residency program, to the organization and the community (see [Chapter 6](#) for detailed description of the orientation). Each resident is assigned to a clinical site as his or her “home base.” At this site, the resident is assigned to and immersed in a primary care team or “pod” with whom the resident will work when not engaged in other Program activities. [Table 4.1](#) lists the components of the Program’s structure.

NP Residency Program Structure				
Direct Clinical Activities	Indirect Clinical Activities	Staff	Resources	Community and Professional Development
<ul style="list-style-type: none"> • Precepted clinic • Mentored clinic • Specialty rotations • Procedural trainings 	<ul style="list-style-type: none"> • Didactic sessions • QI seminar • Project ECHO • Reflective journal • Portfolio • On-call • Quality committees (QI, IC, P&T) 	<ul style="list-style-type: none"> • Preceptors • Mentors • Faculty for presentations • Primary care team • Clinical leaders 	<ul style="list-style-type: none"> • Home base clinic • Patients • Physical space • Equipment • Technology 	<ul style="list-style-type: none"> • Professional meetings • Legislative activities • Community service • Social/recreational/cultural activities • Social networking with peers

Table 4.1: NP Residency Program Structure

Direct Clinical Activities

There are three types of direct clinical structures which make up a total of 80% of the residents’ time: 40% for Precepted Continuity Clinics, 20% Mentored Clinics, 20% Specialty Rotations. The remaining 20% of time is spent in formal educational, non-direct clinical activities, including weekly didactic education sessions. Figure 4.1 illustrates how the NP residents spend their time in the program. A description of each type of rotation is below, and summarized in [Table 4.2](#). We do not track clinical hours per se. Rather, we schedule residents for clinical sessions. A session is defined as a four hour block of time, generally one half day for a regular 8 hour work day. For example, one clinic session may be from 8 a.m.–12 noon. [Figure 4.2](#) shows a sample schedule.



Figure 4.1: How a Resident's Time is Spent

Precepted Continuity Clinics. Precepted Continuity Clinics are the cornerstone of the NP Residency Program and occur at the residents' home base. These Precepted Clinics account for a minimum of 40% of the entire curriculum, or about four sessions each week. ***This clinic experience is critical to the residents' growth and development as a primary care provider accountable to a panel of patients.*** In Precepted Clinics, the NP residents develop their own patient panels while being precepted by a primary care provider (PCP), who may be an expert physician, nurse practitioner (NP) or physician assistant (PA). One preceptor may work with two to three residents at a time. The ratio will vary among different NP postgraduate residency training programs.

Most importantly, preceptors with more than one assigned resident have no other assigned responsibilities during this time. That is, preceptors are **NOT** scheduled to see their own patients while simultaneously precepting the NP residents, which provides the opportunity to teach, provide critical feedback, verify findings and assessments, and teach specific procedures if the need arises. The NP residents are responsible for documentation in the Electronic Health Record (EHR) under their own name, including closing and locking the note, which will be billed in the NP resident's name. In addition, preceptors provide additional support on documentation by adding an addendum to notes signing off that they were the preceptor for that patient, and adding any educational comments they think helpful. In CHCI's NP Residency model, the support staff of the preceptor, such as a medical assistant (MA) and/or registered nurse (RN), usually serves as the support staff for the residents during the Precepted Continuity Clinics, and to the building panel of the NP resident. Some NP postgraduate residency training programs have chosen to provide support staff specifically assigned to the residents. For more information on the evolving role of RNs in primary care, and the evolving evidence for team-based care there are several articles that we suggest you review (Flinter, Hsu, Cromp, Ladden, & Wagner, 2017; Wagner et al., 2017).

At CHCI, NP residents begin seeing patients in Precepted Clinic after an intensive orientation to the organization and to the NP residency program, including intensive training on the use of technology, such as the electronic health record, and areas we have identified as needing an early intensive refresher, such as interpreting EKGs and lab test results. Starting four weeks into the program, in late September/early October, the NP resident is scheduled to see one patient an hour and gradually increasing the number of patients over time. CHCI developed a "Stepwise Increase of NP Resident Clinical Scheduling Policy" which describes the ramp up process and a sample can be found in the appendices (Appendix 4.1) and on the next page.

Policy and Procedures: Stepwise Increase of APRN Resident Clinical Scheduling

The NP residents' schedule will be designed as follows, with incremental increases happening approximately every 2 months. Templates will be updated by a central administrator to help with scheduling consistency.

- **October: 1 patient per hour (7/day)**
- **November: +1 patient per session (9/day)**
- **December: +1 patient per session (11/day)**
- **January: same as above (11/day)**
- **February: +1 patient per session (13/day)**
- **March: +1 patient per hour (15/day)**
- **April: same as above (15/day)**
- **May: +1 patient per hour (17/day)**
- **June: 3/hour (20/day)**
- **July: 3/hour, +1 patient per session (22/day)**
- **August: +1 overbook per session (24/day)**

The ramp up schedule should be individualized by the Program Manager based on conversation with the Office Managers, Preceptors, on-site Medical Directors, and the residents themselves. A resident who is consistently running behind in clinical sessions may need to have certain increases delayed based on this feedback. Other residents may be ready to advance more quickly. All residents should be seeing this full schedule by August.

Because the NP residents are building their panels during the Precepted Clinic sessions, the patients they are scheduled to see initially are primarily those having their initial visit at CHCI, although it may include patients who are transferring from a departing provider in the practice. The focus on seeing new patients also ensures that the NP residents are seeing the typically highly challenging patients who present for the first time at an FQHC, often with pent-up demand for care and undifferentiated health problems, providing a tremendous learning opportunity for the NP resident, much needed care for the patient, and an opportunity to begin building a trusting relationship between both parties. After the initial visit, the follow up visit with that patient will primarily be scheduled during precepted clinic sessions.

Scheduling is staggered to allow the preceptor who is precepting two residents at a time to be actively engaged with patient visits of both residents. For example, resident A may be scheduled on the hour, 8:00 a.m., 9:00 a.m., etc. and resident B at 8:20 a.m., 9:20 a.m., etc. If an initial visit cancels or does not show up, a walk-in patient or one having a follow-up visit could be added to the residents' schedules. We prefer that NP residents see a patient even if they are not the primary care provider of that patient. Precepting days can be flexible based on the needs of the clinic, including optimizing the time when there are most resources available to the program, such as preceptors, support staff, exam rooms, and so on.

	Precepted Continuity Clinic	Specialty Rotations	Mentored Clinic
Percent of Program time	40%	20%	20%
Frequency	4 sessions/week	10 rotations: One day per week for four weeks (one rotation per month)	2 sessions/week
Type of patient	Starting with initial visits, then including all visit types.	Several types of patients	Episodic/acute care
Faculty	Preceptor	Preceptor	Mentor
Documentation in EHR	Preceptor reviews resident's documentation, then resident closes and locks the note.	Varies by specialty and level of access to EHR. To be determined by program.	Mentor reviews resident's documentation, then Mentor closes and locks the note.

Table 4.2: Summary of CHCI NP Residency Program Clinical Activities

Specialty Rotations. Residents spend 20% of their time in Specialty Rotations. CHCI has identified ten clinical specialties that represent high volume, high complexity and/or high burden health problems or procedures most commonly encountered in our FQHC but often referred elsewhere for diagnosis, treatment, and management. Each specialty rotation consists of one day per week over the course of four weeks, generally equating to one specialty rotation per month. Rotations include: Orthopedics; Dermatology; Women's Health; Pediatrics; Geriatrics; Newborn Nursery; HIV and Hepatitis care; Adult Behavioral Health; Child and Adolescent Behavioral Health; and Healthcare for the Homeless. While we can accommodate some specialty rotations at CHCI, others occur outside of the organization at other agencies. Document-

tation for specialty clinics will vary based on whether the rotation is being hosted internally or externally and on the nature of the rotation.

There is flexibility in the selection of specialty rotations and meeting the needs of the clinic and community. There is no set number of specialty rotations that your program must include and you may choose to have rotations last longer than four weeks. Your organization should decide what areas of specialty practice you wish to have your NP residents experience based on your unique patient population and organizational needs, and the goal of full scope primary care.

Monthly Schedule					
	Monday	Tuesday	Wednesday	Thursday	Friday
		1	2	3	4
AM		Dermatology	Precepted Clinic	9-11 Admin 11-1 Pain ECHO	Precepted Clinic
PM		Dermatology	Precepted Clinic	2-5 Didactic	Precepted Clinic
	7	8	9	10	11
AM	Mentored Clinic	Dermatology	Precepted Clinic	9-11:30 Admin	Precepted Clinic
PM	Mentored Clinic	Dermatology	Precepted Clinic	12-1:30 QI 2-5 Didactic	Precepted Clinic
	14	15	16	17	18
AM	Mentored Clinic	Dermatology	Precepted Clinic	9-10:30 Monthly Program Meeting 11-1 Pain ECHO	Precepted Clinic
PM	Mentored Clinic	Dermatology	Precepted Clinic	2-5 Didactic	Precepted Clinic
	21	22	13	24	25
AM	Mentored Clinic	Dermatology	Precepted Clinic	9-11:30 Admin	Precepted Clinic
PM	Mentored Clinic	Dermatology	Precepted Clinic	12-1:30 QI 2-5 Didactic	Precepted Clinic
	28	29	30		
AM	Mentored Clinic	Mentored Clinic	Precepted Clinic		
PM	Mentored Clinic	Mentored Clinic	Precepted Clinic		
Dermatology Specialty Rotation—Main Street, Middletown, CT					

Figure 4.2: Sample Schedule for One NP Resident for One Month

Mentored Clinics. Mentored Clinics make up 20% of NP residents' time, for two sessions each week. During mentored clinics, the NP residents work alongside a primary care provider mentor—a very experienced physician, NP or PA—with a focus on the practice of episodic and acute care and additional mastery of procedures. The residents generally do not have their own schedule of patients during Mentored Clinics but instead see patients at the delegation of the primary care providers, who

remain available for consultations. This is also an opportunity to schedule some follow up visits for a patient seen during the week in precepted clinic who must be seen again before the next scheduled precepted session.

During the “huddle” at the beginning of the mentored clinical session, the clinical mentor will select patients from his or her own schedule for the resident to see. The resident will see the patient independently and report back to the mentor before the patient leaves. The resident documents in the EHR but it is the mentor who reviews, closes and locks the note since they are the primary care provider. The goal of the mentored clinics is to provide the NP residents with a supervised clinical experience in order to obtain knowledge and skills to be able to practice in an outpatient family practice, community health setting. The days of the mentored clinics are determined after the schedule for the Precepted Clinic sessions, Specialty Rotations and indirect clinical learning experiences has been finalized.

Indirect Clinical Activities

The indirect clinical component of the CHCI NP Residency Program accounts for 20% of the resident’s time, and is divided into three parts. The Didactic Education Sessions (10%) cover topics relevant to the care of CHCI patients, and include group discussions and case presentations to their peers. As described in **Chapter 2**, NP residents participate in a Quality Improvement (QI) Seminar (5%) and Project ECHO® (5%). We ask that NP residents keep a reflective journal throughout the year, submitting it to program faculty weekly for review and response. Finally, they develop a portfolio that includes an improvement project submitted for the QI Seminar and a case presentation for Project ECHO®. The portfolio is discussed further in **Chapter 7**.

Didactic Education Sessions. Didactic Education Sessions occur on average once per week, accounting for 10% of the NP resident’s time. Didactics sessions could range from three to four hours, depending on how much time your organization chooses to commit. The content is evidence-based, presented in a clear and challenging format, and reflect the patient population served by CHCI. The first weeks of the program are “front loaded” with didactics on topics considered essential to safely and effectively starting the clinical sessions such as a refresher on interpreting laboratory data and EKGs. These formal learning sessions focus on a variety of complex clinical challenges most commonly encountered in FQHCs in general, and at CHCI in particular. In addition to clinical topics, didactics may also cover a number of leadership and professional development topics. The content of the presentations is

Nurse Practitioner Residency Training Program Didactic Schedule

1. **History of the Community Health Center and Nurse Practitioner Movements**
2. **Focused History, Interviewing, and Documenting**
3. **Immunizations of Children and Adults:** Typical and atypical
4. **EKG Interpretation** (1st in series of 3 presentations)
5. **Laboratory Tests:** Selecting, ordering, and interpreting
6. **Initiating Insulin in the Diabetic Patient**
7. **Interprofessional Care and Collaborative Practice**
8. **Prescribing Opioids for Complex Patients in Community Health and Primary Care**
9. **Professional Boundaries Training**
10. **Initiating and Managing Anticoagulation Therapy**
11. **Pain Management:** Pharmacologic and non-pharmacologic approaches (1st in series of 2 presentations)
12. **Chronic Heart Failure:** Assessment, diagnosis, management, and patient education
13. **Pediatric Asthma:** Assessment, diagnosis, management and patient/family education
14. **Contraception:** Intrauterine devices—selection, insertion, counseling (1st in series of 2 presentations)
15. **Orthopedics:** Upper and lower extremities and back (1st in series of 3 presentations)
16. **Contraception:** Contraceptive methods and options
17. **Tobacco Cessation:** Evidence based interventions including motivational interviewing
18. **Pediatric Growth and Development:** Screening, assessment, identification and referral (Part 1)
19. **Mindfulness Based Medication and Stress Reduction** (lecture plus experiential)
20. **Chronic Kidney Failure:** Assessment, diagnosis, management and patient education
21. **Chronic Liver Failure:** Assessment, diagnosis, management and patient education
22. **Conducting an Eye Exam in Primary Care**
23. **Anxiety and Depression:** Screening, assessment, diagnosis, management and patient education
24. **Interpreting Pap Smears and Managing Abnormal Results**
25. **IUD Insertion Training** (Mirena and Paragard)
26. **Nexplanon Training**
27. **Performing the Pre-Op Physical**
28. **Pediatric Growth and Development** (Part 2)
29. **HIV/AIDS:** Overview, prevention, screening, testing (1st in series of 2 presentations)
30. **HIV/AIDS:** Pharmacologic management in primary care
31. **Hepatitis C:** Screening, assessment, management, patient education
32. **Caring for Patients with History of Trauma** (physical, sexual, emotional)
33. **Dermatology in Primary Care**
34. **Lactation Medicine:** “Medications and Mothers’ Milk”
35. **Resident Case Presentations** (occurs twice/year)
36. **ADHD:** Screening, detection, assessment, treatment, patient/family education
37. **Oral Health:** Prevention, assessment, management, treatment of oral health problems
38. **Geriatrics:** Assessment and management of common geriatric concerns
39. **Podiatry:** Examination and assessment of the foot and common podiatric problems
40. **Stages of Change:** Training NPs on self-management in primary care setting (Series of 2)
41. **Suturing:** Simple closure
42. **Being On-call:** Managing patient concerns by telephone
43. **Managing Menopause:** Assessment, management, counseling, education
44. **Managing Neonatal Jaundice and Elevated Bilirubin**
45. **Adult Asthma:** Assessment, diagnosis, management, patient education
46. **Nutrition Management for Chronic Diseases**
47. **Sexually Transmitted Disease:** Intensive, 3-day, off-site training sponsored by the The Sylvie Ratelle STD/HIV Prevention Training Center of New England
48. **Job Searching, Contracts and Negotiating**
49. **Motivational Interviewing**
50. **Self-Management Goal Setting**
51. **Treating Substance Abuse in Primary Care**
52. **Diagnostic Imaging**
53. **COPD**
54. **Spirometry**
55. **Quality Improvement Training and Meeting Facilitation**
56. **Use of the Microscope**
57. **Myofascial Pain Disorder**
58. **Caring for Pediatric Patients with Trauma**
59. **Adult Psychiatry in Primary Care and DCF Reporting**
60. **Professional Development and Leadership Training**
61. **Rheumatology**
62. **Health Care for the Homeless**
63. **Osteoporosis**
64. **Endocrinology**
65. **The Business of Healthcare**
66. **Managing Difficult Patient Encounters/Resources**
67. **Social Media in Healthcare**
68. **Presenting a Case to Your Preceptor—Best Practices**

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Figure 4.3: Didactic Sessions in CHCI NP Resident Program

planned to correspond to the residents' current clinical experiences, and taught by faculty from CHCI as well as guest faculty from a number of external organizations. The didactic sessions are provided both in person and via video conferencing, and all sessions are recorded (audio, video, and content) so that they may be revisited at another time. While not the practice of all programs, CHCI grants formal CME credit for NP residents who complete the session and submit an evaluation. **Figure 4.3** lists the didactic sessions at CHCI over the course of a recent year.

Quality Improvement Seminar. Accounting for 5% of the resident's total time, the Quality Improvement (QI) Seminar meets twice a month for an hour and half. The QI Seminar is hosted by the Weitzman Institute, a department within CHCI dedicated to quality improvement, research, evaluation and innovation. The Weitzman Institute provides on-site high-level expertise in theory and methods related to professional and patient education; quality improvement and project management; implementation science; and data collection and interpretation. The NP Residency Program has full access to these resources and incorporates them into the residency experience. The QI Seminar provides NP residents the opportunity to develop knowledge and skills to improve care by using quality improvement and systems-based learning.



The Weitzman Institute's quality improvement model is a comprehensive organizational strategy to build a culture of continuous improvement across departments and improve quality in all domains of performance. There is a major movement underway in healthcare nationally to develop ways to improve the results of care and make care safer for patients and families. In addition to the agreement that we must improve care, there is broad support for enhancing the learning of health professionals to include topics and experiences that will prepare health professionals to lead the changes that will result in a better health system. The NP Residency Program leadership and staff believe that residents who are able to demonstrate their knowledge and skills in improving care and changing systems will be highly attractive to employers who wish to bring on new faculty to lead their organization into the future.

The QI Seminar topics covered are:

- an overview of quality improvement;
- introduction to change methods;
- measurement to inform change;
- organizing your improvement project;
- an approach to testing a change;
- communication about your improvement effort;
- sustaining your improvement effort; and
- continuing support from leadership and others for your improvement efforts.

Stages of Improvement powered by weitzmaninstitute

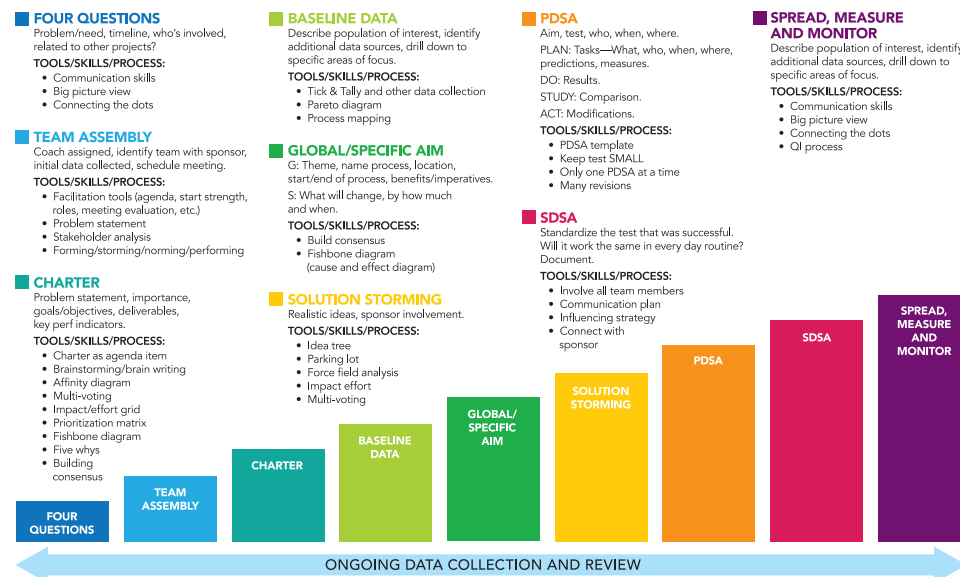


Figure 4.4: Weitzman Institute's Quality Improvement Model

Table 4.3: QI Topics and Session Goals

Topic	Learning Objectives/Session Goals
An Overview of Quality Improvement	<ul style="list-style-type: none"> • Develop a shared understanding of the seminar series • Discuss a framework for improving care • Explore examples of improving care from our sites
Observations About Care	<ul style="list-style-type: none"> • Hear about and discuss many of the things you are noticing and wondering about • Review the evidence for the team-based care approach in primary care • Share some examples of team-based care in your setting
Process Mapping and Flow Charts	<ul style="list-style-type: none"> • Hear about and discuss the example of a process you chose to explore in detail • Review details of how to approach flowcharting • Share examples of strategies to consider when doing flowcharting
Measurement to Inform Change	<ul style="list-style-type: none"> • Appreciate the value of using balanced measures in quality improvement work • Construct a value compass of measures for a specific clinical condition • Recognize the difference between a conceptual and an operational definition • Develop an operational definition for a measure • Formulate a plan for collecting data for a specific measure and identify potential associated challenges in the data collection
Organizing Your Improvement Project	<ul style="list-style-type: none"> • Demonstrate the value of displaying data over time • Introduce the distinction between random (common cause) and non-random (special cause) variation • Review a temporal display and analysis method—the run chart • Offer examples in practice of using run chart
An Approach to Testing Change	<ul style="list-style-type: none"> • Demonstrate the value of displaying data over time • Introduce the distinction between random (common cause) and non-random (special cause) variation • Review a temporal display and analysis method—the run chart • Offer examples in practice of using run chart

Topic	Learning Objectives/Session Goals
Communication About Your Improvement Effort	<ul style="list-style-type: none"> • To discuss strategies for planning a Plan-Do-Study-Act (PDSA) cycle • To share examples of PDSA approaches from your projects • To review tools for communication plans and stakeholder analysis • To practice developing a stakeholder analysis plan
Stakeholder Analysis and Conflict Management	<ul style="list-style-type: none"> • To learn about input from stakeholders related to a planned change • To discuss strategies for further engaging stakeholders • To develop approaches for managing conflict • To practice using a conflict management approach
Managing Conflict and Negotiation	<ul style="list-style-type: none"> • To discuss using a conflict management approach • To review some principles about effective negotiation • To practice an actual negotiation and debrief about what we observed
Negotiation and More About Cycles of Change	<ul style="list-style-type: none"> • To learn from your application of negotiation skills • To continue and deepen our discussion about PDSA cycles • To look ahead and discuss some upcoming sessions in our seminar series
Continuing Leadership Support and Buy-in for Improvement Effort	<ul style="list-style-type: none"> • To consider how to gain leadership support and buy-in for a quality improvement effort • To learn from your examples of considering which leaders influence your projects • To look ahead and discuss some upcoming sessions in our seminar series
Sustaining Your Improvement Effort	<ul style="list-style-type: none"> • Learn and review strategies in order to successfully sustain and spread a proven improvement process • Translate ideas from the strategies to thinking about the spread of your own QI effort • To look ahead and discuss some upcoming sessions in our seminar series
Resident Presentations	<ul style="list-style-type: none"> • Develop a deeper understanding of an aspect of the Quality Improvement Seminar Series • Learn from the experience of our resident colleagues

We have provided a schedule of sessions and learning objectives in the reference section. The QI Seminar series is built on the foundational belief that learning to change and improve systems cannot be a passive effort. Such an endeavor requires knowledge and skill, as well as the value of shared accumulated experience. The goal for each QI Seminar session is to incorporate aspects of experiential learning and provide activities that allow residents a chance to practice applying these tools at their sites. Generally residents will apply these tools at the site where they complete their Precepted Continuity Clinic. As they are practicing as a primary care provider in that setting, they have a greater ability to assess the practice for needed process improvements. The residents are asked to apply the tools to a specific issue they have encountered at their sites and then make a final presentation describing either a quality improvement effort on which they worked, or a specific topic from the seminar series that they found particularly helpful. The goal of the final presentations is to help everyone who participated in the series learn from the experience of others. At CHCI, the QI Seminar series is shared with the postdoctoral clinical psychology residents which provides another opportunity for interprofessional education and collaborative practice.

Project ECHO®. Participation in Project ECHO® sessions every other week accounts for 5% of the NP resident's time. As discussed in [Chapter 2](#), Project ECHO® (Extension for Community Healthcare Outcomes) is a case-based distance learning platform where residents have the opportunity to listen, learn and present their most challenging cases to an interdisciplinary team of experts. Project ECHO® originates

at the University of New Mexico School Of Medicine as a structured way for a team of specialists to regularly meet via videoconference with a select group of primary care providers over time. Using a combination of lecture, case presentations by the primary care providers, and discussion, the primary care providers grow in competence and confidence in managing patients with the condition of focus. Originally developed in New Mexico to help primary care providers treat Hepatitis C, the Weitzman Institute of CHCI now offers Project ECHO® for HIV, chronic pain, opioid addiction, adolescent behavioral health, RN complex care management and more. (<http://weitzmaninstitute.org/project-echo>). There are many Project ECHO® "hubs" around the country now in addition to the Weitzman Institute and the University of New Mexico, and we encourage programs to consider joining one or more for the benefit of their NP residents as well as other primary care providers.

Reflective Journals. The model developed by CHCI calls for the residents to submit a weekly reflective journal. The journals serve many purposes from a curriculum perspective. They are read and responded to by a designated leader(s) in the NP Residency Program. Through the journaling, residents are able to share their reflections on their experience of the past week with patients, co-workers, and the program, and to do a self-assessment of their own sense of progress in the context of real-time bi-directional communication with program staff.

The journals are also a key component of evaluation of residents and of the program.

The journals are submitted electronically to the evaluation platform. Residents are advised to maintain confidentiality and anonymity of patients and colleagues at all times. For guidance, we suggest that they write about a difficult patient encounter, a professional challenge they experienced, observations and experiences with the healthcare system, their experience with the residency, and so on. Also, we encourage residents to share their thoughts on all aspects of the residency experience, although we ask that logistical issues be raised with program staff via email, telephone or in person so they may be resolved in a timely manner. The weekly journaling also helps the program staff to stay abreast of how things are going in the residency. At the completion of the residency year, the NP residents receive a printed, bound copy of their yearlong reflective journals.

