IMPLEMENTATION OF A NURSE RESIDENCY PROGRAM
TO IMPROVE RETENTION RATES IN PUBLIC
HEALTH FACILITIES

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By
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CERTIFICATION OF APPROVAL

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DEDICATION

This comprehensive examination is dedicated to my family – my daughters Haylie, Ella, and Mia, my mother Luz, and my husband Anthony. Because of them, I was able to fully immerse myself in this experience thanks to their encouragement, support, inspiration, motivation, and most of all, their love. Because I had them by my side, I was able to move forward with my dreams.

I hope that my children will see all the hard work I have put toward my goals and in my life to motivate them to be strong and independent women who follow their own dreams. Girls, you can accomplish anything you want in life, and I will always be here to support you. Nothing makes me more fulfilled than seeing you girls happy and healthy in life, and I wish you also grow up to find the time to do some good in the world.

This is also dedicated to my late father Donato Y. Chan and my late brother Arthur Chan, who taught me to be a strong woman who can do anything I wanted in life, and they have truly shaped me into the person I am today.
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TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedication</td>
<td>iv</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>v</td>
</tr>
<tr>
<td>Abstract</td>
<td>viii</td>
</tr>
<tr>
<td>CHAPTER I. Introduction</td>
<td>1</td>
</tr>
<tr>
<td>II. What is the Importance of Retaining Public Health Nurses?</td>
<td>5</td>
</tr>
<tr>
<td>Trends in Healthcare</td>
<td>7</td>
</tr>
<tr>
<td>Role of Public Health Nurses</td>
<td>16</td>
</tr>
<tr>
<td>Factors Related to the Retention of Nurses</td>
<td>18</td>
</tr>
<tr>
<td>Summary</td>
<td>21</td>
</tr>
<tr>
<td>III. How can a Nurse Residency Program Impact the Retention Rates in a Public Health Facility?</td>
<td>24</td>
</tr>
<tr>
<td>Background of a Nurse Residency Program</td>
<td>25</td>
</tr>
<tr>
<td>Differences Between Nurse Residency Programs and General Orientation</td>
<td>27</td>
</tr>
<tr>
<td>Studies on Nurse Residency Programs Improving Retention Rates</td>
<td>29</td>
</tr>
<tr>
<td>Duration of Nurse Residency Programs</td>
<td>33</td>
</tr>
<tr>
<td>Preceptors As a Driving Force</td>
<td>35</td>
</tr>
<tr>
<td>Financial Effects</td>
<td>39</td>
</tr>
<tr>
<td>Summary</td>
<td>39</td>
</tr>
<tr>
<td>IV. What is the Recommended Plan to Implement and Evaluate a Nurse Residency Program in a Public Health Facility?</td>
<td>41</td>
</tr>
<tr>
<td>Stakeholders</td>
<td>42</td>
</tr>
<tr>
<td>Lippitt’s Theory of Change</td>
<td>43</td>
</tr>
<tr>
<td>Post-implementation Assessment of Nurse Residency Programs</td>
<td>46</td>
</tr>
<tr>
<td>Challenges</td>
<td>47</td>
</tr>
<tr>
<td>Benefits</td>
<td>49</td>
</tr>
<tr>
<td>Need for Longitudinal Studies</td>
<td>52</td>
</tr>
<tr>
<td>Accreditation</td>
<td>53</td>
</tr>
</tbody>
</table>
ABSTRACT