You will recall from [Chapter 1](#), that an analysis was completed of 1,200 journal entries from 24 CHCI NP residents over a five year period (Flinter & Hart, 2016). That analysis was based on a theory of role transition (Meleis, Sawyer, Im, Messias, & Schumacher,



Shown above: A Project ECHO® session at CHCI with faculty (left to right) Jamie Stevens, APRN, PMHNP, and Drs. Marwan Haddad and Matt Huddleston, both family physicians and HIV specialists. All three are also licensed and experts in medication assisted treatment of opioid addiction.

2000) which posits that there are two outcomes in a successful transition: 1) mastery of new skills needed to manage a transition, and 2) development of a fluid yet integrative new identity. The residents' journal entries have provided scholarly confirmation of their successful transition experience from new graduate to self-confident and skilled primary care provider as a result of their experience in the CHCI NP Residency Program.

Curriculum Development

We have given you a snapshot of the structure of our NP Residency Program curriculum, which has evolved over several years of experience and evaluation. Knowing what clinical rotations you want to offer and what topics to cover in didactic session is necessary, but it is not enough to host an NP postgraduate residency training program. You need to develop program goals, curricular objectives and learner outcomes so that you can evaluate your residents' performance and determine that your program is meeting the needs that you have identified as the rationale for starting a program at all. In this section of the chapter, we will discuss the details of the curriculum of the CHCI NP Residency Program and offer suggestions on how to develop your curriculum.

While our definition of curriculum at the beginning of this chapter (Grant, 2010) does not address competencies per se, its reference to knowledge, skills and attitudes is important for curriculum development. Knowledge, skills and attitudes, or KSAs, are the characteristics of a competency-based education framework first developed by Bloom (1956), and relevant today (Anderson & Krathwohl, 2001; Forehand, 2010). Competency-based education/training has been the dominant model in curriculum development in the health professions since the 1970s (Del Bueno, 1978; McGaghie, 1978). This model constituted a shift away from education that used on-the-job training models emphasizing time spent and a list of skills performed. Although there have been controversies about defining and measuring competence and competency in health professions training (Frank et al., 2010; Pijl-Zieber, Barton, Konkin, Awosoga, & Caine, 2014), it remains the curriculum model used by accrediting bodies, such as the Accreditation Council for Graduate Medical Education (ACGME, 2016) and the National Nurse Practitioner Residency and Fellowship Training Consortium (NNPRFTC, 2015). Competency-based health professions education is learner-centered, and focuses on outcomes and the ability of the learner to demonstrate a level of mastery sufficient for practice (Frank et al., 2010; ten Cate, 2013).

Therefore, the curriculum design for the NP postgraduate residency training program begins with the end in mind. After a year of residency, what is it that the new NP knows and can do that is not only more proficient than at the start, but proficient enough that the NP is ready to practice with confidence as well as competence, with mastery and a sense of well-being in a collaborative relationship with primary care provider peers? When you approach curriculum development from this perspective, your path forward will be more clear.

The most important message for curriculum development is this: **all of the parts must align, from mission, goals, objectives, and outcomes to evaluation measures.** This is especially important if you plan to have your NP postgraduate residency training program accredited, which we strongly advise (Chapter 8 focuses on the accreditation process). One way to think about the alignment of mission, goals, objectives, competencies and outcomes is to envision them as increasing in specificity as shown in Figure 4.5, with the mission being the most broad and the learner outcomes the most specific and measurable. We will begin our discussion of curriculum development with the NP Residency Program's mission and goals, followed by the competencies, program objectives and learner outcomes.

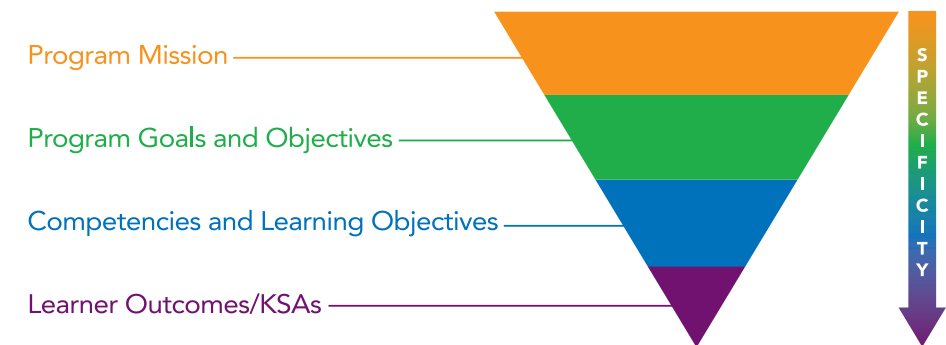


Figure 4.5: Relationship between Mission, Program Goals and Objectives and Competencies and Learner Objectives and Outcomes

Program Mission and Goals and Objectives

The program's mission is firmly grounded in the mission of CHCI, which started with the premise that healthcare is a right, not a privilege, but has expanded to a vision that CHCI is building a world class primary care organization, committed to special populations, improving health outcomes, and building healthier communities. Im-

portantly, it is also derived from the drivers that prompted the development of the NP Residency Program as discussed in [Chapter 3](#). The program goals state what we ultimately want to achieve by hosting a program within our organization. The program objectives state how we will achieve those goals.

Mission. As we noted in [Chapter 3](#), the mission of your NP postgraduate residency training program should align with your organization’s mission and program drivers, and paint a broad picture of why you are hosting a program and what that program will accomplish. For example, the mission of CHCI’s postgraduate Nurse Practitioner Residency Training Program is “to provide new nurse practitioners with the depth, breadth, and intensity of training to clinical complexity and high performance primary care in the service delivery setting of a community health center that leads to competence, confidence and mastery as a primary care provider, and improved health outcomes for the patients they care for and the health system as a whole.” A good mission statement should stand the test of time and guide future curricular revisions. And there will be many!

Program Goals. The program goals are derived from the program’s mission statement. The goals tend to be broad, long-term, and identify what the program aims to achieve as its end point. The goals can be helpful with recruitment and marketing materials as well. Because they are broad, the goals are not intended to be measured; however, goals must clearly lead to objectives and outcomes that are measurable. The CHCI NP Residency Program has five broad goals which are a further elaboration of the mission statement and drivers.

By hosting the NP Residency Program, we aim to achieve the following:

- 1. EXPAND** access to quality primary care for underserved and special populations, and contribute to primary care clinical workforce development by training new nurse practitioners in an FQHC-based residency program.
- 2. SUPPORT** the achievement of competence, confidence, and mastery in all domains of primary care that are needed to serve as a full scope, primary care provider in a complex FQHC setting through a highly structured transition experience that includes the necessary depth, breadth, volume and intensity of clinical practice.
- 3. TRAIN** new nurse practitioners to a model of primary care consistent with the Patient-Centered Medical Home principles including care that is comprehensive,

sive, team-based, patient-centered, coordinated, accessible, high quality and safe.

- 4. INCREASE** the overall confidence and professional job satisfaction of new nurse practitioners who are committed to working in underserved community settings.
- 5. CULTIVATE** the leadership qualities and potential of nurse practitioners to engage in leadership roles and activities both within their practice setting as well as in the local, state, and federal communities with which they are engaged.

Program Objectives. The term “objectives” is often used broadly. In order to provide consistency, and avoid confusion, we will use definitions found in the NNPRFTC accreditation standards (2015). **Program objectives** “specify what the efforts, actions, content and work of the program are intended to accomplish within specific time frames” (NNPRFTC, 2015, p. 10). Program objectives should not be confused with **learning objectives** in the curriculum, which “guide the postgraduate trainee in the mastery of ...knowledge and its subsequent application to practice” (NNPRFTC, 2015, p. 10).

That is, program objectives identify how the program’s goals will be accomplished, and so are more specific and measurable **at the program level**. While the program goals should not need frequent revision, the program objectives might be edited as you revise your program. Each program goal will have one or more program objectives. Learning objectives focus on the performance of the resident.

For example, if the first goal of your NP residency program is to “expand access to quality primary care for underserved and special populations, and contribute to primary care clinical workforce development by training new nurse practitioners in an FQHC-based residency program”, then the associated program objectives explain how that will be done. Note that these are measurable—you will know if you have met your program goals by measuring your program objectives. The program objectives for the first program goal might be as follows:

- 1.) Create capacity for 6 NP residents assigned to 2 sites, each with a capacity to build and care for a panel of 300 patients/1,000 visits; and
- 2.) A minimum of 80% will remain as PCPs in our FQHC or another FQHC following completion of the program.

Competencies

Increasingly, issues related to system-based practice and quality improvement appear in the competencies. The content in the curriculum falls within these competencies, and reflects the needs of the patient population at CHCI in particular.

- Patient Care
- Knowledge for Practice
- Practice-based Learning and Improvement
- System-based Practice
- Interpersonal and Communication Skills
- Interprofessional Collaboration
- Professionalism
- Personal and Professional Development

These competencies are also referred to as “domains” in the accreditation standards. Each domain has a broad learner/curriculum objective. For example, the objective for the domain Patient Care is “to provide patient-centered care that is compassionate, valued, appropriate, and effective for the treatment of both common and uncommon health conditions and the promotion of health” (NNPRFTC, 2015, p. 10). This statement covers a lot of content! Each domain is subdivided into subdomains, that further describes what the domain means, and how you can recognize it when you see it, in actual practice. For example, the objective to “provide patient-centered care” in the Patient Care domain means to “perform screening assessments, interpret laboratory data,” and so on. As an example, in [Figure 4.6](#), you can find the Patient Care domain from the NNPRFTC curriculum standards, the curriculum objective, and five of the ten associated subdomains.

You are **NOT** required to use the eight domains and their subdomains in your program’s objectives and learner outcomes. For example, in the CHCI Residency Program, the domains Patient Care and Knowledge for Practice are combined into a single competency domain. However, if you do pursue accreditation with NNPRFTC, you will need to demonstrate how the competencies in these domains are integrated in your curriculum.

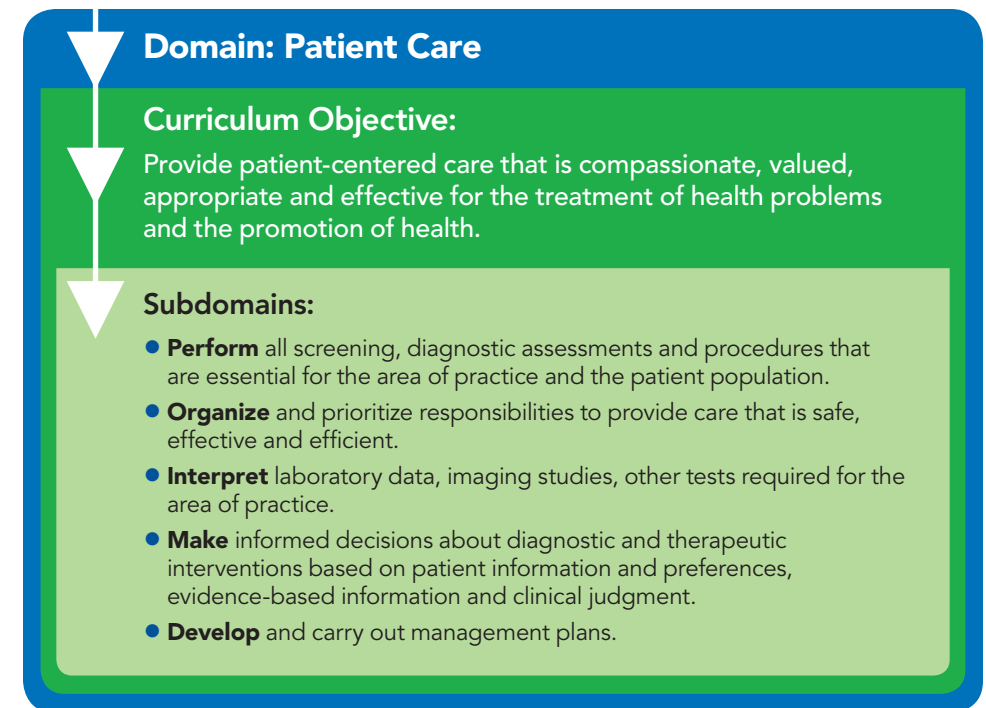


Figure 4.6: Examples of NNPRFTC Patient Care Subdomains

Learning/Curriculum Objectives and Learner Outcomes

As we noted above, learning (or learner) objectives in the curriculum state expectations for resident performance based on the competencies. The learner outcomes measure those expectations, and should further elucidate and measure the learning objective in the curriculum. In the example above from the NNPRFTC standards (2015), the subdomain for Patient Care that states “perform screening assessments, interpret laboratory data” can be interpreted as a learner outcome. Learner outcomes articulate the knowledge, skills and attitudes you expect to see in your residents’ performance. Most importantly, the KSAs associated with learner outcomes are measurable; they are the intended results within a curricular domain that can be observed and assessed. They are how you know if your NP resident is performing as expected. For example, what knowledge, skills and attitudes are needed to “perform screening assessments”?

In Bloom’s model for competency-based curriculum development, knowledge refers to the cognitive domain of educational activities (Anderson & Krathwohl, 2001;

Bloom, 1956; Forehand, 2010). There are six levels of increasing sophistication demonstrated by the learner that make up learner outcomes in the cognitive domain: 1) knowledge; 2) comprehension; 3) application; 4) analysis; 5) synthesis; and 6) evaluation (See Figure 4.7). Skills are the psychomotor domain, the physical and manual skills required for a given task or set of responsibilities. Learner outcomes in the skills domain focus on performance and proficiency. Attitudes are the affective domain, including feelings, values, motivation and behavior. Learner outcomes in the affective domain focus on the demonstration of affective characteristics that can be observed by the person(s) evaluating the learner.

BLOOMS TAXONOMY

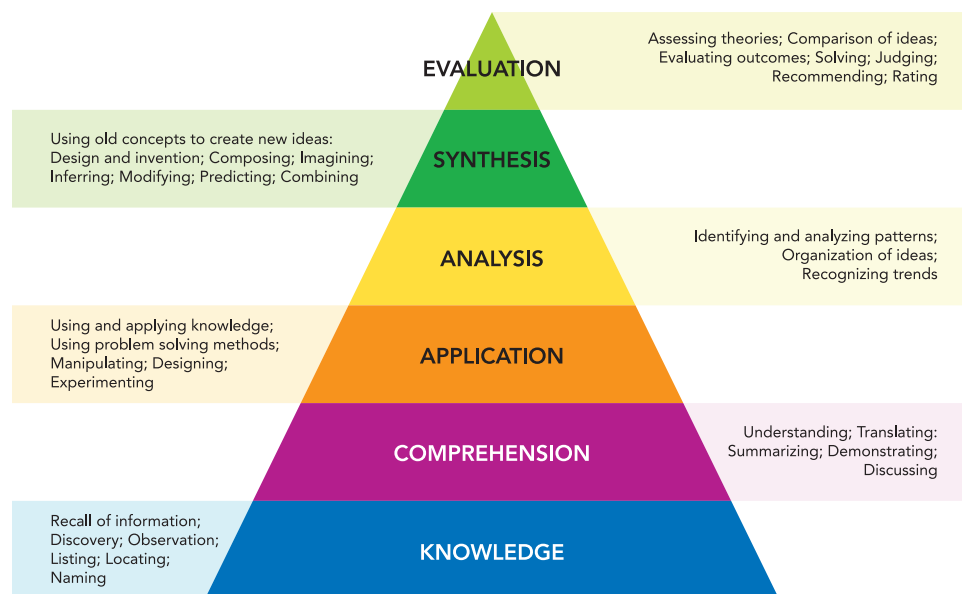


Figure 4.7: Bloom's Cognitive Domain (Bloom, 1956)

Learner outcomes, especially in the cognitive domain, are usually written using Bloom's taxonomy. For example, in the NNPRFTC (2015) domain Patient Care, the first subdomain states "Perform all screening, diagnostic assessments and procedures that are essential for the area of practice and the patient population." What knowledge should a resident have in order to do this, and at what level of proficiency? As an NP postgraduate residency training program focuses on application of learning, the learner outcome would address the level of application as a minimum standard.

Table 4.4 is a brief example of measurable Learner Outcomes Knowledge, Skills and Attitudes (KSAs) for the domain Patient Care for the population of patients with diabetes. The list in each category for KSAs would continue. Figure 4.8 provides a different view of the same concept.

Domain	Curriculum Objective	Subdomain
Patient Care →	Provide patient-centered care that is compassionate, valued..... →	Perform all screening, diagnostic assessments and procedures that are essential for the area of practice and the patient population with diabetes . →
Subdomain Knowledge	Subdomain Skills	Subdomain Attitudes/Behaviors
Apply knowledge of best practice guidelines for treatment of diabetes	Performs comprehensive medication review and reconciliation	Responsiveness to patient needs that supersedes self-interest
Apply knowledge of screening tests for diabetes	Demonstrate proficiency in performing history and physical	Demonstrate respect for patient
What other knowledge would the resident need?	What other skills would the resident need?	What other attitudes would the resident need to demonstrate?

Table 4.4: Example of Knowledge, Skills and Attitudes for Curriculum Objective subdomain "Perform all Screening Assessments" for Patients with Diabetes

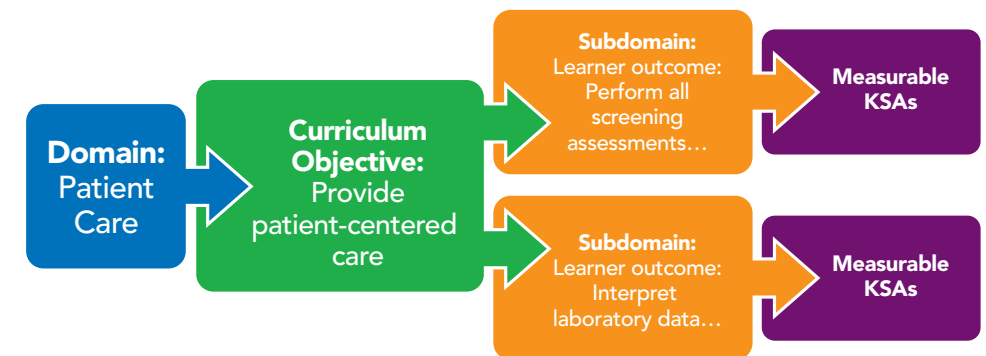


Figure 4.8: Relationship Between Domain, Curriculum Objective, Learner Outcomes and KSAs

As you develop your curriculum, you are not required to use the subdomains in the NNPRFTC standards (2015) as your learner outcomes. They can be a helpful guide,

however. While listing all of the KSAs for each subdomain of every curriculum/learning objective can become overwhelming, it is an exercise worth pursuing. It forces you to consider what you need to include in your program and also in the assessment and evaluation of resident performance. You will find that many of the domains and subdomain/curriculum objectives, learner outcomes and KSAs overlap, but you can prune them to avoid redundancies. For example, at CHCI, we combined the first two domains from the NNPRFTC (2015) accreditation guidelines: Patient Care/Knowledge for Practice.

Standards of Care in Your Organization

Remember, your NP postgraduate residency training program should be designed to meet the needs of your organization and your patients. Review the standards of care that your organization has for different populations of patients and/or health conditions. These standards should identify the expectations of all providers for various patient populations and diagnoses. That is, by using your standards of care in curriculum development, much of the work of identifying the content in curriculum development has already been done for you. The terms “knowledge, skills and attitudes” may not be used explicitly, but your organization’s standards of care can guide the development of your curriculum. Your organization likely has standards for professional conduct as well, that cover ethics, collaboration with peers, communication with patients, and so on. Use them.

Writing measurable Learner Outcomes takes practice. View video at <https://vimeo.com/207530847>

When and How to Use Curriculum Objectives and Learner Outcomes

Curriculum Objectives and Learner Outcomes are used for **any** and **all** learning experiences that contribute to the mission, goals and curriculum objectives of the program and the professional development of the NP resident, and for which you want to assess learner performance. These include:

- Clinical rotations, including specialty rotations, precepted and mentored clinics;
- Didactic sessions;
- Observation experiences;

- Group discussions; and/or
- Self-reflective journals.

If you don’t want to assess learner performance in an assigned experience, then why are you including that experience in your curriculum at all?

You can think of each clinical rotation as a separate course, but the curriculum/learning objectives for all of these rotations would be similar or even the same, with modifications for the patient population, or the expectations of the resident in those rotations. For example, in an orthopedic rotation, or with patients with behavioral health diagnoses, the resident will need to perform appropriate screenings and interpret associated laboratory data for that group of patients. That is, the curriculum/learning objectives are much the same; the details in the learner outcomes will vary.

As noted earlier, the curriculum/learning objectives will begin to sound repetitive. That is good news. They will provide better consistency and cohesiveness in expectations across clinical rotations. Here is an example of how the Competency/Domain, Curriculum Objectives and Learner Outcomes might align for a Specialty Rotation in a diabetes clinic:

I. Competencies/domains: Patient Care/Knowledge for Practice

- A. Curriculum/Learning Objective: **Provide** effective evidence-based patient-centered care for the treatment of health problems and the promotion of health **for patients with diabetes**.
 - i. Subdomains/competencies/measurable learner outcomes:
 1. **Perform** history and physical **for patients with diabetes**.
 2. **Prescribe** appropriate medications **for patients with diabetes**.

Assessment and Evaluation. The critical reason why you want to align the competencies, learning objectives, and learner outcomes is assessment of the residents’ performance and evaluation of the program. **The competencies, learning objectives, and learner outcomes articulate your expectations for the NP residents’ performance, allowing you to use them to assess that performance.** Thus curriculum development and assessment/evaluation are essentially mirror images. **Table 4.5** provides an example of how the competencies, learning objectives, and learner outcomes might work together in a document for a clinical rotation. The tool uses a rating scale of novice to expert model published by Dreyfus (2004) which will be discussed further in **Chapter 7**.

Table 4.5: Assessment Tool of Resident Performance (See full content in Appendix 4.2)

Competency Domains: 1. Patient Care; 2. Knowledge for Practice						
Curricular Objectives: <ul style="list-style-type: none"> Provide effective evidence-based patient-centered care for the treatment of health problems and the promotion of health. Demonstrate knowledge of established and evolving bio-psycho-social, clinical, epidemiological and nursing sciences, for the provision of evidence-based patient care. 						
Rating Scale	Competency Rating Score (1-5)					Method of Assessment
1 = Novice 2 = Advance Beginner 3 = Competent 4 = Proficient 5 = Expert 0 = N/A	Resident Self-Assessment	Preceptor Assessment	Resident Self-Assessment	Preceptor Assessment	Resident Self-Assessment	List all that apply O = Observed D = Demonstrated C = Chart Audit V = Verbalized T = Tested
	Baseline	6 months	6 months	12 months	12 months	
Perform comprehensive history and physical exam						
Develop pertinent differential diagnosis						
Order appropriate screening and diagnostic tests						
Order appropriate consults and e-consults						
Order appropriate medications						
Perform comprehensive medication review and reconciliation						
Present case to preceptor in a clear, concise and organized fashion						
Care for acute illness, chronic disease, and health maintenance needs using evidence-based guidelines						
Assess for, diagnose, treat and manage over time common medical conditions experienced in primary care:						
Hypertension						
Diabetes						
Obesity						
Depression						
Chronic Pain						
COPD						
Heart failure						

Competency Domains: 1. Patient Care; 2. Knowledge for Practice						
Asthma						
HIV						
Hepatitis C						
Alcoholism						
Substance abuse						
Women's Health						
Contraception management						
Perform clinical procedures commonly seen in primary care:						
EKG interpretation						
Nexplanon (insertion and removal)						
IUD (insertion and removal)						
Biopsy (punch, shave, excisional)						
Joint Injection						

What you do **NOT** see in this tool is the curricular content and KSAs that are behind it. For example, the learner outcome “Order appropriate screening and diagnostic tests” does not state what those tests are, but you should have clear expectations in your curriculum KSAs about what those tests are in order for a preceptor to determine that the resident has indeed ordered “appropriate” tests. Similarly, the learner outcome “care for acute illness, chronic disease, and health maintenance needs using evidence-based guidelines” is a broad statement. What evidence-based guidelines apply? Again, the standards of care for your organization will likely identify what tests are appropriate for a given health condition in your population. The details will not appear in an evaluation tool, but they should be in your curricular content.

How to Develop Your Curriculum

Figure 4.9 provides a quick overview of the components of your curriculum, and how they fit together. Figure 4.9 is designed to help you to appreciate the importance of alignment in your NP program as a whole, from mission through learner outcomes, and from learner outcomes back to mission through the process of program evaluation. We have included evaluation of the learner in this figure to emphasize that it flows from the curricular objectives and learner outcomes, but evaluation will be addressed separately in Chapter 7.

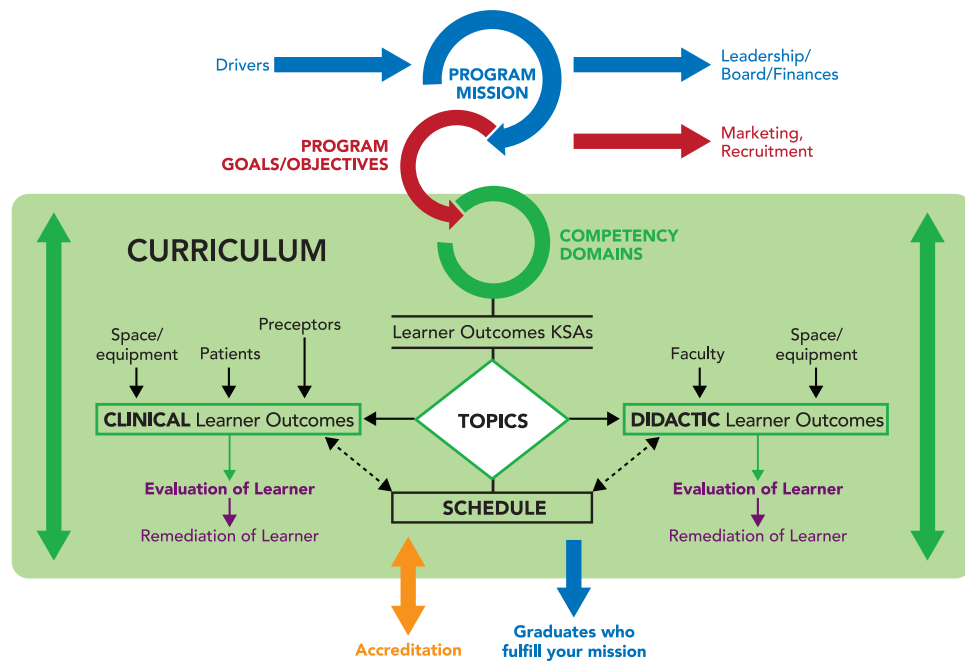


Figure 4.9: Components of the NP Residency Curriculum

How to Begin

There is no right way to begin, but an easy place to start is with your organization's mission, the mission of the NP postgraduate residency training program, your standards of care, professional code of conduct, and an understanding of the patient populations that you serve: diagnoses, age, gender, location, etc. With this information, you can make a list of topics, and then sort them into the clinical and/or didactic components of your curriculum. This list would include not just health problems and diagnoses, but also professional issues, such as quality improvement, conflict resolution, or working with your unique population of patients. Working backward from there, you can focus on your learner outcomes and competency domains.

Another place to start is with accreditation guidelines, which will guide you in the development of those learner outcomes and competency domains (NNPRFTC, 2015). As we have noted before, these accreditation guidelines are not designed to be used to develop your curriculum per se. Rather, you will need to demonstrate that your program and NP residents meet these peer-reviewed standards.

Content Mapping

Content mapping is a graphic representation of the curriculum that helps to organize the curricular content for the list of topics you have developed. (A large whiteboard helps!) Figure 4.10 is an example of a content map for one topic, in this case the health problem "diabetes." What knowledge, skills and attitudes are required to do a history and physical, order and interpret appropriate diagnostic tests, perform procedures, make clinical decisions about treatment, and manage the treatment plan? Again, your organization's standards of care and code of conduct will provide you with some answers for your content map.

After you have mapped content for a few health problems in your list of topics, you will begin to see that a pattern emerges that provides cohesiveness to your curriculum and to your assessment and evaluation of residents' performance. Content mapping helps you to see that pattern. As we noted earlier, you will find that the general expectations regarding residents' performance (curriculum/learning objectives) are the same regardless of clinical rotation, but the specific expectations (learner outcomes/KSAs) will vary by topic. Of course, you are not required to do content mapping, but it is a visual exercise that will help the team in your organization that is developing the curriculum to literally have the same mental model as you proceed.

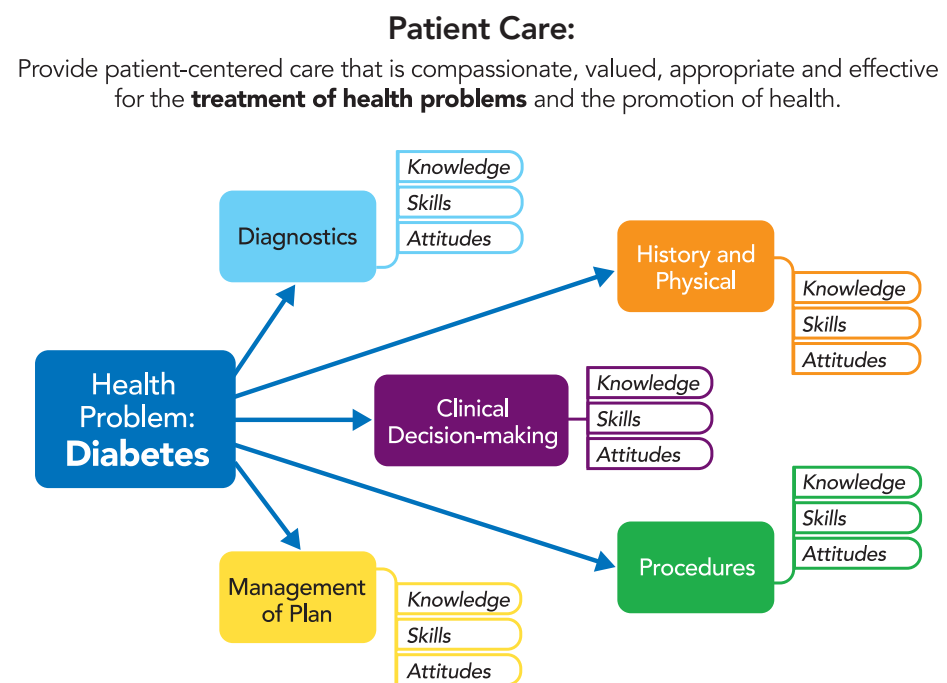


Figure 4.10: Content Map Example

Conclusion

Curriculum development is an iterative process. There is no one way to start. Just start. For the novice, the process can feel overwhelming. This may be an ideal opportunity to reach out to your academic university partners and colleagues and collaborate on the development of the curriculum content and objectives. We want to emphasize again that the curriculum for NP postgraduate training is not intended to re-teach what NPs have learned in their formal graduate education. Rather, the intent is to apply what they have learned to your clinical setting with YOUR population of patients. As stated earlier, the details of the curriculum for your organization will look different from that of other organizations because your needs, patient populations, and resources will be different. The NP Residency program and its curriculum should meet your needs and the needs of your NP residents.

References

- Accreditation Council for Graduate Medical Education (ACGME) <http://www.acgme.org/>
- Anderson, L.W.; Krathwohl, D.R. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman.
- Bloom, B.S. (1956). *Taxonomy of Educational Objectives*. (Vol 1: Cognitive Domain ed., pp. 20–24). New York: McKay.
- Del Bueno, D.J. (1978). "Competency-based education." *Nurse Educator*, 3(3), 10–14.
- Dreyfus, S.E. (2004). "The Five-Stage Model of Adult Skill Acquisition." *Bulletin of Science, Technology & Society*, 24(3), 177–181.
- Flinter, M.; Hart, A.M. (2016). "Thematic Elements of the Postgraduate NP Residency Year and Transition to the Primary Care Provider Role in a Federally Qualified Health Center." *Journal of Nursing Education and Practice*, 7(1), 95.
- Flinter, M. (2012). "From New Nurse Practitioner to Primary Care Provider: Bridging the Transition Through FQHC-Based Residency Training." *OJIN: The Online Journal of Issues in Nursing*, 17(1)
- Flinter, M.; Hsu, C.; Crompt, D.; Ladden, M.D.; Wagner, E.H. (2017). "Registered Nurses in Primary Care: Emerging New Roles and Contributions to Team-Based Care in High-Performing Practices." *The Journal of Ambulatory Care Management*, doi:10.1097/JAC.000000000000193 [doi]

- Forehand, M. (2010). "Bloom's Taxonomy." *Emerging Perspectives on Learning, Teaching, and Technology*, 41(47)
- Frank, J.R.; Mungroo, R.; Ahmad, Y.; Wang, M.; De Rossi, S.; Horsley, T. (2010). "Toward a Definition of Competency-Based Education in Medicine: A Systematic Review of Published Definitions." *Medical Teacher*, 32(8), 631–637.
- Frank, J.R.; Snell, L.S.; Cate, O.T.; Holmboe, E.S.; Carraccio, C.; Swing, S.R.; Harden, R.M. (2010). "Competency-Based Medical Education: Theory to Practice." *Medical Teacher*, 32(8), 638–645.
- Grant, J. (2010). "Principles of curriculum design." in T. swanwick (ed.) *Understanding Medical Education: Evidence, Theory and Practice* (pp. 1–15) The Association for the Study of Medical Education.
- McGaghie, W.C. (1978). "Competency-Based Curriculum Development in Medical Education. An Introduction." *Public Health Papers* No. 68.
- Meleis, A.I.; Sawyer, L.M.; Im, E.; Messias, D.; Schumacher, K. (2000). "Experiencing Transitions: An Emerging Middle-Range Theory." *Advances in Nursing Science*, 23(1), 12–28.
- National Committee for Quality Assurance (NCQA, n.d.)
- NCQA. (n.d.). National committee for quality assurance (NCQA). Retrieved from <http://www.ncqa.org/homepage>
- NNPRFTC. (2015). Postgraduate Nurse Practitioner Training Program Accreditation Standards. Retrieved from http://www.nppostgradtraining.com/Portals/0/Documents/2.0_NNPPTC_Accreditation_Standards_1.5.16.pdf?ver=2016-01-13-070416-923
- Pijl-Zieber, E.M.; Barton, S.; Konkin, J.; Awosoga, O.; Caine, V. (2014). "Competence and Competency-Based Nursing Education: Finding Our Way Through the Issues." *Nurse Education Today*, 34, 676–678.
- ten Cate, O. (2013). "Competency-Based Education, Entrustable Professional Activities, and the Power of Language." *Journal of Graduate Medical Education*, 5(1), 6–7. doi:10.4300/JGME-D-12-00381.1
- Wagner, E.H.; Flinter, M.; Hsu, C.; Crompt, D., Austin, B.T.; Etz, R.; ... Ladden, M.D. (2017). "Effective Team-Based Primary Care: Observations from Innovative Practices." *BMC Family Practice*, 18(1), 13. doi:10.1186/s12875-017-0590-8

Clinical and Financial Resources

Over the years, in virtually every presentation or discussion about NP postgraduate training that we at CHCI have had with colleagues and organizations around the country, the first question people ask us is: “Where does the funding come from?” The first question is rarely about the need for NP postgraduate training, because the need is obvious to our colleagues. After we explain that there is no formal, systematic model of funding for NP postgraduate training as there is for physician training, the discussion returns to other topics like curriculum, evaluation and components of the model, but sooner or later it comes back to funding. “Really—where does the funding come from?”

The second part of this chapter provides details about the financial resources required to start, operate and maintain an NP postgraduate residency training program, including a description of how to calculate direct and indirect costs. We will help you and your organization understand the full, all-in costs of creating and operating a program, as well as the best and worst case presumptive scenarios of the return on that investment. The chapter will conclude with a section on future funding opportunities for NP postgraduate training.

But first, we will describe the clinical resources needed for NP postgraduate training, because these have financial implications for your program and the organization. These resources include the people, space, and equipment that support the direct clinical and indirect clinical activities. Specifically, this chapter will address the role of clinical preceptors, those fully ramped, productive, and seasoned primary care providers who take time away from seeing their own patients, to serve as faculty and precept the NP residents.

You will need to plan ahead to ensure that these resources are well-established in your organization before you start your program, and you will need to dedicate these resources over time for the operation of the program. The Programmatic Resource Assessment Tool in [Table 5.1](#) is a good place to start to understand the types of resources you will need in order to implement, maintain and grow a successful and rigorous program of the highest quality. In [Chapter 6](#), we will review the organizational and operational resource implications for hosting an NP postgraduate residency training program.



Shown above: Dr. Dan Wilensky, CHCI's Chief of Precepting/Medical Advisor to the CHCI NP Residency Program in a precepted session with Katelyn Billings, FNP, CHCI 2015–2016 NP resident. Shown below: An orthopedic didactic being led by James J. Lehman, DC, MBA, FACO (pictured in the center) with CHCI 2010–2011 NP residents (left to right) Anna Olivier, Hao Pham, Kristie Quarles, and Martha Trevey.



Part I. Clinical Resources

In this section of the chapter, we will focus specifically on the people, space, and equipment that support the direct clinical and indirect clinical activities described in **Chapter 4**: home base clinical assignment; sufficient volume of new patients; dedicated workspace and equipment; and space for didactic presentations with the requisite technology. We will also describe the role of clinical preceptors and mentors, and specialty providers.

Home Base: Assigning Residents to a Practice Site

It is essential that your NP residents be embedded within a primary care site where they can function as part of a primary care team. At CHCI, NP residents are members of a “pod,” that is, a primary care clinical team, at their site. The pod is made up of primary care providers, behavioral health providers, nurses, medical assistants, and other residents and students who work together on a regular basis caring for specific panels of patients.

We assign two residents to each of five different primary care sites as their home base for a total of 10 NP residents in our program. Other successful programs have assigned three residents per site. This decision must take into account available exam rooms, support staff, preceptors, and very importantly—a sufficient influx of new patients seeking care from which the NP residents can build a panel. If you have multiple practice sites, as is common for FQHCs, you will need to choose which site is the best fit for your NP residents’ assignment.

The Clinical Team. At each site where residents are assigned, there are a number of key individuals who are designated to facilitate the residents’ progress in achieving program requirements in conjunction with the program staff. As the NP residents are members of the clinical team pod at their site, they have full access to the providers and other clinical support resources as part of their practice. Medical assistant and nursing support is appropriately worked into staffing ratios at the site level to support the residents during their clinical experiences. Residents require support staff assigned to work with them during Precepted Continuity Clinics so that they can experience working in a truly integrated team-based model of care. The preceptors all play a role in facilitating the residents’ progress both in their Precepted Clinics and also on a daily basis. Whoever the clinical leader is at the site will play an important role in the program and in supporting the residents’ progress.

Programmatic Resource Assessment	
PHYSICAL	
1. Have you identified the site that your residents will be assigned?	<input type="checkbox"/> Y <input type="checkbox"/> N
2. Have you identified a dedicated workspace for the residents?	<input type="checkbox"/> Y <input type="checkbox"/> N
3. If Y to question 2, is the space integrated as part of a primary care team?	<input type="checkbox"/> Y <input type="checkbox"/> N
4. Do you have available conference space and video technology for weekly educational programming?	<input type="checkbox"/> Y <input type="checkbox"/> N
FINANCIAL	
1. Have you established the terms of employment (salary and benefits)?	<input type="checkbox"/> Y <input type="checkbox"/> N
2. Have you developed a detailed program budget (includes direct and indirect costs including staff, lost revenue, technology, etc.)?	<input type="checkbox"/> Y <input type="checkbox"/> N
HUMAN	
1. Have you identified key program staff (if yes, list positions)?	<input type="checkbox"/> Y <input type="checkbox"/> N
2. Have you identified potential preceptors (MD, NP or PA) for the program?	<input type="checkbox"/> Y <input type="checkbox"/> N
3. Have you identified potential specialty rotations for the program?	<input type="checkbox"/> Y <input type="checkbox"/> N
4. Have you identified potential didactics/seminars presenters for the residents?	<input type="checkbox"/> Y <input type="checkbox"/> N
ORGANIZATIONAL	
Have you discussed with the following departments about the launch of your postgraduate residency program?	
● Board of Directors	<input type="checkbox"/> Y <input type="checkbox"/> N
● Leadership—commitment to training program	<input type="checkbox"/> Y <input type="checkbox"/> N
● Human Resources—recruitment, retention, onboarding, credentialing, benefits	<input type="checkbox"/> Y <input type="checkbox"/> N
● IT—hardware, software, EMR, conferencing technology	<input type="checkbox"/> Y <input type="checkbox"/> N
● Finance—resident salaries/benefits, payroll, billing	<input type="checkbox"/> Y <input type="checkbox"/> N
● Operations—scheduling, front desk	<input type="checkbox"/> Y <input type="checkbox"/> N
● Clinical Support staff—support of clinical care for resident patient care experiences	<input type="checkbox"/> Y <input type="checkbox"/> N
If YES, please provide more detail on your answer If NO, please provide initial ideas on addressing the resource	

Table 5.1: Programmatic Resource Assessment Tool

New Patients for NP Resident Panels. As noted in [Chapter 4](#), in the CHCI model, the NP residents spend a minimum of 40% of their time embedded in a primary care team at their home base clinical site where they build a small panel of approximately 350 to 400 patients over the course of the year, based on a progressive ramp up schedule described in [Chapter 4](#). Therefore, there must be a sufficient volume of new patients representing a range of ages from which to build that panel. In choosing the best site for your NP residents' assignment, review the data on demand by new patients, wait time for an initial appointment, and current size of the existing primary care providers panels to see if there is in fact enough demand to satisfy the need for new patients for the residents. For family nurse practitioners, that influx of new patients must be inclusive of the full lifespan, from newborns to older adults in order to provide a full learning experience. Remember, by assigning experienced primary care providers to the role of preceptors, their capacity to accept new patients may be reduced. The residents can take on some of this demand.

Clinical Work Space. You will want to ensure that there are sufficient exam rooms to accommodate the NP residents during the time they will be seeing patients. At a minimum, each resident must have one room available to him/her throughout the Precepted Clinics. The need for available exam rooms may increase over the life of the program to accommodate for the increased capacity of the NP residents as they implement the progressive patient schedules. Remember, if a preceptor is precepting instead of seeing his/her own patients, that preceptor's exam rooms may be available for use by the NP resident.

Non-Clinical Work Space/Station. If at all possible, embed your NP residents within the same space as their pod/primary care team to support their training to a team-based model of care. The residents need access to the same physical and technological resources that other PCPs have access to, such as computers, telephones, printers, and so on. Having dedicated space in an integrated clinical setting is paramount in the overall postgraduate training experience.

Space for Didactic Education Sessions. While teaching is continuous and ongoing throughout the program, a major component of the NP postgraduate residency training program is the weekly didactic sessions. You will need to determine how, when, and where these sessions are offered, in addition to what the topics will be. Nevertheless, you want to be sure that your NP residents have access to the appropriate space and technology to facilitate these sessions.

In CHCI's model we deliver didactic and other educational content virtually through a video conferencing platform, since both presenters and NP residents work in many different physical locations. For this reason, our program has conference space with large screen videoconferencing capacity for larger groups, as well as laptops with camera and microphone capabilities for smaller groups at each site. We use this technology for all didactic sessions, as well as for the Project ECHO® sessions and Quality Improvement Seminars mentioned in [Chapter 4](#).

"When we were designing the didactic room (training room), we looked at making sure the room had full wi-fi access, multiple power access for laptops for the residents. In addition, I made sure we installed large projector screen, white boards, instructor podium complete with click share program for ease of switching users. Another aspect we thought about was how to make the room the most functional for many meetings, we purchased training tables that will roll away for storage or can be reconfigured for groups with patients."

—CHERYL CERVANTES, VP of Facility Operations
CHAS Health, Spokane, Washington

Human Resources: The People Who Make it Work

New NPs seek out NP postgraduate training experience in large part because of the availability of clinical experts and peers who are not only ready, willing, and able to support their development as primary care providers, but who also have been given dedicated time to do so. At CHCI, clinical faculty is assigned to Precepted and Mentored Clinics, specialty rotations, didactic sessions, the Quality Improvement Seminar, and other components of the curriculum that address organizational development. It is imperative that your program have sufficient capacity to meet these needs with the most qualified clinical program faculty.

"Precepted Clinics are the cornerstone of the residency program. And, it lived up to all my expectations. The idea that a senior provider will take the time to help me grow as a primary care provider was amazing. They not only had the time to teach, but they also enjoyed the process. None of the preceptors that I have worked with made me feel like I was incompetent or insecure."

—Former CHCI NP resident



Shown at left:
Carl Lecce, MD,
Medical Director,
CHC of Middletown site
with Nichole Mitchell,
2014–2015 cohort and
current CHCI NP.



Preceptors and Mentors. Expert preceptors and mentors are central to the effectiveness of your NP postgraduate residency training program. Postgraduate training in all of the health professions relies on actual clinical experience, as well as expert guidance from clinical preceptors. Preceptors not only teach, but they model the professional role to which the trainee aspires (Chen, Rivera, Rotter, Green, & Kools, 2016). At CHCI, preceptors practice to the high performance model of care (**Chapter 2**) expected of NP residents when they complete our NP Residency Program. Most importantly, preceptors are critical to developing the healthcare workforce (Donley et al., 2014).

The literature on precepting and mentoring in the health professions is extant; the relationship between an experienced preceptor and new practitioner is a significant factor in the latter's professional success (Brooks & Niederhauser, 2010; Chen et al., 2016; E. Hayes, 2000; E. F. Hayes, 1999; Lyon & Peach, 2001). Our approach to precepting has of necessity paved some new ground. We recognized early that precepting the NP residents, already licensed and board-certified healthcare providers, would be different than precepting the medical and NP students that our clinical staff were accustomed to precepting. There were questions of "how much is too much" involvement on the part of preceptors, reluctance at times on the part of the NP resident ("I should know this already"); and some discomfort on both sides with giving constructive criticism ("on both sides"). The evaluation process, with regular, bi-directional feedback, was immensely helpful in crafting the culture of open communication and feedback about the precepting experience that now exists. In order to ensure that we were attending to the needs of the preceptors, as well as the needs of the residents, CHCI created a "Chief of Preceptors" designation for one senior member of the medical staff who has dedicated time to conduct an annual orien-

tation for all new and existing preceptors and mentors to provide an update on the program, review any new policies or procedures, and provide a forum for preceptors to discuss challenges and successes. In addition the Chief of Preceptors facilitates a quarterly preceptor development meeting where preceptors discuss resident progress, preceptor role at that point during the training year, and also any challenges they are facing. The success of this approach is evidenced by the number of medical staff members, MDs, PAs, and NPs, who apply to be preceptors in the program.

We assign one preceptor to a team of two residents per session, though other programs have chosen to have three residents per site if space is adequate. Minimum requirements to serve as a preceptor in the CHCI program include a minimum of one year of practice at CHCI as a primary care provider (regardless of total years in practice). Interested providers who do not qualify as a preceptor can still participate in mentored clinics, didactic sessions, the QI Seminar, and other curricular activities and special events. All of these areas provide an opportunity for CHCI staff members to engage with the residents outside of being a preceptor.

During Precepted Clinics, the preceptor schedule is blocked to patients, so he/she is fully available to the residents. In addition, residents are encouraged to follow up with the preceptor in between Precepted Clinic sessions if additional guidance is needed regarding new information obtained, such as results from lab and diagnostic imaging ordered during the session. There is some flexibility in the schedule when a preceptor is assigned to just a single resident. For example, from time to time, if one of the two residents assigned to a preceptor is away and the ratio of preceptor to resident is 1:1, the preceptor may be booked for a few of his or her own patients to offset unused excess of capacity.

"As a Family Nurse Practitioner myself, it has been very rewarding to support new residents as they work to build their knowledge base and overall confidence. Precepting ensures that I am always reading and keeping myself up to date on the latest, while teaching residents how to use their resources well to ensure they can build skills that will carry them throughout their careers as they care for some of our most complex patients.

Nothing reinforces my connection to the mission of what we do as primary care providers more than helping to equip the next generation to carry on the work that I care so deeply about."

—MARY BLANKSON, APRN, FNP, DNP, Chief Nursing Officer
Community Health Center, Inc.

Part II.

Financial Resources: Cost, Revenue, and the Return on Investment

Specialists. You may identify specialty rotation preceptors internally or externally, based on the resources and needs of your organization and program. CHCI's HIV, Women's Health, Healthcare for the Homeless, Pediatrics, and Adult and Child Psychiatry rotations are staffed with faculty from within CHCI, while our Newborn Nursery, Dermatology, Geriatrics, and Orthopedics rotations are staffed by external specialists. Identifying and recruiting external practices to support and staff specialty rotations for your program can present some challenges with the current high demand for clinical placement sites by health professions students. However, our experience and that of many NP residency programs that we work with is that local practices and hospitals with which they are already collaborating with clinically are willing to partner. Not only does this provide the program with the desired clinical learning experiences for an NP postgraduate residency training program, but provides the organization with an opportunity for relationship building and better coordination of patient care.

Choosing the Right Resources

Choosing the right physical and staff resources for your program comes with challenges. As your program grows, and as your organization grows, you will need to design space to accommodate the NP postgraduate training program and its residents. As CHCI's NP Residency Program has expanded from four to ten residents, we have found that it can be difficult to balance the residents' needs for physical space and equipment with other, equally important priorities for space and resources. You may have a wonderful clinical practice site to which you want to assign residents, with qualified preceptors and plenty of space, but perhaps there isn't sufficient demand by new patients to support both the current providers and the NP residents in building a panel of new patients. Conversely, you may have another location that has both sufficient patient demand and expert preceptors, but there is simply not enough space without inconveniencing the staff already on site. You must balance all these factors when assessing your resources and in choosing the best location for your residents to train.

We note that some NP Residency programs have designed new dedicated space for training health professionals, including the NP residents. This is a unique opportunity to design a space that meets your program needs, hopefully in a team-based, inter-professional context, with design features to enhance your training program.

The current reality is that a number of **potential** sources exist for reliable, sustainable funding streams for NP postgraduate training. However, these remain possibilities that may be realized at some point in time. We will discuss some of these possible funding sources. Although we are optimistic that such funding may eventually be available, currently we need to make the case for the Board of Directors and leadership of your FQHC or other type of organization to decide to invest precious bottom line margin in NP postgraduate residency training.

We provide a Pro Forma Analysis to serve as a "cost calculator" tool ([Appendix 5.1](#)) when comparing the impact of adjustable factors such as the number of NP residents, the number of sites to which they are assigned, and the ratio of preceptors to NP residents. This model takes a realistic look at a key cash flow: the lost revenue resulting from experienced primary care providers acting as preceptors assigned to NP resident teaching, and the resultant reduction of billable visits. In this chapter, we also acknowledge the unique nature of NP postgraduate training: NP residents are licensed primary care providers (PCP) who are credentialed with insurance plans and capable of directly billing for their own patient visits. Finally, we will address the return on the investment of a training program by reviewing the financial impact of retaining NP residents post-training compared to recruitment of new providers. We will take a look at cost first, then revenue, and finally provide a model for calculating the return on your investment. Many organizations have told us their final decision to proceed was not based on whether they could afford to start a program, but whether they could afford not to.

Costs: Direct, Overhead, and Indirect

In postgraduate clinical training, whether of NPs, physicians, dentists, or psychologists, there are two major areas of costs: direct and indirect. The best known example is post-medical school training for resident physicians working in teaching hospitals under the supervision of more senior residents and attending physicians.

The direct and indirect costs of postgraduate medical training are traditionally supported by payments to the hospital from federal Graduate Medical Education (GME) dollars, which are carved out from reimbursements to the hospital for care of Medi-

care patients. Direct costs include residents' salaries and benefits. The indirect costs are unique to the acute care setting. For example, medical residents often order more diagnostic tests than more experienced physicians, and while they spend considerable time in the hospital, their services are billed under the name of the attending physician. The Teaching Health Center program, created and funded under the Affordable Care Act, operates differently with a per capita payment per medical resident, but also recognizes both direct and indirect costs (Department of Health and Human Services, 2011). This is an initiative that began in 2011 to support an increased number of primary care residents and dentists trained in community-based ambulatory patient care settings. These community-based settings include, but are not limited to, Federally Qualified Health Centers (FQHCs), community mental health centers, rural health clinics and health centers operated by the Indian Health Service or an Indian tribe or tribal organization, and entities receiving funders under the Public Health Service (PHS) Act.

Calculating Direct Costs. Each program must set its own salary structure for the NP residents. At CHCI, we have traditionally set our salary for new NPs enrolled in the residency program at approximately 70% of the local market compensation for a new NP. Employee benefits are also a direct cost, and for NP residents are generally on par with other Licensed Independent Practitioner (LIPs) in the organization, although there will be some variations such as paid time off (PTO) accrual and CME allowance.

Direct costs also include program personnel and equipment, as described in [Chapter 5](#). Depending on the size of your program, the roles of program director and program coordinator may be a full-time position or allocated as dedicated time from existing positions, but someone has to take responsibility for the clinical leadership responsibilities (curriculum, evaluation, precepting) as well as the operational details (tracking clinical assignments, arranging didactic sessions, coordinating schedules), as well as additional responsibilities. Direct costs also include computers, tablets and phones, EMR and evaluation system licensing fees, mileage reimbursement, and teaching/education aides.

The [cost calculator](#) on page 101 provides a snapshot of potential expenses and ROI, and is based on assumptions for details that only you can meaningfully provide. In this example, we assume that there are no additional revenue sources such as grant funds, that there are either two or three NP residents in the initial cohort, and that the organization is using only one site for the program. We assume that your program follows the model of devoting 40% of the time of the NP residents to sessions in

Nurse Practitioner Residency Training Program Pro Forma Financial Analysis/Cost Calculator Sample		2 Residents	3 Residents
YEAR 1			
REVENUE			
Patient Revenue Generated by Residents			
# of Residents		2	3
Visits per Resident during Residency Period		1,000	1,000
Total Patient Visits		2,000	3,000
Average Revenue per Patient Visit		\$150	\$150
Total Patient Revenue		\$300,000	\$450,000
TOTAL REVENUE		\$300,000	\$450,000
EXPENSES			
Salaries and Fringe Benefits			
# of Residents		2	3
Salary per Resident		\$65,000	\$65,000
Total Resident Salary		\$130,000	\$195,000
Residency Program Director (.2 fte)		\$30,000	\$30,000
Residency Program Coordinator (.5)		\$22,500	\$22,500
Total Salaries		\$182,500	\$247,500
Fringe Benefits (22%)		\$40,150	\$54,450
Total Salaries and Fringe Benefits		\$222,650	\$301,950
Other Direct Expenses			
Equipment, Software, EMR Licenses (\$2,250 per Resident)		\$4,500	\$6,750
Evaluation Software License		\$1,200	\$1,200
Medical Supplies and Materials (\$2,000 per Resident)		\$4,000	\$6,000
Total Direct Expenses		\$9,700	\$13,950
Indirect Expenses (lost patient revenue from preceptors)			
Estimated Lost Visits per Year—45 Weeks of Precepting (40% of 3,800 visits)		1,520	1,520
Average Revenue per Patient Visit		\$150	\$150
Total Indirect Expenses		\$228,000	\$228,000
TOTAL EXPENSES		\$460,350	\$543,900
Gross Margin—Year 1		(\$160,350)	(\$93,900)
YEAR 2 (Post-residency Year)			
REVENUE			
# of Residents Converted to Permanent Employee		1	2
Annual Visits by Former Resident in Excess of Ramp-up Provider		1,200	1,200
Average Revenue per Patient Visit		\$150	\$150
Additional Patient Revenue Total (1,200 x \$150.00)		\$180,000	\$360,000
EXPENSES			
Cost Savings on Recruitment Fees (est. \$22,500 per hire)		\$ (22,500)	\$ (22,500)
Gross Margin—Year 2		\$202,500	\$382,500
Net Cash Flow		\$42,150	\$288,600

* This assumes there are no additional revenue sources.

Table 5.2: Pro Forma Analysis (Cost Calculator) (Appendix 5.1)

which they have the exclusive attention of a preceptor, and therefore have allowed for both the revenue generated by the NP residents in the form of billable visits, and the estimated loss of billable visits for the preceptors. In this small program, the amount of direct staffing is limited to .2 FTE Program Director and .5 FTE program coordinator. Of course, many staff will contribute to the education and training of the NP residents beyond these individuals. The Program Director, usually an NP, is engaged in key elements of the program and responsible for curriculum development and evaluation. The program coordinator is responsible for the oversight of the operation of the program and manages day to day implementation and logistics of the program. These responsibilities can be combined with another staff position within your organization.

When using the cost calculator it is important to keep in mind this is a multi-year life cycle with a cash outlay/investment in first year and ROI actualized in Year 2.

Calculating Opportunity Costs. The revenue lost when preceptor clinicians are not seeing their own patients, but are exclusively attending to the education and training of the NP residents, is what we refer to as an opportunity cost of the program. Some organizations encourage preceptors to schedule additional hours, with additional compensation, for precepting to avoid this loss. In that case, the amount of compensation paid for their time spent precepting should be included as a Direct Cost. In most organizations, many clinicians welcome the opportunity to serve as preceptors as a respite from their regularly scheduled clinical time.

We have previously noted that most programs devote 40% of the NP residents' time to Precepted Continuity Clinic sessions. Since the NP residents are licensed independent providers, they are the accountable clinicians of record who bill for the patient visit. This is recorded as revenue and will offset the lost revenue of the preceptor not seeing their own patients and billing for those visits. This "lost revenue" is a function of your practice's average reimbursement rate per visit x the expected number of visits per hour for your precepting providers x the number of hours spent precepting.

Average Number of Visits per Provider/Year	3,800
Average Reimbursement per Visit	\$150.00
Time Spent Precepting Residents	40%
Lost Visits (.4 X 3,800)	1,520
Lost Revenue from Precepting (\$150.00 X 1,520)	\$228,000.00

Table 5.3: Example of Indirect Costs from Lost Revenue

While the number of visits billed by each NP resident in the first few months of the program is modest, this number steadily increases throughout the year as they become more experienced. Most NP postgraduate training programs aim for 800 to 1,200 visits per NP resident over the 12 month program, based on the goals of competence, confidence and mastery across a wide range of clinical challenges. If you do monthly cash flow forecasting for your organization, ensure that you back-end load the NP resident's visits during their year of residency.

Benefits: The Return on Investment

It is the potential return on investment (ROI) and business imperative of growing an expert primary care workforce that makes implementing an NP postgraduate residency training program an attractive investment to an FQHC. In order to correctly arrive at an ROI for the residency program, the cost analysis of the program has to be calculated over the full life-cycle of the residents, which is two years. If all of your wonderfully trained, confident, competent NP residency alums now head off for other health centers and areas of the country, you can take pride in having made a real contribution to clinical workforce development; but that may not be very reassuring to your organization's bottom line. The ROI is realized in retaining at least some of the alumni of the program as primary care providers at your organization in Year Two.

Retention by Contract. Some, but not all, organizations require by contract that NP residents commit to employment for a period of time, usually one year, post residency. Our experience at CHCI is that an average of 40%–50% of our NP residents will choose to remain for at least an additional two years without a contractual obligation. Our experience is that the NP Residency alums provide an average of 3,800 visits in Year Two, the first year post residency, which is significantly higher than the average for primary care providers new to the organization. In the year after residency, your retained NP will see more patient visits than a PCP that is new to the organization.

Another factor to consider is the additional cost of recruiting a new provider to your organization, rather than retaining an NP resident. This will vary for each organization based on the time, effort, and fees your organization typically expends in recruiting new providers.

The Intangibles: Staff Satisfaction. There are important intangible benefits as well that must be recognized. One of the unanticipated benefits CHCI and other organizations have seen from implementing an NP postgraduate residency training program is the immense satisfaction of staff who are engaged in the residency program. Having an NP Residency Program has also helped with other organizations' overall recruit-

ment efforts. Clinical providers engaged in teaching are attracted to positions within organizations with NP residency programs because of the potential to precept, teach and become involved in the NP postgraduate residency training program.

“Overall, we see the benefit of the NP residency program having three main components: 1. It helps us to train three new nurse practitioners each year to join the Thundermist team and become top notch Thundermist Nurse Practitioners, without the normally associated startup costs. 2. It allows us to retain our nurse practitioners and physicians who desire to incorporate teaching/precepting into their work experience. 3. It helps us to recruit very high caliber talent who want to incorporate teaching/precepting into their employment experience.

We feel incorporating precepting into employment contracts of non-resident providers create what we call “non-replicable” positions. Meaning positions that blend clinical practice with teaching that providers will not be able replicate at other employers.

We have witnessed all of these benefits since implementing the NP residency program at Thundermist.”

—MATT ROMAN, Chief Operating Officer, Thundermist Health Center

Partnering With Another Organization

As you plan your program and build your budget, you may want to consider contracting with an external partner for some aspects of the program. An expert partner can manage all or some aspects of the NP residency training program including recruitment and selection of candidates, program design/redesign and implementation, preceptor and staff trainings, distance learning for didactic elements and program evaluation. Some organizations seek out an academic partner for help specifically with curriculum development and delivery as well as evaluation.

Organizations may find it easier in the initial years to partner with an expert organization to provide support and consultation to the NP postgraduate residency training program. When thinking about potential partners and collaboration, you will need to identify the services needed for your program and the cost associated with another organization providing those services.

Summary

It is important to remember that starting and operating a postgraduate training program for new NP graduates is a multi-year cycle. It should be clear by now that there

are many variables in your financial calculations. The number of residents and program staff, their compensation and benefits, the ratio of preceptor to residents, lost productivity of the preceptors and projected revenue for the residents all are factors to consider in developing your financial projections. We have provided a hypothetical Pro Forma Analysis ([Appendix 5.1](#)) for your review that is based on the many factors we have described in this section.

Part III. Future Funding Opportunities

This exercise in calculating your costs and return on investment point to an obvious conclusion: some health centers are in a better position than others to start and operate an NP postgraduate residency training program. Health centers that have a substantial bottom line margin, available operational resources, such as space and equipment, and staff and preceptors that can be deployed to support such a program are better positioned to make the investment in developing an NP residency program than those health centers that are smaller or more restrained. Yet these smaller centers may be able to offer an excellent training experience and would benefit enormously from attracting talented new NPs to their area, with the possibility of retaining them as longterm primary care providers.

We believe that there is a case for a national investment in NP postgraduate training and have worked diligently over the past decade to educate all stakeholders about the need for expert primary care providers in the U.S., the value of NPs in meeting that need, and the benefit of an additional year of postgraduate training in the FQHC system to fully prepare them for the challenges of practice. We have seen progress in stakeholders’ understanding of the clinical workforce issues in primary care, and the need for sustainable funding for NP postgraduate training but have not yet realized our goal of such funding, which will require political will, legislative strategy, and a willingness to invest in a new program of clinical workforce training. We offer the following thoughts on potential funding sources.

Graduate Medical Education (GME)

Because GME funding for postgraduate physician training is supported by reimbursements to teaching hospitals for Medicare, CMS could change its statutory language to include allowing funding for NP postgraduate training as well. This is not on the horizon at this time. However, the results of an Institute of Medicine (IOM) study on the future of GME recommended the creation of an Innovation Fund that might

consider funding the training of “other kinds of healthcare professionals” (Institute of Medicine [IOM], 2014).

HHS, Health Resources and Services Administration (HRSA), and Bureau of Primary Health Care (BPHC)

HHS, HRSA and its Bureau of Primary Health Care are charged with “improving the health of underserved and vulnerable populations by strengthening the health workforce and connecting skilled professionals to communities in need” (HRSA, 2017). Thus HRSA is a significant stakeholder for NP postgraduate training.

HRSA also funds community health centers, nurse managed health centers, and other safety net settings, and as such has a strong interest in seeing that these facilities are staffed with excellent primary care providers. The Teaching Health Center (THC) legislation under the ACA created funding for health centers to launch their own medical residency training programs, and that legislation could potentially expand to include NP postgraduate residency training programs. HRSA annually receives an appropriation from Congress for the Health Center program for organizations funded under Section 330 of the Public Health Service Act (42 U.S.C. §254b). Funding for NP postgraduate training and potentially other workforce training programs could potentially be added to this funding vehicle.

State Medicaid GME

Unlike federal GME statutory language, state GME funding is not restricted by statute from funding NP postgraduate residency training programs. State Medicaid programs have a particular vested interest in ensuring a supply of excellent primary care providers in community health centers, because most Medicaid patients are cared for in these safety net settings. The National Governors Association has reviewed this issue through their Health Policy Division, and are actively considering using Medicaid dollars for this purpose (IOM, 2014). However, this solution would happen on a state by state basis.

Private Foundations

Private and philanthropy is particularly well suited to the innovation and development phase of a new initiative and as such, foundations may be able to help with implementing and evaluating demonstration NP postgraduate residency training programs, but they cannot be relied upon as a long term source of funding.

Conclusion

The questions before you, your Board of Directors, and the leadership team in your organization are: What are the clinical, financial, and strategic drivers for developing an NP postgraduate residency training program, the impact to your bottom line, and the likely potential return on the investment? And most importantly, what is the cost of **NOT** moving forward with clinical workforce development in your own institution? With this in mind, as wise stewards of the resources available to your organization and a commitment to both the short- and long-term healthcare needs of your patients and your organizations, we are confident you will make the right decision for your organization. Despite the lack of an established funding mechanism, we continue to see growth and further development of a model for NP postgraduate residency training programs.

References

- Brooks, M.V.; Niederhauser, V.P. (2010). “Preceptor Expectations and Issues with Nurse Practitioner Clinical Rotations.” *Journal of the American Academy of Nurse Practitioners*, 22(11), 573–579.
- Chen, A.K.; Rivera, J.; Rotter, N.; Green, E.; Kools, S. (2016). “Interprofessional Education in the Clinical Setting: A Qualitative Look at the Preceptor’s Perspective in Training Advanced Practice Nursing Students.” *Nurse Education in Practice*, 21, 29–36.
- Teaching Health Center Graduate Medical Education Payment (THCGME payment program), 93.530, (2011).
- Donley, R.; Flaherty, M.; Sarsfield, E.; Burkhard, A.; O’Brien, S.; Anderson, K. (2014). “Graduate Clinical Nurse Preceptors: Implications for Improved Intra-Professional Collaboration.” *OJIN: The Online Journal of Issues in Nursing*, 19(3), 9.
- Hayes, E. (2000). “The Preceptor/Student Relationship: Implications for Practicum Evaluation.” *Nurse Practitioner*, 25, 118–124.
- Hayes, E. F. (1999). “Athena Found or Lost: The Precepting Experiences of Mentored and Non-Mentored Nurse Practitioner Students.” *Journal of the American Academy of Nurse Practitioners*, 11(8), 335–342.
- HRSA. (2017). Human resources and services administration (HRSA). Retrieved from <https://www.hrsa.gov/index.html>
- IOM (Institute of Medicine). (2014). *Graduate Medical Education that Meets the Nation’s Health Needs*. Washington, DC: The National Academies Press.
- Lyon, D.E.; Peach, J. (2001). “Primary Care Providers’ Views of Precepting Nurse Practitioner Students.” *Journal of the American Academy of Nurse Practitioners*, 13(5), 237–240.

Operations and Administration

In a well-run NP Residency program, it is easy to miss how much is going on behind the scenes to make it a smooth, efficient, effective operation for the NP residents and the organization. Marketing, recruiting, candidate selection, onboarding, credentialing, orienting, scheduling, and—of course—troubleshooting are all part of the orchestration below the surface.

The operational activities of the program involve several departments across the organization, which is why it is important to involve them from the beginning. They include: Human Resources (HR), Information Technology (IT), Business Intelligence (BI), Marketing and Communications, Finance, Facilities, and Credentialing. The program itself also requires administrative staff with time dedicated to planning, implementing, and evaluating the NP residency program to ensure that it is of the highest quality. In this chapter we will describe the operational activities and organizational resources underpinning the model of NP Postgraduate Residency Training Programs as has been presented through our National Cooperative Agreement (NCA) on Clinical Workforce Development.

Organizational Resources: Achieving Top-to-Bottom Support

Here is a fundamental truth: you can't run an effective NP residency program in a silo. The entire organization must be involved in understanding and supporting the program and its implementation. Your implementation plan must include clear and focused communications with key departments in order for them to have the information they need to support the program. Below is a list of some of the key people and departments whom we recommend that you engage early in your planning to identify the key roles they and their staff will play in supporting the program. We discussed these organizational resources briefly in [Chapter 3](#), and review them again here to emphasize that they are essential to your program's success.



On left: 2013 Stand Down, Rocky Hill, CT. Former Connecticut Veterans Commissioner Linda S. Schwartz (left) watches while Connecticut Governor Dannel Malloy has his blood pressure checked by an NP resident.



Shown at right: 2016 Stand Down in Rocky Hill, CT; September 2016. CHCI 2016–2017 NP residents (left to right), Huma Hussain, Suelen DeOliveira and Carla Paredes, with Connecticut Governor Dannel Malloy.



Shown above: Connecticut's Lieutenant Governor Nancy Wyman visits with CHCI residents and staff at the 2016 Stand Down event held in Rocky Hill, CT; September 2016.

Leadership

Your leadership team is likely the first group from which to enlist support for starting a new NP postgraduate training program. Given the necessary financial investment in the program and its integration into the clinical setting, your administrative and clinical leadership must fully understand the commitment that a program entails, as well as recognize the value of the program both for your organization and for primary care. Leadership support is critical to your program's success; without it, you cannot move forward.

Human Resources

Your HR department will play a key role in many parts of the program given the status of NP residents as employees. Your HR team will not only act as a resource when it comes to recruitment and interviewing, but they will play a significant role in onboarding activities as well as employee relations and management issues during the course of the program year. It is important to connect with your HR team early so that you can work to decide on the core activities that will overlap with HR responsibilities and also discuss where modifications may need to be made due to the unique nature of the program.

Communications and Marketing

Your Communications, Marketing and/or Public Relations department(s) will be helpful in creating the marketing collateral for your NP residency program. Marketing collateral may include: press releases, NP residency advertisements, informational sheets, more detailed NP residency booklets, website design and social media content. Once you've decided to launch your NP residency program you will want to engage your communications team right away to begin creating materials and promoting your program.

Information Technology

The information technology (IT) team will need to support the NP postgraduate training program as it does all other employees of the organization. Work with this department early in the process of starting a program so that they understand your needs from a program perspective. NP residents should have access to the same

technology as other members of the medical staff, including access to physical resources such as laptops or tablets, access to data systems and the EMR, and any resources such as online access to clinical education and decisions supports that are available to your clinical staff.

Finance

As we discussed in [Chapter 5](#), the financial implications of your program must be clearly understood across the organization. Your Finance department will play a key role in setting up the fiscal oversight for the program, by determining how cost and revenue for the program is captured, developing budgets, and also supporting return on investment analyses. If billing and revenue cycle activities are housed within Finance, this department will be very important to the training of the NP residents in correct use of coding, including training them to the importance of documenting the social determinants of health such as homelessness. In addition, the Finance team likely supports the payroll and benefits functions of the program, if it already does for the entire organization.

Operations

Every organization structures their operations team somewhat differently. It may include a Chief Operating Officer, a layer of operations managers, and the staff assigned to frontline operational support. It is essential that this team understands not just the purpose and goals of the NP postgraduate residency training program as a whole, but more specifically the operational plan that will ensure that the NP residents are on track to see the right number, type, and variety of patients, at the right time and volume, with the appropriate rooms and support staff—no small task! The site-based operations staff, including those who register new patients, will need training in how to communicate effectively to patients regarding their selection of a nurse practitioner, who has elected to do a one year postgraduate residency program, as their primary care provider. This staff will also help to ensure the appropriate ramp-up in volume of patients as the NP resident gains in experience and mastery. The support, enthusiasm, and technical competence of the operations team, especially at the assigned host sites, is a vital element of a successful NP resident experience.

Clinical Support Staff

Finally, clinical support staff, including medical assistants, nurses, care coordinators and other staff that may be involved in clinical care will need to understand their unique role in supporting the experience of the NP residents. Your NP residents will be members of the care team, and should experience the same level of collaboration and cooperation as other providers in your organization.

Operations: Policies and Procedures

Well defined policies and procedures reflect the missions and goals of both the NP residency program and organization. Although we have reviewed policies and procedures in other sections, it is important to address policies that apply specifically to the NP residency program. As full-time employees, NP residents are expected to adhere to the same organizational policies and procedures as other employees.

These policies and procedures should be covered during new hire orientation, and be available to all employees in a central information repository, such as an organizational intranet page.

Resident records and documentation should be maintained by the same department in the same way and manner in which they are kept for employees. All policies and procedures regarding confidentiality and release of records apply equally to NP residents. At CHCI, HR is engaged to support the program in identifying and applying any CHCI policies and procedures that are directly related to the residents' employment, including health screenings, licensing and credentialing, grievances, performance issues, and so on. While the majority of policies and procedures that your organization has already established will apply to the residents, it may be necessary to modify existing policies or procedures to fit the unique nature of the NP residents' employment.

In addition to organizational policies and procedures, the NP residency program should develop additional policies that meet specific programmatic and operational needs. For example, CHCI's "Stepwise Increase of APRN resident Clinical Scheduling Policy" outlines the procedure for clinical scheduling "ramp-up" and also meets the training need of progressively increasing responsibility and independence in patient assessment, diagnosis, treatment and management, as well as in mastering the prin-

ciples of team-based care, interprofessional practice, and use of sophisticated electronic data and technology. We recommend that you consider some of the following policies as you develop your program.

Stepwise Increase of APRN Resident Clinical Scheduling: We mentioned this policy in [Chapter 4](#) on curriculum developing. The purpose of this policy is to clearly lay out the structure and procedures for increasing the resident's clinical schedules that are progressive over the life of the program. (See Appendix 4.1)

NP Residency Program Precepting Policy: The precepting policy provides clear guidelines and structure for all preceptors in their roles and responsibilities, including details on guidelines based on stages of residency development. (See Appendix 6.1)

Formal Residency Agreement: We recognize that not all programs will choose to have a formal contract with their NP residents, but you must spell out the terms and conditions of employment, including traditional items such as salary, benefits, access to Continuing Medical Education opportunities and personal time off. We have seen some organizations in which the NP residents were treated as at-will employees, with a confirming hire letter, but an NP Residents' Handbook was created to detail all aspects of the responsibilities and privileges.

Nurse Practitioner Residency Training Program Application Process: It is important to create a procedure for the application process to ensure consistency and fairness. The application procedure should include: date of opening of applications, application deadline, qualifications, application and required documentation, residency compensation and benefits, interview dates, offer date and residency start date, Continuing Medical Education opportunities and personal time off. (See Appendix 6.2)

Patient Transfer Policy: The purpose of this policy is to create a consistent process across all sites so that the transition of NP residents from year to year can be handled proactively. While we hope that NP residents will stay on after the residency year, and hopefully in the same site so that they can retain their established patient panel, that is often not the case. The process for transitioning patients to another primary care provider should be clear and communicated early on to patients.

Operations: Marketing and Recruitment

Marketing and recruitment are essential activities as you plan for attracting your incoming class of NP residents. The recruitment process should occur at least six months before the start of the program and should include a communications and marketing plan. This is a good time to decide who will be on your applicant review and interviewing team as well. Before you can begin recruitment and marketing, however, you need to determine the qualifications you are looking for in your candidates and include those qualifications in the application, marketing materials, and on your program website. We will share CHCI's approach to recruitment and offer some suggestions based on our experience.

Candidate Qualifications

In the CHCI model, we recruit specifically for new nurse practitioners who have completed their graduate degree, either the Doctor of Nursing Practice (DNP) or the Master of Science in Nursing (MSN), within 18 months of the planned start of the residency program year. This is consistent with our organizational focus on the next generation, but is by no means a universal rule for all to follow. Other organizations are open to a wide variety of candidates in terms of length of time since graduation and in practice. We strongly encourage all recent grads to take the national certification examination as early as possible in order to be fully eligible for credentialing, privileging, and appointment to your own medical staff, as well as eligible for enrollment in all applicable public and private insurance plans, by the start of the residency in September. They need to be licensed in your state as an Advance Practice Registered Nurse (APRN), and credentialed as a nurse practitioner in an appropriate specialty. For primary care NP residency training programs, that will include family, adult/gerontology, pediatrics or possibly women's health. Some FQHCs offering primary care NP residency training programs are expanding to include psychiatric mental health NP residency training programs as a natural next step.

Based on your organizational needs, strengths and populations, you may consider language competency as a requirement or a competitive strength of applicants. If your NP residency program is intended for applicants who are committed to practice careers as primary care providers in FQHCs and other safety net settings, you may require as part of the application a stated commitment (written) to practice as a primary care provider in an FQHC upon completion of the residency.

Marketing and Recruitment: Local vs. National

With your leadership team, decide if you want to recruit nationally or locally. This is entirely your strategic decision, and will guide your marketing materials and activities. At CHCI, marketing and recruitment for the NP Residency Program are conducted nationally. We use print advertisements and promotional program flyers, and have created a presence on the world-wide web with an NP Residency website (www.npresidency.com) and on social media outlets such as Facebook and Twitter. We reach out to key university schools of nursing in our state and across the country, providing information about the program and recruitment materials, and on occasion provide online presentations about the program to students or visit the schools in person. To ensure that you attract the right candidates for your organization, you need to first develop a recruitment strategy that answers the questions below:

Who are you recruiting? Does it matter to you if applicants are from your local geographic area and universities or are you interested in casting a broader net to include applicants from across the country? Design your marketing and media approach accordingly. Identify current nurse practitioner graduate students doing clinical rotations at your organization who might be interested in applying and make sure they are aware of the opportunity. Work collaboratively with other FQHCs sponsoring programs to refer candidates that may not be appropriate for your organization to another organization.

Where will you advertise and recruit? You will once again be guided by your focus on local, regional, or national recruitment. We suggest you consider placing one prominent notice of your NP residency program opportunity in a national publication that is widely read by NPs, preferably both print and electronic. Beyond that, consider postings to other publications and forums, enlisting your academic partners in distributing notice of the opportunity through their list serves, and recruiting at state and national NP conferences.

When will you recruit? Develop a recruitment timeline that allows candidates to consider the opportunity, assemble their materials, and complete the application process on time. The recruitment process should occur **at least six months** before the start of the program.

America's First Family Nurse Practitioner Residency Training Program



Background:

- In 2007, the Community Health Center, Inc., headquartered in Middletown, CT launched the nation's first nurse practitioner postgraduate residency training program to support the transition from new NP to primary care provider.
- The goal: to provide new nurse practitioners with a depth, breadth, volume, and intensity of clinical training necessary to serve as primary care providers in the complex setting of the country's FQHCs.
- The 2017–2018 class is the 11th class accepted into the program. Our residents have come from: Alabama, Arizona, California, Connecticut, Florida, Idaho, Illinois, Iowa, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, Texas, Vermont, Virginia, Washington, Washington D.C., Wyoming, United Kingdom, and Vancouver, BC, Canada.

Where are they now?

The majority of CHCI's alumni (61 of 66) are practicing as primary care providers in FQHCs and other safety net settings in FQHCs in Arizona, California, Colorado, Connecticut, Illinois, Iowa, Louisiana, Maryland, Massachusetts, Minnesota, New York, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington, and Washington D.C.

Qualifications:

Candidates: recent graduates of Masters or DNP programs, certified or board eligible as FNP, bilingual preferred, with a stated commitment to practice career as a primary care providers in safety net setting.

Structure:

- 12 months, full-time salaried position.
- Precepted Clinics: residents develop their own patient panel while having a CHCI provider (MD, PA or APRN) exclusively assigned during precepted sessions.
- Specialty Rotations: Ten rotations in areas of high volume and clinical complexity, most commonly encountered in FQHCs including managing HIV and Hepatitis C, dermatology and orthopedics, women's health and prenatal care, and more.
- Mentored Clinics: Focused on practice of episodic and acute care.
- Didactic Sessions: Scheduled learning sessions on a variety of complex, clinical challenges commonly encountered in FQHCs.
- Continuous training to CHCI model of high performance health system: advanced access, chronic care model, planned care, team-based, prevention focused, expert use of electronic technology and data.
- Quality Improvement training.
- Clear learning objectives and evaluation plan.
- Participation in CHCI's Project ECHO® case-based distance learning approach to managing chronic pain.

Current and Future Developments:

- Goal is national replication of CHCI's model of FQHC-based residency training for nurse practitioners.
- CHCI has consulted with FQHCs in 45 states about developing a Nurse Practitioner Residency Training Program and is now helping FQHCs across the country learn how to implement similar programs through our HRSA National Cooperative Agreement.
- CHCI led the 2015 creation of the National Nurse Practitioner Residency & Fellowship Training Consortium (NNPRFTC), a new organization which grew out of collaborative efforts among the Nurse Practitioner Residency programs across the country to advance the work of establishing and supporting these programs nationally. The Consortium developed standards that led to a formal accreditation program.
- On December 7, 2015, the Institute of Medicine Committee on the Future of Nursing reaffirmed their recommendation to develop postgraduate residency programs for new APRNs.

For more information about CHCI's Nurse Practitioner Residency Training Program, contact **Kerry Bamrick, Director, Postgraduate Training Programs**, at Kerry@chc1.com or **860-852-0834**.

For more information about the NNPRFTC or accreditation, please visit the website at www.nppostgradtraining.com.

For more information on CHCI's National Cooperative Agreement (NCA) on Clinical Workforce Development, please visit www.chc1.com/nca.

Scan for more information.



Community Health Center, Inc.

675 Main Street, Middletown, CT 06457 | 860-347-6971 | www.chc1.com | Facebook/CHCInc; Twitter/@CHCConnecticut

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Communications and Marketing Plan

Once you have answered the questions above, you can begin to develop your communications and marketing plan. Leverage your organization's resources if you have a marketing or communications department; if you do not, you may need to outsource these activities. This is also a good time to reach out to your Human Resources department so that they are aware of the marketing campaign, and can align the application process accordingly. We suggest that you pursue the following:

1. Create a residency program website or page within your organizational website. This must be in place before you launch your advertising and recruitment cycle. The website should include at a minimum some background on the history of the program, appropriate detail about the structure and content of the program, and key contacts for learning more about the program, as well as detailed information about the application process.
2. Develop key marketing materials, specifically:
 - a. a press release announcing your NP postgraduate training program
 - b. a single page handout, summarizing key information and FAQs, which can be distributed in electronic or hard copy. (Please see **Figure 6.1** for a sample of an NP residency handout)
 - c. a short presentation, either live or video or both, on your NP postgraduate training program that can be shared with visitors, potential candidates, stakeholders, and other interested parties.
3. Work with your marketing and/or communications department to identify the most appropriate media outlets through which to spread the press release. For example, local media news outlets may be interested in doing a story about your program. National organizations for nurse practitioners and schools of nursing often have a news column on their websites.

The time you invest in planning your recruitment and marketing campaign is an excellent investment in building a strong program. As part of our NCA, we developed a communications and marketing plan grid to help various programs within our organization to track their marketing and communications deliverables (**Table 6.1** and **Appendix 6.3**).

Figure 6.1: Sample of an NP Residency Handout

Communication and Marketing Plan				
Activity	Person Responsible	Departments	Message(s) or Purpose	Media & Methods
Press Release (Dev. and Pub.)				
Webpage (Dev. and Pub.)				
Develop Postgraduate residency informational sheet/FAQ sheet				
Create postgraduate residency presentation for recruitment				
Determine market for recruitment (local vs. national)				
Develop Advertisement (print and digital versions)				
Determine advertisement placement (print and electronic)				
Contact Schools of Nursing MSN Programs (NP Residency) and Schools of Psychology (post doc residency program) to inform graduating students of postgraduate opportunities				

Table 6.1: Excerpt of a Communication and Marketing Plan. See Appendix 6.3 for full plan.

Operations: Application Process

In this section we will discuss the application process which includes reviewing, interviewing, ranking, and selecting candidates; making offers; contracts; and the onboarding process. This should be a transparent process for the candidates. Using the recruitment timeline we discussed earlier, you should begin marketing your program at least six months before the start of the residency program.

The Application

Your Human Resources department likely has standards for the development of an application for employment and for the application process, so it is important that your efforts align. Be clear about the qualifications you are looking for in candidates. Post the qualifications, instructions about the application process and the application itself on your program's website. An alternative is to have the application available in hard copy that can be downloaded and mailed.

Consider including essay questions. While your requirements for admission are likely to be quite straightforward, the narrative essay questions offers an opportunity to learn about the applicant's interests, life experiences, and motivation in pursuing NP residency training, and career aspirations and interests and commitment to practicing as a primary care provider in a safety net setting. We have provided sample essay questions for a family nurse practitioner residency training program below, but you will want to develop your own.

- 1. What personal, professional, educational and clinical experiences have led you to choose nursing as a profession and the role of a family nurse practitioner as a specialty practice?**
- 2. Please describe your desire to train in a community health center setting as well as your long term commitment to practicing as a primary care provider.**
- 3. What are your goals for an NP Residency Program, including your aspirations for your short and long term career development?**

If possible, structure your process so that the application can be completed electronically, hard copy or both and post it on your website. At CHCI, the application period typically opens on January 1st and closes on April 1st. Define your application window, and identify the staff person responsible for receiving, recording, and reviewing the applications as they are submitted for completeness based on an application requirements checklist. Finally, be prepared to answer lots of questions, especially as the deadline approaches!

PLEASE NOTE: *Licensing and credentialing does **NOT** need to be active at the time of application. However, it must be in place prior to the start of the program in September including state license to practice (APRN), and federal and state controlled substance prescribing licenses.*

Selection Committee

Your selection committee will be responsible for reviewing, scoring and ultimately selecting the candidates to invite for interviews. The selection committee should include a variety of roles within the organization including but not limited to clinical and operational leadership, potential preceptors and Human Resources personnel familiar with the organization's application process.

Interview Process

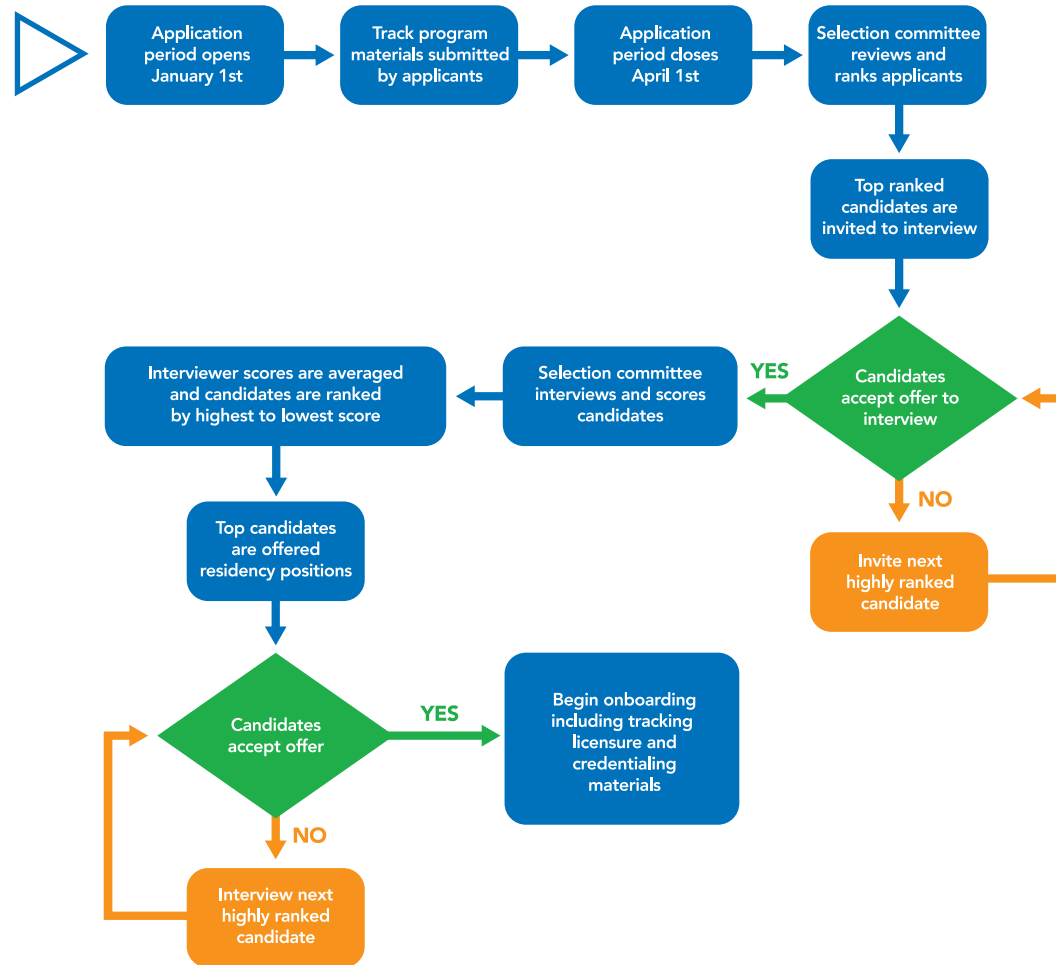


Figure 6.2: Recruitment, Interviewing and Selection Process Flow Chart

The selection committee reviews all applications and ranks them based on your key criteria. In the CHCI model, the following criteria are used: quality of training and education, clinical competency and experience, linguistic and cultural competency, dedication and commitment to underserved placement and intangible experiences (essays, life experiences and references). Members of the selection committee score each candidate (1–5) for each category for a maximum total of 25. Please see the grid on the next page (Table 6.2) for the “application review ranking sheet” that can be used by a selection committee.

First Name	Last Name	School (Graduate)	CORE CRITERIA 3: International and Volunteer Experience	CORE CRITERIA 4: Letters of Recommendation
CORE CRITERIA 5: Personal Statement Essays		ADDITIONAL CRITERIA 1: Language Skills +2 Spanish (fluent/intermediate) +1 Spanish (beginner) or other language	Language	TOTAL

For CORE CRITERIA please rank each candidate from 1 to 5 (5 being the highest)
For ADDITIONAL CRITERIA please follow corresponding instructions on score

Table 6.2: Excerpt from Application Review Ranking Sheet (See Appendix 6.4 for full content)

Based on the ranking/scoring process you are using, you will then identify candidates to invite for interviews. You must decide how many candidates you wish to interview for your available positions and place others on a secondary list should the initial choices decline to interview. You may also decide to notify those applicants ranking at the bottom of the ranking list that they will not be offered interviews.

Determine if you will require in person interviews, or accept videoconference-based interviews and if you will schedule all of the interviews in a dedicated block of time. Based on our experience, we encourage organizations to ask candidates for in-person interviews, and to schedule a block of time so that the interview team can conduct all interviews within a one to two day period with ample time for discussion, ranking, and selection of candidates for offers. We recognize the time and expense involved for candidates (and for the interview team) but have consistently found this to be the most effective strategy. Under certain circumstances, we have allowed videoconference interviews. In the CHCI model, the interview day includes a formal presentation about the organization as a whole and the NP Residency Program specifically, a tour of clinical sites, an opportunity to meet with current and former NP residents from the program, and a rotation of 30-minute interviews with key clinical and organizational leaders.

This process takes dedicated and intensive support from an assigned staff person, so choose that person carefully. He/she will provide intensive support to all members of the interview and selection team, prepare full background material sets, support

the flow during interview days, and technically support the scoring and selection process. In a well-established program, this will likely fall under the responsibility of someone like the Residency Program Coordinator, but in a start-up program, you may need to ask for help from the HR Department.

Ranking the Candidates

Each interview team will be assigned a set of questions. Each team will use the same questions for every candidate they interview. The behavioral-based questions focus on the following five competencies:

- Teamwork and Collaboration
- Caring and Compassion
- Communication
- Judgment and Problem Solving
- Leadership

The selection committee uses a scoring grid (Table 6.3) to score the applications and candidate interviews. The grid addresses quality of education, clinical experience, linguistic skills, commitment to underserved placement, and intangibles. Candidate feedback forms and ranking sheets are provided to the interviewers. Following the interviews, the selection committee will give the candidate feedback forms and scores to the Program Manager, who compiles this information for the Selection Committee’s final decision.

Nurse Practitioner Training Program Selection Committee Interviewing Review Ranking Sheet							
First Name	Last Name	Quality of training and education	Clinical competency and experience	Linguistic and cultural competence	Dedication and commitment to underserved placement	Intangible: Life experience, essay, references	TOTAL
							0
							0
							0
							0
							0
							0

Table 6.3: NP Residency Program Selection Committee Scoring Grid (See Appendix 6.5 for full content)

Offers, Contracts and Agreements

Determine your organization’s process for following up with candidates after the interview. Once the Selection Committee puts together a list of candidates to whom offers will be made, the designated staff person will contact the applicants personally and extend the offer. We encourage you to give a short time frame for a formal acceptance, such as 48 hours. If an applicant declines, you will proceed down the final ranking list and extend the offer to the next candidate in line.

Following verbal acceptance of the offer, we encourage you to follow up immediately with the formal contract or written offer of employment. Establish a deadline for the return of the signed letter of employment of contract. With that document in hand, the onboarding process begins.

Onboarding

Onboarding has two major components. First, it is imperative that you begin the credentialing process immediately. Together, the NP Residency Program staff, Human Resources department, and any specific credentialing department staff will guide the incoming residents through the credentialing process, tracking their status to be sure each NP resident is fully licensed in your state and credentialed/privileged by your organization by the start of the program year.

Second, the NP residents must be brought on board within your organization as an employee. Leverage your Human Resources department to execute the organization’s process for onboarding all new staff, including background checks, infection control documents, and required trainings that all new employees must complete.

Operations: Orientation

We encourage you to consider two orientations, one to the organization and one to the NP residency program specifically. If your organization hosts multiple residencies with the same start date, you may be able to combine many aspects of the program orientation for a true interprofessional orientation experience. Your organization will already have a solid orientation schedule for all employees, and the NP residents should fully participate in that, either immediately before or after the NP residency program orientation.

In the CHCI model, there is an intensive, month long orientation for all of our NP residents. Following a review of the history and current status of the NP postgraduate training movement, the orientation includes a series of clinical didactic training activities that prepare the residents to comfortably begin seeing patients. These include critical policies and procedures related to patient care and the patient population. As months may have elapsed between their last clinical rotations as a student and the start of orientation, we have found that “refresher” didactics in areas such as interpreting EKGs, managing chronic pain, interpreting lab values, and high volume procedures is greatly appreciated (please see [Figure 4.4](#) on page 68 for a complete listing of the NP residency didactics).

We encourage programs to create an opportunity for the NP residents to spend time with key staff members at their assigned clinical sites to provide further connection and understanding of the model of care within the organization, and the contributions of each staff person as a member of the team, both clinical and operations.

Community Immersion Excursion

From the outset, structure opportunities for your NP residents to appreciate that the context of their practice extends beyond the walls of the organization. They need to understand how their practice fits into the larger fabric of the community in which they work, allowing the NP residents to better understand the context in which the patients and their families live, work, play, and pray. The “community immersion excursion” is an exercise to promote understanding of the community, and a popular component of the orientation to the NP residency program. Prepare them for the experience with a deep dive into the UDS data (www.UDSMapper.org) available publicly as a strategy to identify population characteristics in the zip code where their assigned site is located. Consider setting up meeting with community leaders and key stakeholders such as the Mayor, School Superintendent, Health Department, local hospital, YMCA, food pantries and other community organizations. A key goal here is for the NP residents to gain an appreciation of the community strengths, challenges and resources, but also to begin to view themselves as essential community leaders in their developing role as trusted primary care providers in the community. Complete with a walking tour during which the residents locate and document, through photographs the local police station, fire house, public library, courthouse, grocery stores, pharmacies, and public transportation, this creates a meaningful and memorable orientation to the community. Please see Appendix 6.6 for a Community Immersion Excursion template.



At left: CHCI 2014–2015 NP residents Nichole Mitchell and Ashley Fine (left to right) meet with Mayor Daniel Drew of Middletown, CT during their community orientation.

“Today we toured various sites in Meriden in order to understand the dynamic relationships between CHCI and its community. We met with the Health Department, MidState Hospital, the Superintendent, Rushford, and Mayor Mike. Mayor Mike said, “CHCI had a vision of how healthcare should be and was radical about making it happen, but it didn’t happen overnight, it’s a lot of work.” Interestingly, my favorite movie quote is never despise humble beginnings. I realized today that CHCI didn’t become a world-class primary healthcare organization overnight. It began in a one room, second floor building, with a dental chair. Along the way, I will rub shoulders with like-minded people, who will help write the story of what will one day be history.”

—DACIA JOHNSON, CHCI NP RESIDENT 2011–2012



At left: CHCI 2016–2017 NP residents Carla Paredes and Huma Hussain during their community immersion excursion in New Britain, CT.

Shown below: CHCI 2012–2013 NP residents Elizabeth Scott and Amanda DeCew with Mike Rhode, former mayor of Meriden, CT.



Community Health Center, Inc. Nurse Practitioner Orientation Schedule

DAY 1: TUESDAY, SEPTEMBER 6TH		
Time	Topic	Presenter
7:45–8 AM	Welcome	Kerry Bamrick , Sr. Program Manager, Weitzman Institute Charise Corsino , Program Manager, NP Residency Erica Hastings , Program Coordinator, Postgraduate Residency Training Programs
8–8:30 AM	Community Health Center Welcome & Introductions	Mark Masselli , President and CEO Margaret Flinter , APRN, PhD, c-FNP, FAAN, FAANP, Sr. VP/Clinical Director
8:30–9:30 AM	History of the Health Center Movement	Margaret Flinter , APRN, PhD, c-FNP, FAAN, FAANP, Sr. VP/Clinical Director
9:30–10:30 AM	Model of Care & Patient-Centered Medical Home	Veena Channamsetty , MD, Chief Medical Officer Tim Kearney , Ph.D., Chief Behavioral Health Director Sheela Tummala , DMD, Chief Dental Officer Mary Blankson , DNP, APRN, Chief Nursing Officer
10:30–11 AM	Introduction to the Weitzman Institute	Daren Anderson , MD, VP/Chief Quality Officer
11–11:15 AM	Introduction to Project ECHO®	Agi Erickson , Director, Project ECHO
11:15–11:30 AM	Introduction to Quality Improvement Seminars	Patti Feeney , Manager, Quality Improvement Education Mark Splaine , MD, MS, Director of Education
11:30 AM–12 PM	Human Bingo	Group Ice Breaker
12–1 PM	Lunch	
1–2 PM	Organizational Introductions: HealthLinc Community Health Centers Open Door Community Health Centers Thundermist Health Center Yakima Valley Farmworker's Clinic Waianae Coast Comprehensive Health Center	Tara Pulley , HR Generalist, HealthLinc Sarah Ross , Southern Region Administrator, Open Door Matthew Roman , LICSW, COO, THC Yurika Lopez , Program Coordinator NP Residency, YVFWC Pat McKenzie , APRN, WH-BC, FNP, Director Women's Health and NP Residency at WCCHC
2–3 PM	Uniform Data Systems Mapper and Quality Metrics	Amy Taylor , Vice President, CHC's Western Region
3–4 PM	Residency Technology Training	Kerry Bamrick , Sr. Program Manager, Weitzman Institute Charise Corsino , Program Manager, NP Residency Erica Hastings , Program Coordinator, Postgraduate Residency Training Programs
4–5 PM	Human Resources (CHC Residents only) Photos (All Residents)	
5–7 PM	Social Gathering	Rooftop Pavilion
DAY 2: WEDNESDAY, SEPTEMBER 7TH		
Time	Topic	Presenter
8–9 AM	Program Structure and Expectations	Kerry Bamrick , Sr. Program Manager, Weitzman Institute Erica Hastings , Program Coordinator, Postgraduate Residency Training Programs Charise Corsino , Program Manager, NP Residency Margaret Flinter , APRN, PhD, c-FNP, FAAN, FAANP, Sr. VP/Clinical Director
9 AM–12 PM	Interviewing and History Taking Didactic	Veena Channamsetty , MD, Chief Medical Officer Rachel DeMarco , APRN, Preceptor and Resident Alum
12–1 PM	Lunch	
1–3 PM	EKG Didactic	Dan Wilensky , MD, Chief Preceptor
3–4 PM	Professional Liability and Risk Management: An Intro to FTCA in the FQHC Setting	Margaret Flinter , APRN, PhD, c-FNP, FAAN, FAANP, Sr. VP/Clinical Director Frank Williams , MD, Specialty Director, Adult/Internal Medicine, WCCHC
4–5:30 PM	Chronic Pain Management Didactic	Daren Anderson , MD, VP/Chief Quality Officer
DAY 3: THURSDAY, SEPTEMBER 8TH		
Time	Topic	Presenter
8–10 AM	Lab Values Didactic	Mary Blankson , DNP, APRN, Chief Nursing Officer
10 AM–12:30 PM	Nexplanon Didactic	Hannah Bajor , Certified Nurse Midwife; Pat McKenzie , APRN, WH-BC, FNP, Director Women's Health and NP Residency at WCCHC
12:30–1:30 PM	Lunch	
1:30–3:30 PM	Orthopedic Assessment Didactic	Fiore Soviero , MHS, PA-C, Clinical Assistant Professor/Clinical Coordinator Quinnipiac PA Program
3:30–4:30 PM	Professional Development	Deanne Shapiro , President, Life Skills Associates, LLC
4:30–5 PM	Wrap Up	Charise Corsino , Program Manager, NP Residency

Community Health Center of Middletown | 675 Main Street, Middletown, CT 06457

Figure 6.3: Sample CHCI NP Residency Orientation Schedule

Administration: NP Residency Program Staff

There are several key staff roles that are necessary to operate a high functioning and high quality NP postgraduate training program. In this section, we will discuss those roles and their responsibilities based on our experience in developing the model over many years. You will find that your staffing needs will also change as you develop your program over time.

Key Program Staff

Plan to have an NP in a leadership role, either as Program Director or, if the Program Director is not an NP, as a senior clinical officer overseeing the program. The overall responsibility for the NP residency program's curriculum design, implementation and evaluation rests with this individual. This individual is likely to represent your program externally in national forums, as well as internally to the leadership team. He/she plays a prominent role in considering funding opportunities, developing a research agenda if desired, and strategic planning for future growth and expansion.

NP Residency Program Director. This position is directly responsible for the operation and oversight of the program. The Program Director leads the NP residents in their role as primary care providers in community health. Based on the size of your program, and the amount of time the Program Director can devote to it, you may need a program manager or program coordinator (or both) as well. The smooth and effective coordination of the logistics of a very complex program, from monitoring schedules and assignments to tracking evaluation data and arranging for didactics, grows more challenging with size and multiple sites. Program staff also serve as a key "touchpoint" for each resident and plays a vital role in quickly identifying and addressing needs and issues that arise.

NP Residency Program Manager/Coordinator. This position is largely responsible for the day-to-day operations. At a foundational level, the Program Coordinator ensures that every resident's individual schedule, and the entire cohort's collective schedule, is prepared in advance and disseminated to everyone involved. The Program Coordinator maintains regular contact with all preceptors, office managers, and external/internal specialists to ensure everyone is well prepared for all clinical rotations. The Program Coordinator also personally supervises the didactic sessions to assure that residents are fully present and engaged, and ensure that the evaluation of the objectives for each didactic session is completed. The program coordinator is also responsible for the program's evaluation plan including creating, assigning and collecting residency evaluations.

Chief of Preceptors/Clinical Advisor to the NP Residency Program. In 2012, CHCI created an additional position for a Chief of Preceptors to the program. Open to physicians, NPs, or PAs, the goal was to have a clinical expert with a commitment to the NP residents serve as an expert resource to all of the preceptors, and as a source of continuity and connection to the progress of each of the residents, regardless of their host site. Unique to the role, which represents approximately 0.2 FTE of a full time clinician's role or one day per week, we assigned this individual to precept one day per week at each site hosting NP residents in order to personally assess the progress over time of each individual resident. In recognition that expert precepting is at the heart of its residency program along with the immersion in a high performance model of care and that CHCI's residency spans multiple sites/cities and involves many preceptors. CHCI created the position of Chief of Preceptors to monitor the progress of all of the NP residents as well as to provide guidance and coaching to preceptors across the organization.

Operations: Graduation

Don't forget to celebrate! Anticipate the end of the NP residency program year and celebrate the NP residents' achievements. Whether simple or elaborate, it is important to recognize the residents, all of the individuals who made their journey possible, and family/friends if you can. You will choose your own format, but in our experience, the more personal the event and recognition, the more meaningful it is to all. The CHCI design includes an opportunity for each resident to speak about their experience, while surrounded by a team of preceptors and support staff from their assigned site. The presentation of a formal certificate of completion of the Residency completes the experience.

Conclusion

A great deal of information was covered in this chapter. To summarize, the operational activities necessary to run the NP residency program will span across several departments within your organization and are essential to your program's success. Every program should have appropriate program leadership and key staff roles to operate, manage and support the NP residency program.



Above: CHCI's 2015–2016 NP Residency Graduation.

At right: Mary Blankson, CHCI's Chief Nursing Officer, presenting the NP Residency graduation certificate to Charity Braden.



Shown above: CHCI's 2009–2010 NP Residency Graduation.



Above, at right: CHCI's 2011–2012 NP Residency Graduation. Pictured, left to right: Kerry Bamrick, Jane Anichini, Dacia Johnson, Nicole Seagriff, Margaret Flinter, Amber Richert, and Mark Masselli.

Shown at right: CHCI's 2015–2016 Middletown NP Residency graduates and staff. Pictured, left to right: Margaret Flinter, Kristin Haney, Mary Blankson, Farqan Khan, Kaitlin Roche, and Matthew Huddleston.



Evaluation: Real Impact Verified

Evaluation was a guiding force in the original design and subsequent revisions of the first Nurse Practitioner Residency Program at CHCI in Middletown, Connecticut. We believed our model for NP postgraduate training would be effective, but we needed to develop the evidence to determine if this was indeed the case, and to identify the relative strengths and weaknesses of the model. During the initial application process, we stressed to the applicants that as the initial cohort of residents, they would be “co-creators” of the Residency Program, and deeply engaged in the evaluation. They did not disappoint us!

As an innovation without precedent, we were challenged to consider the meaning, reliability, and purpose of each element of the evaluation plan for the NP Residency Program. We drew upon our own internal deep experience within the organization, looked at what colleagues in other disciplines were doing with regards to evaluation of postgraduate training of healthcare professionals, and modified our plan as we moved along. Since the Residency is an intensive clinical training program, we knew that setting quantitative goals and evaluating our progress towards meeting them in terms of the type and volume of procedures that residents performed, patients they saw, and diagnoses they encountered would be a meaningful part of the evaluation. We also realized that it was equally important to assess the qualitative aspects of mastery of the primary care provider role, such as interprofessional teamwork and communication skills.

We realized that each of the key individual elements of the curriculum, that is, precepted clinics, mentored clinics, didactic presentation, and specialty rotations, would require specific learning objectives and assessment of the degree to which they were met by the residents. We felt it would be critical to include a qualitative feedback component to measure ongoing, real-time, direct, and hopefully very straightforward feedback from the residents going through the program, and chose reflective journaling to accomplish this. We were not disappointed in the sincerity, honesty, and richness of the information received from the first journal through today, more than a decade later. Finally, since a key goal is to prepare NPs for careers as full scope primary care providers in the safety net setting of community health centers, we wanted to track our alumni retention in primary care, and the type of practice setting that they chose to work in, such as an FQHC or a private practice.

Shown below: CHCI's 2014–2015 NP residents participate in CT Mission of Mercy (CTMOM) in Hartford, CT. Left to right: Felicia Seay, Rebekah Smith, Katelyn Billings, Ashley Fine, Nichole Mitchell, Dana Kroop, Rachel Morse, Jacqueline Brysacz, and Afua Tay.



Shown above: CHCI's 2011–2012 NP residents (left to right) Amber Richert and Nicole Seagriff participate in CT Mission of Mercy, Waterbury, CT.

With the advent of formal accreditation for NP postgraduate training programs, new programs have the advantage of adapting to the standards for evaluation from the accreditation requirements. We can say with authority that every bit of planning invested in the initial design of the evaluation, along with a commitment to ongoing improvement, is an investment with tremendous return.

In working with other health centers undertaking postgraduate training, we have found that, with a few notable exceptions such as the U.S. Department of Veterans Affairs programs, program evaluation is an area that the organizations are least likely to have significant experience with; hence, we will start this chapter with some fundamental background on evaluation. We will then address four areas of program evaluation relevant to NP postgraduate residency training, using examples from the CHCI NP Residency Program: 1) assessment and evaluation of the NP residents' performance in meeting curricular learning objectives and learner outcomes; 2) assessment and evaluation of clinical faculty, including preceptors, mentors, and those providing didactic content; 3) the organization's capacity and effectiveness in the delivery of the training program and meeting stated program mission, goals and objectives; and 4) evidence of ongoing self-assessment of the program by its staff, residents, and by the organization. We will also discuss the types of data you will want to collect. We will end the chapter with guidance about how to design your own evaluation plan.

About Program Evaluation

Program evaluation is the formal systematic and meaningful process of gathering information to make a judgment about a program's merit, worth, or significance (National Council on Measurement in Education, 2013). As an iterative process that collects and analyzes data and other information about a program over time, program evaluation is planned in advance of launching an educational or training program, and developed along with the program. It cannot be an afterthought. Most importantly, effective program evaluation provides a mechanism for accountability, ensuring that the program meets the standards of quality to which it subscribes, such as standards for program accreditation. The CDC (<http://www.cdc.gov/eval/guide/introduction/>) provides the following description of program evaluation:

"What distinguishes program evaluation from ongoing informal assessment is that program evaluation is conducted according to a set of guidelines. With that in mind ... (e)valuation should be practical and feasible and conducted within the confines of

resources, time, and political context. Moreover, it should serve a useful purpose, be conducted in an ethical manner, and produce accurate findings. Evaluation findings should be used both to make decisions about program implementation and to improve program effectiveness."

In other words, program evaluation asks about the effectiveness of an educational or training program in meeting objective professional standards. You will use these guidelines to gather and analyze the evidence you need to judge your program's performance. Is the program achieving the desired goals and objectives? Where is the program working? Where does it need to be changed? Where are the opportunities for innovation or dissemination of best practices, lessons learned or new information?

Why Evaluation is Important

Program evaluation is important for two major reasons: program improvement and stakeholder engagement. First, the primary goal of program evaluation is to make judgments about a program, to improve its effectiveness, and/or to inform programming decisions (Patton, 1987). It also allows the program leadership to clarify program plans by reviewing, revising, and better aligning program objectives and learning objectives so they are more achievable and measurable, thereby increasing the effectiveness of the program. Through the evaluation process, leaders gain insight about best practices, innovation and opportunities for dissemination of lessons learned. By documenting the impact of the program, there is clarification about how the program contributes to the organization's overall mission and its role in contributing to organizational growth. Program evaluation helps a program to move forward.

Second, program evaluation engages stakeholders. The process of program evaluation requires that the stakeholders who participate systematically reflect on the program's effectiveness, a process that can be a catalyst for self-directed change. And so, one of the benefits of program evaluation is that stakeholder participation in the evaluation process can be empowering, increasing their commitment to the program and their ownership of it, while also reinforcing the program's mission for the host organization and community. Thus, program evaluation provides information that increases not only your program's productivity and effectiveness, but also its value (MEERA, n.d.).

Characteristics of an Effective Evaluation Plan

In general, there are three characteristics of a good evaluation plan. First, it has to be inclusive, involving all of the program participants and stakeholders including trainees/residents, preceptors, staff, patients, the host organization/employer, as well as community members. This ensures that multiple perspectives are heard. Second, it has to be honest. Every program has strengths and weaknesses. Program evaluation lets you build on the former, and identify and correct the latter. The CHCI NP Residency Program has worked hard for over a decade to address its weaknesses, given that it was an innovative approach to postgraduate training without standards against which to measure our effectiveness. Third, good evaluation is replicable and feasible with methods as rigorous as circumstances allow. Multiple evaluators should come up with comparable results.

To be effective, useful and meaningful, program evaluation should be aligned with your program's mission, goals, objectives, curriculum, and resources. That is why an evaluation plan needs to be developed at the same time that you are developing your NP postgraduate training program. Doing so provides context and detail to the evaluation findings, providing invaluable conclusions that can guide future programmatic changes and allocation of resources.

An evaluation plan prompts you to be clear about what you intend to achieve so that you can measure whether or not you have achieved it. For example, if your program's mission is to "contribute to the healthcare workforce in the region," your evaluation plan will need to be clear about what you mean by "contribute" and "region." Is region a 50-mile radius of the program? Does "contribute" mean practicing as an NP? If both of these are the case, you would track your program graduates to determine the number of individuals who join a practice within a 50-mile radius of the program.

How Data Contributes to Program Evaluation

This last example, being clear about what you mean by "region" and "contribute to the healthcare workforce," brings us to the role of data in program evaluation. Consistent with our discussion in [Chapter 4](#) about measurable outcomes, program evaluation relies on measurement. There are a few truisms to consider here. First, not everything that is important is readily measurable, and not everything that is measurable is important (Cameron, 1963). So you need to measure what matters and what is measurable. Second, if you can't define it, you can't measure it. An example is the

need for clarity about "region." Third, "garbage in-garbage out" is a favorite saying of people who work with data. That is, if you aren't clear upfront what data you want to collect and why, the data that you collect will fill spreadsheets, but not provide you with actionable information. Good data are a prerequisite for good analysis, and good data drive change.

So what is good data? As you know, data can be quantitative, such as surveys and assessment tools, and qualitative, such as interviews and self-reflective journals. For program evaluation, you will use both types of data, and you will measure processes as well as outcomes. But first and foremost, program evaluation data must be credible, observable, and measurable. That means data have to be reliable and valid. Reliability refers to consistency when different raters make the same decisions about whomever or whatever is being rated. Validity means data are meaningful, that reasonable and/or knowledgeable people agree that the thing being measured is relevant to the evaluation.

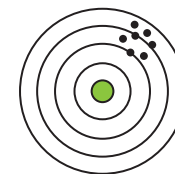
As NP postgraduate training matures and spreads, it is critical to develop tools that measure competence (validity) and performance in a particular clinical scenario (reliability). Evaluation plans that provide reliable and valid measurement are a vital source of useful information for program planning. The VA has developed one such tool, and we anticipate further development. Figure 7.1 below provides a visual graphic of validity and reliability.

Reliability and Validity

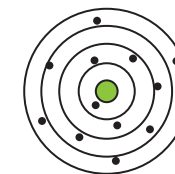
Reliable: "A data collection method or instrument is considered reliable if the same result is obtained from using the method on repeated occasions."

Valid: "A measurement method or instrument is considered valid if it measures what it intends to measure."

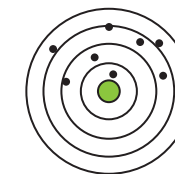
The meaning and relationships among reliability and validity can be clarified through the metaphor of the target.



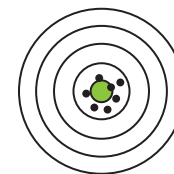
Reliable Not Valid
The target is hit consistently and systematically measuring the wrong value for all cases; it is consistent but wrong.



Valid Not Reliable
Hits are randomly spread across the target. On average you get a valid group, but you are inconsistent.



Neither Reliable Nor Valid
Hits are spread across the target and consistently missing the center.



Both Reliable And Valid
You consistently hit the center of the target.

Adapted from Trochim 2001. <http://trochim.cornell.edu/kb/rel&val.html>

Figure 7.1: Graphic of Validity and Reliability

Assessment and Evaluation of NP Resident Performance: Linking Curriculum and Program Evaluation

The core driver in implementing an NP postgraduate residency training program is supporting the training of new NPs to increase their competence, confidence and mastery in all domains required to be a full-scope primary care provider in your practice setting. Therefore, one of the most fundamental aspects of your evaluation plan for an NP postgraduate residency training program is the methods and tools for evaluating the NP resident's clinical and professional performance in providing patient care. A robust evaluation plan includes mechanisms for continuous monitoring (formative) as well as a method for comprehensively assessing (summative) the performance and development of each postgraduate resident during the program year. Also, measuring resident performance reflects the integrity and quality of your program's curriculum, including clinical and didactic learning experiences, and the competencies, learning objectives and learner outcomes that articulate expected results.

In order to evaluate your residents, you must have a foundation by which to measure their performance. The National Nurse Practitioner Residency and Fellowship Training Consortium (NNPRFTC, 2015) provides comprehensive curriculum and evaluation standards for NP postgraduate residency training programs that provide direction on program curriculum and structure. These Standards are the foundation for CHCI's program and for the evaluation of the resident's performance. For example, the Standards require:

"...that programs assess the performance and development of each postgraduate trainee through periodic and objective assessment focused on core competency areas in both clinical and professional areas. The assessment should include the identification of any deficiencies or performance concerns" (NNPRFTC, 2015)

In this section, we will describe some of the core evaluation components for resident performance. We will discuss how resident performance and program evaluation are anchored in the curriculum standards, a schedule for assessing resident performance different measures of performance, and how to respond when a resident's performance is not up to standards. But before we move on, recall the figure from [Chapter 4. Figure 7.2](#) is designed to help you to appreciate the importance of alignment in your NP program as a whole, from mission through learner outcomes, and from learner outcomes back to mission through the process of program evaluation.

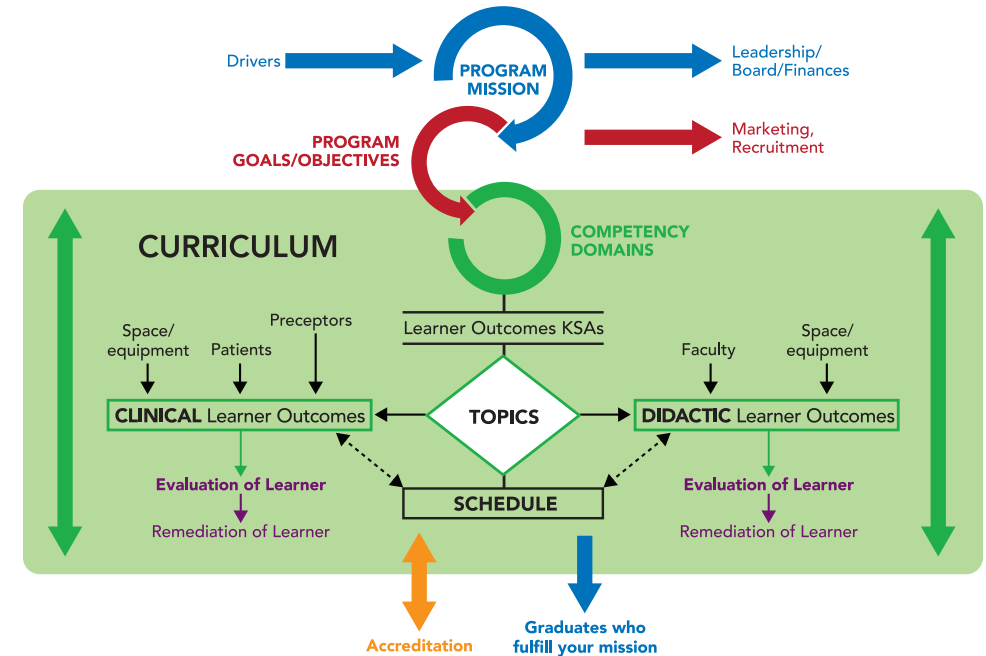


Figure 7.2: Components of the NP Residency Curriculum

Resident Performance and Program Evaluation are Anchored in the Curriculum Standards

The NNPRFTC (2015) Standards require that the NP postgraduate residency training program curriculum should have five types of learning experiences.

Five types of learning experiences in the NP postgraduate residency training program curriculum:

1. **Clinical-based practice and patient care experience** that are sufficient in depth, breadth, variety, and volume of diagnoses and patient demographics to prepare the postgraduate resident for clinical practice in the specialty of the Program;
2. **Regularly scheduled didactic sessions;**
3. **System-based learning and quality improvement** tools that underlie effective front-line improvement in care;
4. **Population-based health focus;** and
5. **Leadership and professional development**, particularly in interprofessional practice.

Your written evaluation plan must identify where in the curriculum these activities occur, their learning objectives and how you measure them for each resident, and then summarize the results in the aggregate as part of your program evaluation. One way to do this is to crosswalk the curriculum requirements with an evaluation plan. When you crosswalk the curriculum and evaluation, every element of your training program (curriculum) should be paired with a measure of performance. When the curriculum and evaluation programs are integrated completely, you can draw conclusions about your program's success in meeting its objectives, identify areas that will benefit from further attention, and celebrate success, and disseminate best practices.

Crosswalking curriculum and evaluation. A classic method for pairing curriculum and evaluation is to “crosswalk” the curriculum and evaluation. Just like a crosswalk links one side of a street to another, the crosswalk between curriculum and evaluation links the two together. The curriculum is the starting point, the foundation. Every objective in the curriculum is linked to one or more measures in the evaluation plan. The outcome of the program evaluation provides documentation regarding the accomplishment of the objectives. Table 7.1 below provides an abbreviated example of aligning a curricular requirement with objectives and evaluation measures. Recall that one of the competencies in the CHCI program is Patient Care, and the learning objective is: **Provide patient-centered care that is compassionate, valued, appropriate and effective for the treatment of both common and uncommon health conditions and the promotion of health.**

Curriculum Requirement	Example	Competency Objectives/ Learner Outcomes	Evaluation Measures
Clinical-based practice and patient care experience that are sufficient in depth, breadth, variety, and volume of diagnoses and patient demographics to prepare the postgraduate trainee for clinical practice in the specialty of the Program	Precepted clinic (40% of resident time) at home based practice site	Provides patient care that is compassionate, etc.... <ul style="list-style-type: none"> • Counsels and educates patients and their families • Develops and carries out patient management plans 	<ul style="list-style-type: none"> • Postgraduate trainee competency self-assessment • Preceptor assessment of the postgraduate trainee performance • Postgraduate trainee evaluation of preceptor • Portfolio of numbers of patients seen, diagnoses, demographics, procedures

Table 7.1: Example of Crosswalk of Curriculum and Evaluation

This type of exercise is best done as you develop the curriculum. You could do this for each curricular requirement in order to assure yourself that your program addresses the standards. As we noted in [Chapter 4](#), a pattern will emerge. For example, every clinical experience will use the same type of evaluation measures noted in the crosswalk; the details would vary based on the clinical experience, such as a specialty rotation.

Assessment of Resident Performance is Objective and Systematic

The NNPRFTC (2015) Standards require that an NP postgraduate residency training program “use an objective, systematic and cumulative evaluation and assessment process [of the trainee/resident] that is designed based on the program’s core elements, competency, and curriculum components” (NNPRFTC, 2015, p. 10). We should note that this expectation is consistent with other professional training programs such as the Accreditation Council for Graduate Medical Education (ACGME) and the American Psychological Association (APA).

An objective assessment process uses tools that align with clear expectations for performance as indicated by learning objectives and learner outcomes. For example, if learner outcome is to perform a specific number of selected procedures, a straightforward measurement would be a weekly tally via a checklist by each resident of the number and name of the procedures conducted that week. If an outcome is that the resident “counsels and educates patients and their families,” the preceptor would have to witness this, with a mutual understanding between preceptors and residents of what this means.

An assessment process is systematic and ultimately cumulative when it is embedded within the training program at specific intervals. This allows careful monitoring of the resident’s progress with sufficient time for remediation as necessary. We will discuss remediation later in this chapter. [Table 7.2](#) on the next page is an example of how CHCI schedules assessment of resident performance over the course of the 12 month program.

Evaluation Element	Frequency	Reviewed By
Competency Self-Assessment	1, 6, 12 months	Leadership Team
Preceptor Evaluations	6, 12 months	Preceptors face-to-face with residents
Specialty Rotation Evaluations	Monthly	Program Staff
Procedures	Monthly	Program Staff
Mid-year Coaching Session	Month 6	Leadership Team
Reflective Journals	Weekly	Program Staff

Table 7.2: Schedule for CHCI Systematic Assessment and Evaluation of Resident Performance

Measuring Resident Performance

To assess and evaluate resident performance, you need to identify the criteria that you will use, ensure they are reflected in measurement tools, and use an evidence-based measurement scale for quantitative tools. If you have developed your training curriculum and evaluation plan at the same time, much of this work can be accomplished simultaneously.

Tools for measuring resident performance. Table 7.3 gives you a sense of the types of tools used by CHCI to measure resident performance and when they are used. The tools are listed below:

- Evaluation of the resident’s competence by the preceptor in the Continuity Clinic at the resident’s home base clinical practice site;
- Evaluation of the resident’s competence by the preceptor or mentor in Specialty Rotations and Mentored Clinic;
- The resident’s self-evaluation of competence;
- Weekly reflective journals (discussed in Chapter 1, Chapter 4 and again below);
- Mid-year coaching session;
- Weekly tally of procedures performed;
- Presentation of quality improvement project;
- Presentation of case study at Project ECHO® (optional);
- Portfolio.

At the end of the program, residents are given a portfolio that includes procedures performed, types and numbers of patients seen, as well as their quality improvement project, any presentations they have given, and of course, all of the evaluation tools. Residents also evaluate their preceptors, mentors, and other faculty.

Criteria for measuring resident performance. The criteria for measuring resident performance are the learner outcomes that flow from the learning objectives in the competencies. Not every competency in the curriculum is measurable in every learning experience. For example, clinical competencies related to direct patient care are not relevant to the Quality Improvement Seminar. Some competencies may be combined. For example, at CHCI the competencies Patient Care and Knowledge for Practice are combined in the tool measuring clinical performance in Precepted Continuity Clinic. However, all of the eight competencies in the NNPRFTC (2015) Standards can be measured in the clinical setting.

The CHCI NP Residency Program uses a Nurse Practitioner Residency Competency Assessment Tool as its principal tool for evaluation of NP residents by preceptors. It includes 60 sub-competency areas to evaluate residents, organized under the eight competency domains that are found in the NNPRFTC Standards (2015) as well as elements from the validated assessment tool developed by Rugen and colleagues (Rugen, Speroff, Zapatka, & Brienza, 2016). This is still an evolving field, and we anticipate that more tools will be developed and validated.

The tool is used by the preceptor to evaluate the resident and by the resident for self-assessment in the precepted continuity clinic. Elements of this tool are used to develop other evaluations for specialty rotations. Evaluations completed by preceptors are key in understanding the competency of the residents, as well as areas of strength and deficiency. The self-assessment by the residents provides insight into their own assessment of growth and development in these core domains as well as identifying areas where they would like further experience or supervision. The self-assessment also provides a mechanism to learn about how the program is working and how it supports the trainees’ honing of professional knowledge, skills and attitudes.

In Chapter 4, we provided an excerpt from the tool used by preceptors to assess resident performance in a general family practice Precepted Clinic, and we include it here again in abbreviated form. It can be found in its entirety in Appendix 4.2 of Chapter 4. The tool also includes room for open-ended written comments. Remember that while the competencies remain the same, the details as they apply to the learner outcomes in different specialty rotations will necessarily change to reflect the patient population.

Competency Domains: 1. Patient Care; 2. Knowledge for Practice						
Curricular Objectives:						
<ul style="list-style-type: none"> Provide effective evidence-based patient-centered care for the treatment of health problems and the promotion of health. Demonstrate knowledge of established and evolving bio-psycho-social, clinical, epidemiological and nursing sciences, for the provision of evidence-based patient care. 						
Rating Scale	Competency Rating Score (1-5)					Method of Assessment
1 = Novice 2 = Advance Beginner 3 = Competent 4 = Proficient 5 = Expert 0 = N/A	Resident Self-Assessment	Preceptor Assessment	Resident Self-Assessment	Preceptor Assessment	Resident Self-Assessment	List all that apply O = Observed D = Demonstrated C = Chart Audit V = Verbalized T = Tested
	Baseline	6 months	6 months	12 months	12 months	
Perform comprehensive history and physical exam						
Develop pertinent differential diagnosis						
Order appropriate screening and diagnostic tests						
Order appropriate consults and e-consults						
Order appropriate medications						
(And so on)						
Assess for, diagnose, treat and manage over time common medical conditions experienced in primary care:						
Hypertension						
Diabetes						
Obesity						
Depression						
Chronic Pain						
(And so on)						
Perform clinical procedures commonly seen in primary care:						
EKG interpretation						
IUD (insertion and removal)						
Biopsy (punch, shave, excisional)						
Joint Injection						

Table 7.3: Assessment Tool of Resident Performance (See Appendix 4.2 for full content)

Self-assessment by the resident. The assessment tool used by residents to assess their own competency covers the same content, but uses a different scale than the one in the tool used by preceptors to rate the residents. Instead of the novice to expert scale (Dreyfus, 2004), which we described briefly in Chapter 4 and is explained further in Figure 7.3, residents rate themselves on a Likert scale of 1–5, from strongly disagree to strongly agree in response to statements, such as, “I am competent in obtaining and documenting a relevant health history...” for the relevant population.

Measurement Methods and Scales

Note in the tool above that there are multiple methods for gathering evidence to assess resident performance: Observed, Demonstrated, Chart Audit, Verbalized and Tested. We have also noted that the scale of measurement in Figure 7.3 below (adapted from Dreyfus 2004) is Novice to Expert. At CHCI, the residents, preceptors, mentors and other faculty receive instruction on how to use this scale.



Figure 7.3: Adapted from Dreyfus's Five Stage Model of Adult Skill Acquisition (2004)

However, we should note that there is no consensus on measuring the performance of NPs enrolled in postgraduate training programs (Sciacca & Reville, 2016). Rugen and her colleagues (Rugen et al., 2016) developed a performance assessment tool for NP residents working in a Veterans Administration (VA) NP postgraduate residency. The tool draws from multiple sources, including the American Association of Colleges of Nursing, the National Organization of Nurse Practitioner Faculty, Accreditation Council of Graduate Medical Education, the top diagnoses among U.S. Department of Veterans Affairs patients, among others. Instead of using Dreyfus's criteria, they

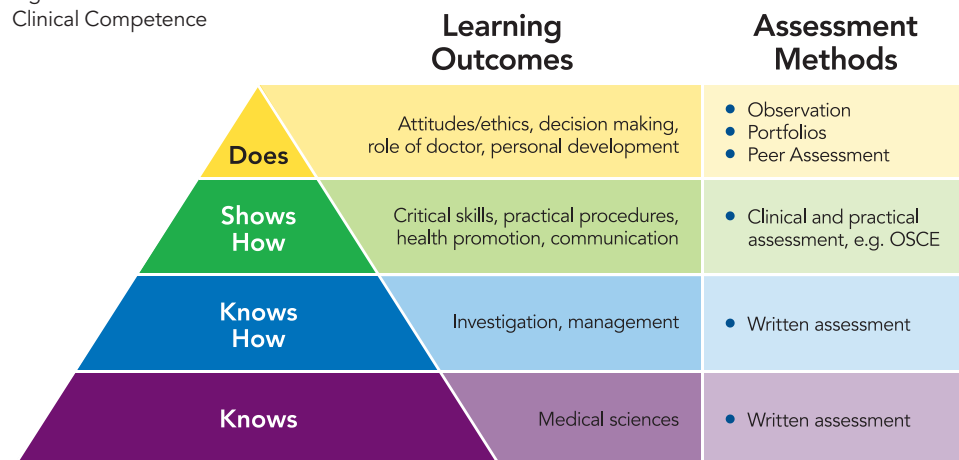
developed a different 5 point rating scale because they felt it was unlikely that post-graduate trainees would achieve the level of “Expert” over the course of 12 months. Their rating scale is in Table 7.4; the assessment tool includes open-ended questions and room for comments as well and has been tested for validity and reliability.

Rating	Criteria
0	Not observed or not performed
1	Observes task only
2	Needs direct supervision
3	Needs supervision periodically
4	Able to perform without supervision
5	Able to supervise others—aspirational

Table 7.4: Rating Scale, Rugen et al. (2016)

Another rating scale that is used for assessing performance of resident physicians in training was developed by Miller (1990). He proposed a prism of clinical competence that integrates a hierarchy of mastery with Knowledge, Skills and Attitudes (KSAs). Miller’s prism is applicable to NP postgraduate training as template for thinking about how to document the KSAs relevant to the professional development of trainees/residents, which is an indication of the effectiveness of their program. Effective evaluation should capture the trainees’ increased proficiencies as they move across the learning curve from ‘knows’ to ‘does’. Miller’s model is in Figure 7.4 below.

Figure 7.4: Miller’s Prism of Clinical Competence



As residents progress through the program, one would expect that their performance in each category would improve. Concurrently, the program should be offering experiences that promote the trainee’s professional growth. There should be an increase in the residents’ knowledge base, their ability to perform isolated clinical skills, and their ability to integrate knowledge and skills into seamless and professional delivery of care. As you are designing your evaluation program, think about your program objectives, learning objectives and related the KSAs, as well as your residents’ progression in proficiency from day one through completion. The program objectives and learning objectives will provide direction on what content should be evaluated. The assessment methods listed above provide suggestions on the way to document the residents’ levels of proficiency for each content area.

Residents’ Journals: Cross Assessment of Residents and the Program

One unique evaluation that crosses both the assessment of the resident and the program is residents’ weekly reflective journals, a qualitative approach to evaluation that is used by the CHCI Residency Program and others (Chapter 1 and Chapter 4). Qualitative data is usually used to gain an understanding of reasons, opinions and motivations. Qualitative methods use unstructured or semi-structured techniques such as interviews, journals, or focus groups (Wyse, 2011). Whereas quantitative data is measured in numbers, qualitative data is non-numeric and describes attributes or properties, such as themes in journal entries.

CHCI’s training program collects a weekly reflective journal completed by each NP resident for the duration of the program. The journals are read by the program director and designated program leaders with comments, feedback and encouragement or other follow-up as needed. The journal entries document the residents’ perceptions of their personal progress and are indications of the program’s effectiveness. This weekly evaluation provides the program with critically important insights into the resident experience. It allows for real time information on experiences, challenges, and problems in the program. This kind of immediate evaluation on a weekly basis allows the program to adjust quickly and resolve any issues. Ultimately this leads to increased program satisfaction for the residents as there is a consistent feedback loop and a perception of individualized attention. Although intended primarily as a formative measure of the NP resident progress such as self-perceived competency, the journals also provide insight into programmatic issues that contribute to the evaluation of the program as a whole.

Weekly journals are a safe space for residents to document the highs and lows of their experience. It provides them a space for processing and self-reflection on their transition into the role of primary care provider. Descriptions of patient encounters and interactions with an interdisciplinary team allow residents, through their own words, to demonstrate competency in core domains. A formal qualitative analysis of more than 1,200 journal entries was discussed at length in **Chapter 1** (Flinter & Hart, 2016). The analysis provided significant information on the developmental nature of the transition from newly graduated entry level NP to confident primary care provider.

Remediation of Resident Performance

One of the advantages of having expert preceptors and mentors is the opportunity to provide feedback in real time to residents regarding their clinical care of patients. But sometimes residents may not always perform as expected despite this ongoing guidance. The frequency of assessment outlined in **Table 7.2** on page 140 provides several opportunities to identify and remediate areas of concern. As part of your program's evaluation, you will be expected to provide evidence of written policies and procedures for remediation of resident performance.

At CHCI, preceptors have the opportunity to identify areas of growth for residents but also the chance to express any major deficiencies or performance concerns. They can bring major concerns regarding a resident's clinical or administrative performance directly to the attention of the program staff, who will then assess next steps. Major clinical performance concerns are dealt with by clinical leadership at the organization, including the Director of the NP Residency Program and the Chief Medical Officer through the use of a written performance improvement plan. The plan clearly outlines performance concerns, an action plan for improvements on each item addressed and a timeline for expected improvement. As residents are employees, any Human Resources policies that apply to concerns about professional performance and conduct, and grievance procedures are relevant as well.

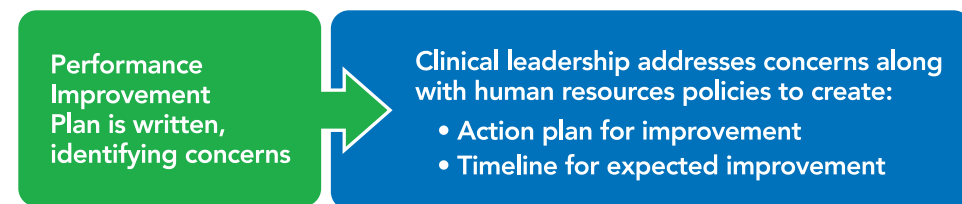


Figure 7.5: Written Performance Improvement Plan

Assessment of Clinical Faculty

The second component of program evaluation that we mentioned at the beginning of this chapter is assessment and evaluation of clinical faculty, including preceptors, mentors, and those providing didactic content, by the residents. In the CHCI NP Residency Program, the Chief of Preceptors is also involved in working with and assessing the clinical program faculty preceptors in a more informal way. In addition, the on-site medical leadership at practice sites, and the Chief Medical Officer, can also provide feedback as part of the evaluation process.

Residents as Members of the Program Evaluation Team

When residents evaluate clinical faculty, they become essential members of the program evaluation team. Having residents provide feedback on the content you are delivering helps to identify the aspects of the program that support training the NP residents and also any areas of the program that would benefit from improvement. You should make sure that all core components of the program you are delivering have an opportunity to be evaluated. Specialty rotations and didactics can be evaluated based on the residents' experience and the relevance of the component in meeting your program's learning objectives. Preceptors and residents should be assessed on a similar timeline to create a bi-directional feedback loop.

Assessment Tools

The assessment tools used by the CHCI residents to assess clinical faculty cover aspects of competency specifically related to the learning objectives of the specific clinical rotation, as well as questions related to the quality of teaching and learning experiences provided by the preceptor or mentor. Other aspects of the rotation, such as the facilities, support services and overall satisfaction with the rotation, are also included. In addition to room for comments, the tools also utilize a Likert-like scale of 1–5, from strongly disagree to strongly agree, in response to statements, such as the following: "My preceptor gave me an appropriate amount of supervision." "My preceptor taught me elements of the physical exam and procedures." "I would recommend my preceptor to other residents." "Support services were available from other healthcare workers." As we have noted before, the basic format of the questions will be the same for all of the assessment tools in clinical settings; the details will vary by the type of rotation and patient population.

One of the lessons learned from the evaluation of clinical faculty is that the teaching style of a preceptor and the learning style of the resident may not be complementary. Because of the ongoing communication between program staff, preceptors and residents, these issues can be addressed in a timely manner, often through informal discussion. However, evaluations provide the opportunity for residents to express areas of concern or challenges they may face that may require further resolution.

Didactic sessions are rated by residents using the same Likert scale of 1–5 from strongly disagree to strongly agree in response to statements about the relevance and quality of the content and the presenting speakers. At the end of the year-long residency program, residents also provide feedback on the 10 most helpful and 10 least helpful didactic sessions so that changes can be made. For example, residents have asked that content on women’s health and the specialty rotation in women’s health, be scheduled earlier in the program. Figure 7.6 provides a schedule for evaluation of clinical faculty and didactic sessions in the CHCI NP Residency Program.

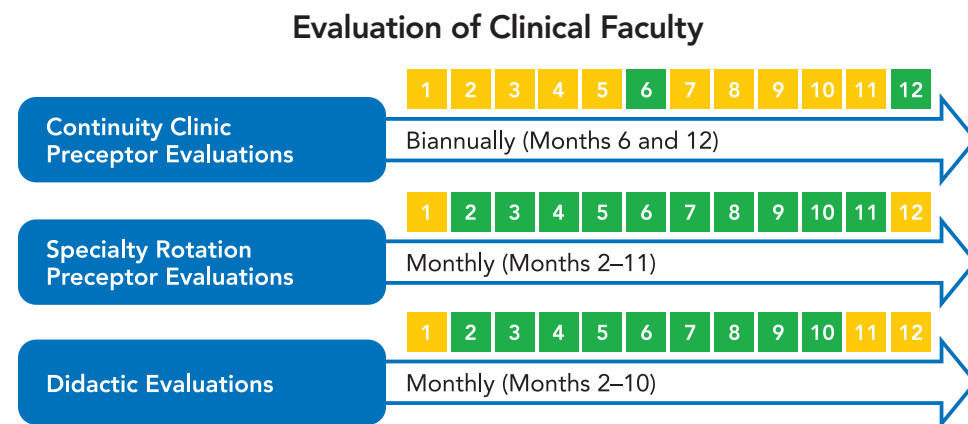


Figure 7.6: Schedule for Evaluation of Clinical Faculty by Residents in CHCI NP Residency Program

Assessment of Organizational Capacity

The third component of program evaluation is the organization’s capacity and effectiveness in the delivery of the training program and meeting stated program mission, goals and objectives. Organizational capacity refers to the infrastructure that support program viability, that is, finances (Chapter 5), resources required to support the curriculum (Chapter 4), and operations and administration (Chapter 6). If a resident is not progressing as expected, or your program is not meeting its program goals and

objectives, there is always the possibility that your capacity to provide a high quality postgraduate training for NPs is inadequate. Assessment of organizational capacity includes multiple sources of information from multiple stakeholders. This is another reason to involve stakeholders and to use accreditation guidelines, such as from the NNPRFTC (2015), that set standards for expectations of organizational capacity when you develop your program from the outset, as you will be accountable for meeting those guidelines as part of your program’s evaluation plan.

Review of Clinical Sites

It is important to ensure that the clinical sites, both within and outside of your organization, are providing the high quality learning experience needed for the residents’ professional development. This can be done through site visits and review of available patient demand. In the CHCI NP Residency Program, program staff stays in close communication with stakeholders and residents at all clinical placement sites regarding any operational challenges. Residents’ journals and evaluations of clinical faculty also provide valuable information.

Operations, Administration and Finance

The operational, administrative, and financial aspects of your NP postgraduate residency training program, as well as policies and procedures relevant to the program, should be reviewed and revised both on an ongoing basis and as needed for more targeted and comprehensive reviews. At CHCI, the program manager of the NP residency program meets with the chief financial officer as part of the annual strategic planning and budget development for the organization to review the fiscal and operational impact of the program on the organization, and changes in its need for program, resources, or staff in the coming year. This is also an opportunity for the program to establish goals for the coming year.

In terms of targeted and comprehensive reviews, the financial impact of the CHCI program is reviewed and assessed by the program staff and finance team no less than annually. During the review, they assess the financial impact of the program as it relates to the program’s direct and indirect costs, as well as any revenue generated by its residents. For example, a recent financial assessment provided the NP Residency Program with valuable information about the manner in which program costs were being coded and captured on monthly and yearly financial statements. As a result of this assessment, the program will now be captured under its own department so that it can more accurately track and assess its financial performance.

Ongoing Program Evaluation

The final component of a program evaluation plan is evidence of ongoing self-assessment of the program by its staff, residents, and by the organization. It is also important that this ongoing process yields actionable information to improve the program. **Figure 7.7** illustrates the evaluation activities that occur throughout the NP Residency Program year at CHCI. The data from evaluations of resident performance by the preceptors, of preceptor effectiveness by the residents, of the clinical site reviews and didactic sessions can be aggregated over time to present a fuller picture of program performance.

The NP residency program staff—clinical director, program manager, and program coordinator—meet weekly to discuss the program’s operations and administration so that challenges can be reviewed and addressed immediately. Issues that may arise includes policies that need to be reviewed and revised, changes in resident or preceptor schedules, and allocation of resources. This formative evaluation process concludes with a cumulative evaluation when, at the end of each year, the program staff completes a survey and final debrief meeting with all residents and preceptors, and then meet to discuss what was learned and what can or needs to be changed. Also, a strategic planning meeting is held yearly with senior leaders to review the program’s effectiveness.

Final Steps

The final steps in an evaluation plan are to analyze the data and other findings from the evaluation process in the context of the program and its host organization, and to draw conclusions (or judgments). Context is essential in determining conclusions; the same data can yield different conclusions for different programs. For example, recruiting three well-qualified residents, may be an important indicator of success for a program in its second year of operation. However, for a mature program that had previously recruited eight residents, recruiting only three is an important indication of a need to investigate the declining matriculation. Once you have analyzed the findings and put them into context, the final step is sharing the conclusions with all the stakeholders, both within and outside of your organization. Their feedback evolves into an ongoing process of monitoring and evaluating the program.

Organization Evaluation



Figure 7.7: Evaluation Activities throughout the NP Residency Program year at CHCI

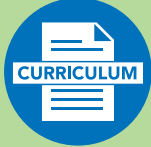
How to Design and Execute Program Evaluation

As we have noted, we strongly recommend that you develop your NP postgraduate residency training program evaluation plan as you design your program. Here again, accreditation guidelines, such as from NNPRFTC (2015) provide a road map for accountability. The program’s components, including curriculum, clinical faculty, and organizational capacity (resources and the operational, administrative and financial infrastructure), should align with the evaluation plan. Furthermore, the evaluation plan should help to confirm—or not—that you are meeting your program’s mission and goals. Evaluation is a continuous loop of investigation, revision, and improvement that is formal, systematic, deliberate, and scheduled at routine intervals.

Here are some basic steps to designing your program evaluation plan:



1. Engage stakeholders within and outside of your organization. What would they like to know about how the program is performing?



2. Develop a written plan linked to the curriculum, that is, evaluation of residents, preceptors, didactic sessions, and reflective journals provide information about the curriculum's effectiveness in preparing new NPs to become primary care providers in your organization. Use both quantitative and qualitative evaluation methods as appropriate.



3. Use tools to assess resident and preceptor performance that are valid and reliable.



4. Develop a written plan that assesses your organizational capacity to offer a program. Use both quantitative and qualitative evaluation methods as appropriate.



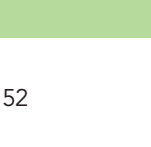
5. Develop a schedule for collecting data for the evaluation plan.



6. Gather the data.



7. Analyze the data, interpret the findings, justify your conclusions.



8. Share findings and lessons learned with stakeholders, disseminate findings.

Conclusion

In conclusion, evaluation is a critical component for developing and operating a high quality NP postgraduate residency training program. NP residency programs need an intensive, ongoing, and cumulative evaluation of the NP residents' performance, the curriculum and clinical faculty, resources, and the operational, administrative and financial infrastructure that make the program possible. The evaluation process ensures that NP residency programs maintain and provide evidence for quality and effectiveness through continuous improvement of programmatic structure, practices, and content. We would like to conclude this chapter with a quote from *Research to Results Brief*, an online journal for program evaluation focused on children's programming, that is an apt summary of evaluation:

"While conducting an evaluation may seem complicated, expensive, or even overwhelming, it is important to remember that program evaluations serve as tools to improve programs. Simply put, program evaluations are conducted to make programs better. Evaluations benefit programs at every stage of implementation. For start-up programs, evaluations can provide process data on the successes and challenges of early implementation; and, for more mature programs, evaluations can provide outcome data on program participants. While evaluation is not without challenges, the information obtained from a program evaluation can help to streamline and target program resources in the most cost-efficient way by focusing time and money on delivering services that benefit program participants and providing staff with the training they need to deliver these services effectively. Data on program outcomes can also help secure future funding."

—Metz, 2007

Resources

There are some well-designed, user-friendly resources available through the web for developing an evaluation plan. Some selected examples follow.

The Pell Institute has an excellent user-friendly toolbox that steps through every point in the evaluation process: from designing a plan, to data collection and analysis, to dissemination and communication, to program improvement.

<http://toolkit.pellinstitute.org/>

The CDC has an evaluation workbook for obesity programs whose concepts and detailed work products can be readily adapted to NP postgraduate programs.

<http://www.cdc.gov/obesity/downloads/cdc-evaluation-workbook-508.pdf>

The Community Tool Box, a service of the Work Group for Community Health at the University of Kansas has developed an incredibly complete and understandable resource that offers theoretical overviews, practical suggestions, a tool box, checklists, and an extensive bibliography.

<http://ctb.ku.edu/en/table-of-contents/evaluate/evaluation/framework-for-evaluation/main>

Another wonderful resource is Designing your Program Evaluation Plans which provides a self-study approach to evaluation for nonprofit organizations and is easily adapted to training programs. There are checklists and suggested activities, as well as recommended readings.

<http://managementhelp.org/freenonprofittraining/program-evaluation.htm>

References

Cameron, W.B. (1963). *Informal Sociology: A Casual Introduction to Sociological Thinking*. Random House.

Flinter, M.; Hart, A.M. (2016). "Thematic Elements of the Postgraduate NP Residency Year and Transition to the Primary Care Provider Role in a Federally Qualified Health Center." *Journal of Nursing Education and Practice*, 7(1), 95.

MEERA. (n.d.). Evaluation: "What Is It and Why Do It?" Retrieved from <http://meera.snre.umich.edu/evaluation-what-it-and-why-do-it#what>

Metz, A.J. (2007). "Why Conduct a Program Evaluation? Five Reasons Why Evaluation Can Help an Out-Of-School Time Program." Retrieved March, 29, 2008.

Miller, G.E. (1990). "The Assessment of Clinical Skills/Competence/Performance." *Academic Medicine*, 65(9), S63-7.

National Council on Measurement in Education. (2013). *Glossary of Important Assessment and Measurement Terms*.

NNPRFTC. (2015). Postgraduate Nurse Practitioner Training Program Accreditation Standards. Retrieved from http://www.nppostgradtraining.com/Portals/0/Documents/2.0_NNPPTC_Accreditation_Standards_1.5.16.pdf?ver=2016-01-13-070416-923

Patton, M.Q. (1987). *How to use qualitative methods in evaluation*. Sage.

Rugen, K.W.; Speroff, E.; Zapatka, S.A.; Brienza, R. (2016). "Veterans Affairs Interprofessional Nurse Practitioner Residency in Primary Care: A Competency-Based Program." *The Journal for Nurse Practitioners*, 12(6), e267–e273.

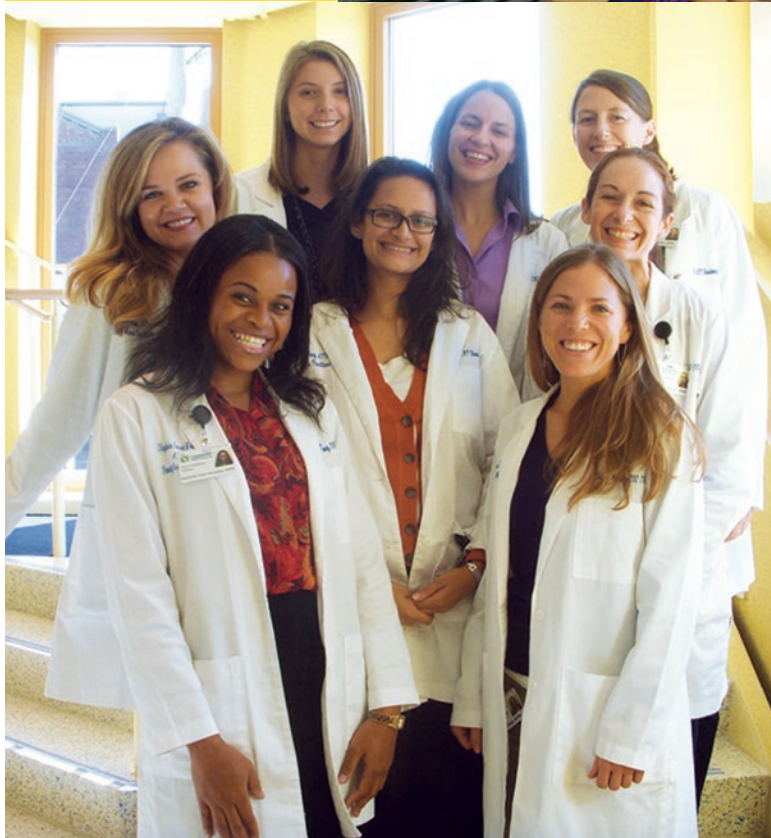
Sciacca, K.; Reville, B. (2016). "Evaluation Of Nurse Practitioners Enrolled In Fellowship And Residency Programs: Methods And Trends." *The Journal for Nurse Practitioners*, 12(6), e275–e280.

Wyse, S.E. (2011). "What is the Difference Between Qualitative Research and Quantitative Research." Message Posted to <https://www.snapsurveys.com/blog/qualitative-vs-quantitative-research/>



2013–2014 CHCI
NP resident
Paulina Miklosz
with her patient.

Pictured at right:
CHCI's 2014–2015 NP
resident Nichole Mitchell
with her patient.



Shown at left:
CHCI's 2012–2013
NP residency class.

CHAPTER 8

Accreditation: Anchoring Credibility and Trust

The history of postgraduate training for Nurse Practitioners (NP) has been driven by an emphasis on rigor and effectiveness. This applies to programs in all settings, from FQHCs to the in-patient setting and across all specialties. Accreditation is an important mechanism to assure the public, trainees, and potential employers of a postgraduate training program's quality and consistency with national standards. Accreditation should be based on a coherent set of standards that focus on competency and mastery of advanced practice knowledge, skills and attitudes. Accreditation promotes the recognition and support of clinical excellence, innovation, dissemination of knowledge and advancement of practice. When the NP postgraduate residency and fellowship training movement was launched in 2007, there were, of course, no existing accreditation standards for such programs. Today, the National Nurse Practitioner Residency and Fellowship Training Consortium (NNPRFTC or "the Consortium"; <http://www.nppostgradtraining.com>) and the American Nurses Credentialing Center (ANCC) Transition to Practice accredit postgraduate NP Residency and Fellowship Training Programs.

In this chapter, we will describe the evolution of the standards for accreditation with a particular focus on FQHC-based residencies for NPs and benefits of accreditation for your program and organization. Finally, we will provide you with guidance about how to pursue accreditation.

Development of Standards for Accreditation

As we noted in [Chapter 1](#), in 2010, CHCI in Connecticut convened an informal group of NP postgraduate program directors who were early innovators and developers of NP postgraduate residency training programs. The group recognized the benefits of a peer group interested in sharing best practices and training the next generation of healthcare providers. The founders called the group the National Nurse Practitioner Residency Training Consortium (NNPRTC), and reached out and welcomed any in-

terested stakeholders in this area to join. The group's initial purpose was to educate stakeholders about NP postgraduate training programs, and advocate for support and investment in such programs. The group later included the word "fellowship" in the name (NNPRFTC) to be inclusive, becoming the National Nurse Practitioner Residency and Fellowship Training Consortium (NNPRFTC).

After determining that there were no existing organizations that accredited NP postgraduate training programs, and in the absence of any known interest by other professional organizations in developing accreditation for postgraduate NP training programs, the Consortium developed the standards, infrastructure, and organizational base to become an accrediting body. In addition to the emphasis on rigor and quality, the Consortium leaders intended from the start to develop national programmatic accreditation for postgraduate NP training programs that would be eligible for recognition by the United States Department of Education (USDE) described below. The Consortium founders placed importance on this recognition as it is almost always a requirement for federal funding of health professions training programs that they be accredited, or accreditation eligible, by a federally recognized accrediting organization.

The USDE is the federal agency that recognizes organizations which provide accreditation to educational and training programs by "establishing operating standards for professional programs and determining the extent to which the standards are met and publicly announce their findings" as a mechanism for promoting quality and diversity (USDE, n.d.). USDE recognizes the Council of Higher Education (<http://www.chea.org>) which offers accreditation for degree-granting academic institutions, that is, colleges and universities. The USDE also recognizes organizations that accredit non-degree granting educational and training programs, such as NP postgraduate training. USDE recognition is important because it is affirmation that an accrediting organization is in compliance with USDE requirements regarding their organizational structure and operations, as well as how they conduct the accreditation process of educational and training programs (USDE, 2017).

After an organization applies to the USDE for recognition as an accrediting body, the USDE review process consists of an internal (self-study report) and external evaluation (by USDE evaluators) to determine that the applicant accrediting body meets the USDE standards for institutional quality and integrity. When educational and training programs receive accreditation from a USDE recognized accrediting body, those programs may also become eligible for federal government training programs that require accreditation by a federally recognized accrediting organization. The specific

USDE approach to how accrediting bodies shall accredit individual programs will be described in more detail later in the chapter.

Early on, the Consortium articulated clearly the need for a national accreditation process of NP postgraduate training programs to promote quality and foster innovation. The Consortium was unique in its focus on offering postgraduate training program accreditation that was intentionally designed by experts in postgraduate NP postgraduate training representing not just FQHCs, but academic institutions, U.S. Department of Veterans Affairs, and health systems. Ten members of the Consortium representing these varied partners surveyed the literature and state of the science of accreditation in other health professions postgraduate training programs, as well as existing accreditation standards for academic nursing programs, and then worked collaboratively to author the Consortium's Accreditation Standards. In addition to the Standards, the processes, infrastructure, and governance for accreditation of postgraduate NP training programs were developed with a traditional design of an initial accreditation, followed by triennial reaccreditation and periodic program updates.

The NNPRFTC is currently preparing to apply to the USDE for recognition as an accrediting body, a process that takes time as well as evidence of organizational quality, integrity and effectiveness. That is, before an accrediting body is formally recognized by USDE, that organization must demonstrate its ability to accredit educational and training programs as part of the application process. In preparation for recognition, in 2015, the NNPRFTC was formally incorporated as a 501 c(3) non-profit organization with headquarters in Washington, DC.

The Board of Directors of the Consortium was created with volunteers from around the country, representing various stakeholders with a broad range of backgrounds and expertise. The first Executive Director was hired in 2015, the Standards for accreditation of NP postgraduate training programs were adopted, and the infrastructure to accommodate a national accreditation effort was begun. The NNPRFTC website was launched and applications for accreditation were solicited. On a parallel path, in 2014 the American Nurses Credentialing Center (ANCC) launched the Practice Transition Accreditation Program (PTAP)TM which includes standards to accredit APRN fellowship programs as well as RN residency and RN fellowship programs (<http://www.nursecredentialing.org/Accreditation/PracticeTransition>). The ANCC accredited its first transition to practice program for NPs in 2015 and the NNPRFTC accredited its first postgraduate NP training program in 2016.

Accreditation: What It Is and Why It Is Important

Accreditation is the recognition by an approved accrediting body that an institution of learning or a formal program of study or training sufficiently meets and maintains standards required to achieve an acceptable level of quality (USDE, n.d.).

The standards set by an accrediting body represent a consensus among peers in a specific discipline about what constitutes program quality. Thus, accreditation is a systematic process of review against established and relevant standards in that discipline. That review is both internal and external. The internal review is called a self-study, described later in this chapter as a process by which the organization that hosts a program assesses its own performance against the standards. The external review is done by the accrediting body.

Program accreditation evaluates a program's performance against standards set by an accrediting body of peers and is a voluntary activity; however, accreditation may be required of the program by its host institution or by funding entities. External reviewers are professional peers chosen by the accrediting body. Accreditation should not be confused with institutional or programmatic approval by a state or federal authority, which is often mandated by law for the purposes of licensure, payment, or certification to specific standards. Formal education programs leading to a degree and ultimately individual professional licensure in a practice discipline such as nursing and medicine usually have both state approval and peer accreditation.

Purpose of Accreditation

The primary purpose of accreditation for postgraduate training is quality assurance. As we have noted, accreditation standards provide consistency and rigor across programs of the same type, allowing the public to have confidence that a program's graduates have met requirements set by their discipline and are able to perform safely and effectively as expected. Standards for accreditation cover a wide variety of topics. These include the relevant content of the core training program, expected competencies, types of learning experiences and outcomes; and the programmatic policies, procedures, practices, resources and key structural elements that must be in place for the trainees to succeed. Thus, standards protect trainees and the public by assuring the trainees that they will receive the education and training they need to perform as expected, as well as assuring the public that they can do so.

Benefits of Accreditation

The benefits of accreditation are described below. Accreditation provides the public with a recognizable seal of approval that is an indication of quality and integrity. Potential trainees, potential employers and others use programmatic accreditation as a mechanism to identify training programs that meet national standards of educational quality and graduate individuals who have been well prepared in discipline-specific knowledge, skills, and attitudes.

Accreditation



The Association for Specialized and Professional Accreditation defines accreditation as “a mark of distinction for academic programs and institutions, signaling high quality and a commitment to excellence... Programmatic (specialized and professional) accreditation conducts an in-depth assessment of specialized or professional programs at a college, university or independent institutions.”

(Accessed <http://www.aspa-usa.org/about-accreditation/> on 11/29/17)

Accreditation means that an institution that is hosting an NP postgraduate training program can assure applicants who are applying to the program, as well as patients receiving care from the NP resident, that the program sufficiently meets peer-reviewed quality standards. Additionally, through accreditation and reaccreditation, organizations can further develop their programs by systematic self-evaluation against the standards. This lets a program readily identify strengths and weaknesses, refine the curriculum, and otherwise enhance the program to reflect the realities of challenging and changing practice environments.

This last point is critical to understanding the benefits of accreditation. Change in healthcare and the health professions is a constant. When NP postgraduate programs are accredited, they join a group of NP postgraduate training programs that emphasizes collegial and collaborative inter-professional practice, and networking.

This results in a multi-faceted diverse learning community of trainees/residents, faculty, staff, patients and the public that can share best practices and new evidence, encourage ‘flashes of brilliance,’ and be proactive in moving the field forward while being anchored in stable accreditation standards. With the evolution of best practices, new and revised standards emerge. Accreditation is a forward-focused mechanism for formalizing, evaluating, and applying those standards in a programmatic setting. NP postgraduate program directors are working together to create a system of quality assurance that is recognized and valued, and that the public can trust as an indicator of excellence.

“The North Mississippi Health Services Advanced Practice Clinician Fellowship, located on the grounds of the North Mississippi Medical Center, has found the process of accreditation by NNPRFTC to be very beneficial. Overwhelmingly, the validation of quality seemed to be present. The eight standards provided a framework of reference to which the components of the program could be externally verified.

After receiving the credential, inquiries about the program and applications to the program have expanded greatly. The applicant pool increased from 17 for 10 slots last year to 40 for 10 slots this year.

Applicants came from San Francisco, Florida, and Utah, as well as locally. Joint Commission seemed quite interested in the program and the benefits to the system in regard to high quality APCs meeting the needs of Mississippians.”

—Rebecca Cagle PhD, FNP-BC, PMHNP-BC
Director, APC Fellowship

The Structure and Process of Accreditation

The USDE has six operational requirements of accrediting bodies that are the foundation of the review process they must follow to accredit applicant educational and training programs. The NNPRFTC has adopted these USDE requirements, summarized in **Figure 8.1**, and which are as follows (USDE, 2017):

- 1. Standards for educational and training programs**, which are written and reviewed by a peer group within the discipline;
- 2. Self-study (internal evaluation)** by the program or organization seeking accreditation using those standards;
- 3. On-site evaluation (site visit) by the accrediting body;**
- 4. Publication of accreditation status** for each applicant organization (usually posted on the website of the accrediting agency);
- 5. Monitoring via annual data collection** (written reports submitted to the accrediting agency following up on any deficiencies specified by the accrediting agency and mid-term review [a mid-accreditation term update of the self-study]);
- 6. Reevaluation or reaccreditation** (apply for continued accreditation).

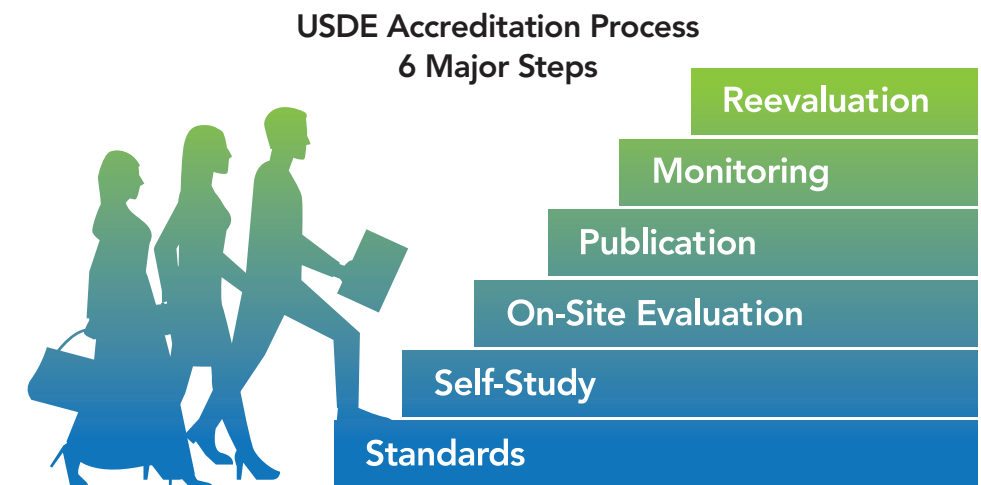


Figure 8.1: Summary of USDE Operational Requirements for Accrediting Bodies

Standards for NP Postgraduate Training Program Accreditation

The NNPRFTC approach to implementing these six steps began with the development of its eight Accreditation Standards, designed by a group of national leaders in NP postgraduate training that included NP postgraduate program directors,

academicians, researchers, and NP clinicians. These Standards are outlined on the next page in **Figure 8.2**: 1. Mission, Goals and Objectives; 2. Curriculum; 3. Evaluation; 4. Program Eligibility; 5. Administration; 6. Operations; 7. Staff; and 8. Postgraduate Trainee Services. These standards are consistent with other postgraduate professional training programs, such as the American Psychological Association (APA) for clinical psychologists and the Accrediting Council for Graduate Medical Education (ACGME).

- 1. Mission, Goals and Objectives.** The mission states the core purpose of the program, the goals are what you expect to achieve, and the objectives are measurable evidence that you have succeeded.
- 2. Curriculum.** The curriculum is the training program as experienced by the NP residents. The curriculum is a written document that outlines the competencies that the residents must demonstrate. It also includes clinical and didactic learning experiences, as well as the curricular learning objectives and measurable learner outcomes.
- 3. Evaluation.** Evaluation has two levels. The first refers to how residents are in fact demonstrating the expected competencies, that is, assessment of resident performance. The second refers to how your program as a whole is meeting its stated objectives, and includes an evaluation of the organization and the faculty that support the NP postgraduate training program.
- 4. Program Eligibility.** This section of the accreditation standards sets out the eligibility criteria for programs seeking accreditation. For example, they must be a minimum of 12 months; the host organization must be accredited to provide the healthcare services it is training the residents to provide; and that applicants who apply to the program must have a master's degree in nursing from an accredited school of nursing.
- 5. Administration.** This refers to the administrative support and resources that a host organization must have in order to offer an NP postgraduate training program, including the clinical and financial resources, assigned clinical sites and patient population, electronic resources, and working environment required to meet the needs of the program.
- 6. Operations.** This includes operational policies and procedures that a program must follow to assure quality, such as preceptor requirements, liability issues, dismissal and grievance.

7. Staff. The NP postgraduate training program requires sufficient staffing by a chief clinical officer, a program director, organizational and clinical support staff, and clinical preceptors to operate and evaluate the day to day activities of the program.

8. Postgraduate Trainee Services. As NP residents are employees, they must be provided the same services as other employees.

Accreditation standards can serve as templates to guide emerging programs' development and delivery and as a peer-reviewed yardstick to measure the quality of existing programs. The Standards serve as guideposts for excellence and quality assurance as well as inspiration for innovation.



NNPRFTC's Standards Driving Excellence in Program Design

- Standard 1: Mission, Goals and Objectives
- Standard 2: Curriculum
- Standard 3: Evaluation
- Standard 4: Program Eligibility
- Standard 5: Administration
- Standard 6: Operations
- Standard 7: Staff
- Standard 8: Postgraduate Trainee Services

Figure 8.2: NNPRFTC Accreditation Standards

Accreditation Process

The Standards provide the basis for the internal (self-study) and external (site visit) evaluations. The evaluations focus on the training environment, trainee achievement and trainee success. The Standards also serve as a mechanism that promotes consistency in decision-making—every program is measured against the same set of criteria. The programs conduct their internal evaluation (self-study) to determine the program's level of adherence to the Standards. The findings of the self-study are written up and submitted to the NNPRFTC.

The next step is the in-person site visit by two professional peers (site visitors). NN-PRFTC site visitors are trained to a model of external evaluation that promotes consistency through a deep understanding of the Standards, simulations of site visit meetings, understanding how to validate the findings of the program’s self-study, and exploring techniques for conducting an objective, yet collegial, review.

Next, the NNPRFTC Accreditation Committee considers the program’s application materials including the self-study; the site visitor report; the applicant program’s comments responding to the site visitor findings; public commentary and other relevant materials. The Committee makes a recommendation for accreditation action to the NNPRFTC Board. The outcome of the accreditation review, the accreditation decision, is then published on the NNPRFTC website so the public is informed. Annually, programs submit a brief report of demographic information and any updates on programmatic changes to the NNPRFTC. Re-evaluation occurs every three years, as part of the reaccreditation process.

When a program is accredited, it is a public recognition that trainees are offered experiential learning in an environment that adheres to accepted indicators of quality. This NNPRFTC accreditation process is outlined in the NNPRFTC Accreditation Process Map below Figure 8.3.

Accreditation of a program by the NNPRFTC lasts for three years. Details about how to apply can be found on the NNPRFTC website, along with the most up to date information, at www.nppostgradtraining.com. Additional resources such as the Consortium FAQs, the Accreditation Fact Sheet, the Accreditation Standards and Self-Study Guide, and a gap-analysis tool to facilitate pre-accreditation readiness review are also available on the website. Technical assistance is available throughout the process. Final accreditation decisions and a portal for public commentary are available on the NNPRFTC website.

The American Nurses Credentialing Center (ANCC) Practice Transition Accreditation Program (PTAP)[™] accredits RN residency/RN or APRN fellowship programs using evidence-based criteria.

PTAP accreditation process consists of four phases:

- **PHASE 1: Application and self-study**
- **PHASE 2: Document review and survey**
- **PHASE 3: Validation of documentation**
- **PHASE 4: Commission decision.**

During phase 1, the applicant submits an application form to the ANCC office for verification of eligibility. Once verified the applicant is notified and they complete a comprehensive self-study document that addresses the PTAP criteria. Phase 2 consists of a peer review process by two appraisers. The applicant program is also given a survey that is distributed to current and past residents/fellows over the last 12 months. During phase 3, validation of documentation, the appraiser team conducts a virtual visit to amplify, clarify, and verify their findings. In the final phase, the Commission on Accreditation reviews the appraisers finding and vote to grant or deny accreditation. The ANCC PTAP accreditation period is for three years with reports due annually.

Accredited programs are posted on the ANCC website: <http://www.nursecredentialing.org/Accreditation/PracticeTransition>.

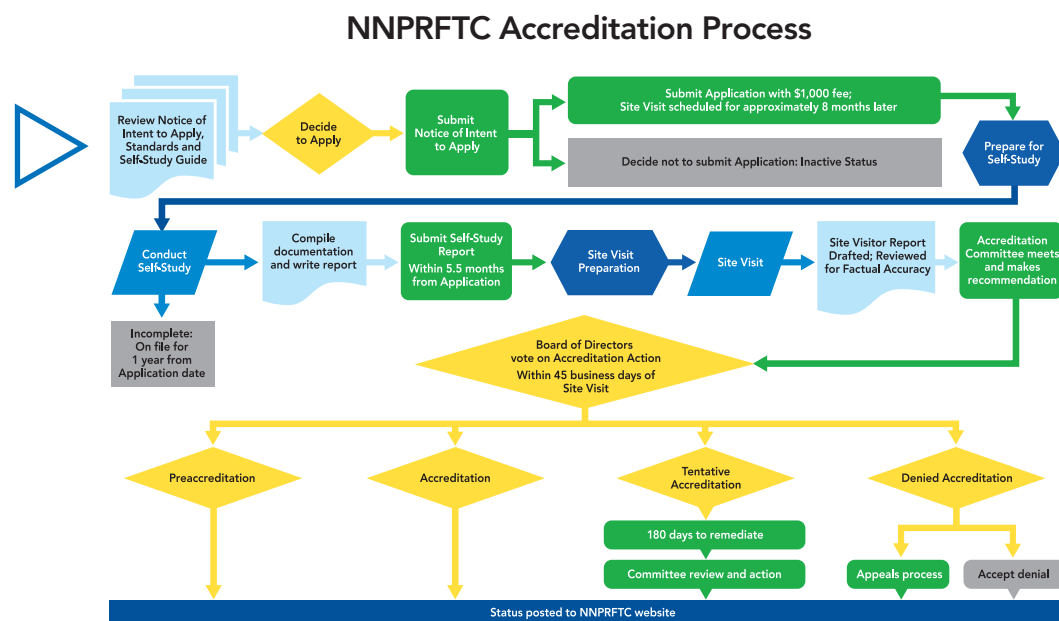
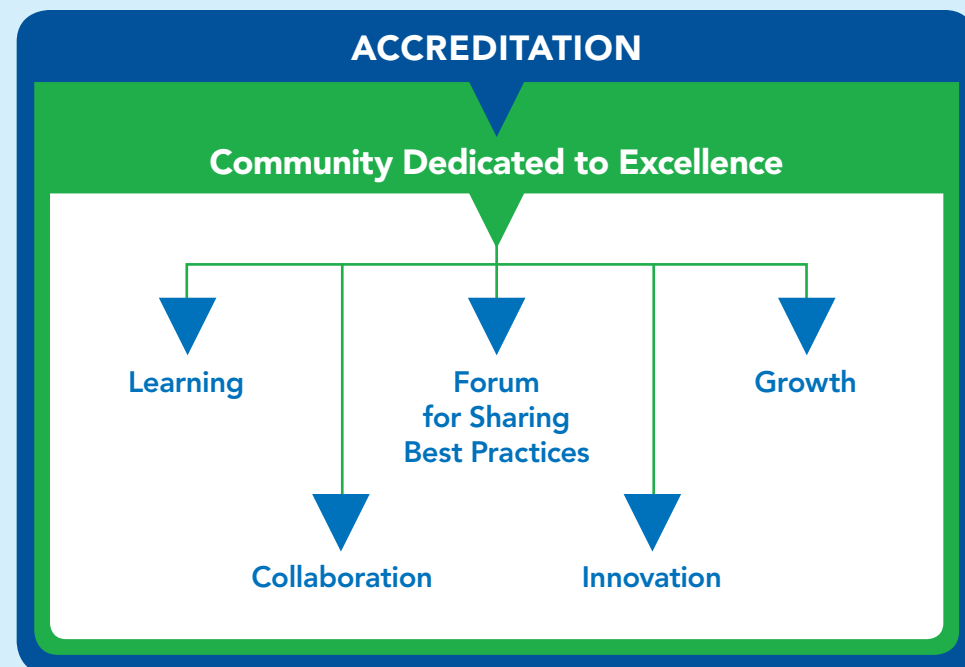


Figure 8.3: NNPRFTC Accreditation Process Map

Conclusion: Accreditation Anchors Excellence in Program Development

Accreditation fosters a community of like-minded professionals and interested parties who are dedicated to excellence in NP practice and training. Community creates a forum for sharing best practices, for working together to identify and address challenges. Life-long learning and professional growth become implicit and explicit. In a supportive peer environment, innovation and creativity flourish.

Accreditation is a promise. It is a tangible promise of quality and meaningful content. It is a choice to meet the expectations of peers. It is a decision to create a program that adheres to rigorous standards. For the evolving field of NP postgraduate training, accreditation offers an opportunity to create and join a community of like-minded leaders in shaping the future of the next generation of socially responsible healthcare providers. Promises speak to the future. They organize expectations. They encourage actions.



To summarize the value of accreditation, it provides: systematic, programmatic quality assurance (QI) through:

1. **Formative and summative program evaluation** that is validated by external peer review.
2. **National recognition of quality** based on recognized standards created by NP peers, for NP peers.
3. **Fostering innovation, dissemination of best practices and new knowledge.**
4. **Applying policies and procedures that are consistent** with the best practice standards that underlie the USDE eligibility requirements for recognition.

"As the program manager for our NP postgraduate residency training program, I was charged with taking the lead for preparing for the accreditation process, developing and submitting the self-study, and playing an integral role in the on-site visit.

It was time-consuming and challenging, but I was amazed at how many opportunities there were to strengthen our infrastructure, our data, and our communications processes.

Many times, I or my colleagues said, 'I wish we'd had these standards to go by when we were setting up the program in the first place!'

—CHARISE CORSINO, Program Manager, NP Residency Training Program
Community Health Center, Inc., Middletown, CT

References

- USDE. (2017). Accreditation in the United States. Retrieved from https://www2.ed.gov/admins/finaid/accred/accreditation_pg11.html#Part602-Secretary'sRecognition
- USDE. (n.d.). FAQs about Accreditation. Retrieved from <https://ope.ed.gov/accreditation/FAQAccr.aspx>

AFTERWORD

It has been over a decade now since the launch of the Nation's first formal postgraduate NP residency training program at the Community Health Center, Inc. This program was created to provide new nurse practitioners with the training and support that will enable them to create and thrive in practice careers as primary care providers in community health centers. From the very beginning, CHCI's intent was to create a program that could and would be nationally replicated. To that end, we have developed significant infrastructure including curriculum, evaluation tools, preceptor trainings, didactic content, recruitment strategies, and marketing materials. As of September 2017, there are 48 primary care nurse practitioner postgraduate residency and fellowship training programs across the country and several in development. We are committed to helping organizations implement postgraduate NP training programs and hope this book will help advance the work.

"It has been incredibly satisfying to see the growth of new postgraduate NP training programs, but even more satisfying to see and hear the transition from new NPs at the start of the residency year to confident, competent and committed primary care providers, providing exceptional care to their patients."

—KERRY BAMRICK, MBA
Director, Postgraduate Training Programs
at Community Health Center, Inc., Weitzman Institute

While we have made hundreds of presentations on the subject of postgraduate training for NPs, we felt it was time to bring together the experience and lessons of the past decade into a book that would serve the needs and interests of colleagues, stakeholders, and new generations of NPs and NP students around the country. We hope we have achieved our goal, and look forward to continuing our collaborative work with all who seek to advance health and health care.

This book represents our efforts to share our knowledge and experience with others in the field who are interested in learning more about the model, and perhaps implementing and leading a program in their community and state. The book covers the **Origins of the Movement, Training to a High-Performance Model of Care, Building the Case for Starting a Program, Structure and Curriculum, Finances, Operations and Administration, Evaluation** and **Accreditation**.

We are proud of the publication and hope you enjoyed reading it.

Margaret Flinter, APRN, PhD, c-FNP, FAAN, FAANP

Kerry Bamrick, MBA

Co-Principal Investigators, NCA–Clinical Workforce Development

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Addressing the Need Transforming Teams Training the Next Generation

“For more than a decade, we have been engaged in creating, testing, and spreading a model of postgraduate residency and fellowship training for new nurse practitioners who are committed to practice as primary care providers in community health centers.”

—Margaret Flinter, APRN, PhD, c-FNP, FAAN, FAANP
Senior Vice President and Clinical Director at Community Health Center, Inc.

Learn more about Community Health Center, Inc.’s Nurse Practitioners
Postgraduate Training Program at www.chc1.com

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December 2017
Community Health Center, Inc. and the Weitzman Institute