In a world where health issues range from deadly viruses to preventable diseases, the need for an effective public health system is essential. Public health nurses play a vital role in the community as they promote and protect the health of populations by mitigating public health issues and responding to public health crises. The contributions of public health to the community have shaped the world today and will continue to do so for generations to come. To support a strong nursing infrastructure, efficient, committed, and stable nursing staff are necessary. A nursing shortage in public health agencies affects the services that are provided to the community. This downstream effect has dire consequences for the health of a community. Nurses, who are employed by local health departments, provide essential care and services. The availability and retention of public health nurses are even more important during times of uncertainty and in emergency situations when additional duties are required to further protect the health of our communities. Research indicates that there is a high nursing turnover in public health settings. To mitigate this issue, a nurse residency program should be implemented in all public health facilities. This comprehensive examination will analyze three topics in relation to a nurse residency program in a public health facility: the importance of retaining public health nurses, the impact of a nurse residency program on retention rates in public health facilities, and a recommended plan to implement and evaluate a nurse residency program in a public health facility.
CHAPTER I

INTRODUCTION

Balancing the supply and demand of healthcare professionals is crucial to a well-functioning healthcare delivery system (Auerbach et al., 2017). Nurses, in particular, play a critical role in healthcare delivery as the demand for healthcare services is growing at an unprecedented pace (Juraschek et al., 2019). Yet, there is a shortage of nurses specifically in governmental public health agencies (Larsen et al., 2018; Juraschek et al., 2019; Yeager & Wisniewski, 2017). A nursing shortage in these sectors affects services influencing quality of care and/or access to care within a community.

Public health nurses (PHNs) play an important role in the public health infrastructure as they promote and protect the health of communities (American Public Health Association [APHA], 2013a; Kulbok et al., 2012). According to the CDC (2020a), the 10 Essential Public Health Services aims to:

1. Assess and monitor population health status, factors that influence health, and community needs and assets
2. Investigate, diagnose, and address health problems and hazards affecting the population
3. Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it
4. Strengthen, support, and mobilize communities and partnerships to improve health

5. Create, champion, and implement policies, plans, and laws that impact health

6. Utilize legal and regulatory actions designed to improve and protect the public’s health

7. Assure an effective system that enables equitable access to the individual services and care needed to be healthy

8. Build and support a diverse and skilled public health workforce

9. Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement

10. Build and maintain a strong organizational infrastructure for public health.

(CDC, 2020a, para. 1)

Public health nurses perform a vital role in the community; retaining current nursing staff is imperative for the overall health of population.

The importance of retaining current nursing staff is even more crucial as nurses risk their lives in emergency situations. More recently, PHNs have been on the frontline of the public health crisis responding to the coronavirus disease of 2019 (COVID-19), the worse pandemic humanity has seen in a century (Edmonds et al., 2020; Schwerdtle et al., 2020). This pandemic has uncovered the fragility of the healthcare workforce, and nursing leaders now have an opportunity to address any issues and support staff to be better prepared for the next public health crisis (Duncan,
2020; Haas et al., 2020). Policymakers, stakeholders, and nurse leaders are encouraged to support the nursing workforce in their organizations to reduce nursing shortages through retaining nurses (Duncan, 2020; Juraschek, 2019). This is especially important during difficult times as there is a need to consider how healthcare crises such as the COVID-19 pandemic affects the nursing workforce (Duncan, 2020).

Studies show that job satisfaction, wages, opportunities for advancement or promotion, and opportunities for training or continuing education can influence the retention of the nursing workforce (Baik & Zierler, 2019; Beck & Boulton, 2016; Hudgins, 2016; Issel et al., 2016; Yeager et al., 2015; Yeager & Wisniewski, 2017). According to research, nurse residency programs (NRPs) can help to improve retention rates of new graduate nurses (NGNs) (Asber, 2019; Cline et al., 2017; Eckerson, 2018; Owings & Gaskins, 2020; Pillai et al., 2018; Rush et al., 2019; Walsh, 2018; Wolford et al., 2019). In addition, many healthcare organizations in the United States (U.S.) have implemented NRPs to reduce high costs associated with the retention of NGNs (Friday et al., 2015; Van Camp & Chappy, 2017).

The private sector has responded to nursing shortages by offering competitive salaries and implementing strategies to make job options more appealing to NGNs via NRPs, which have become commonplace in the inpatient setting (Larsen et al., 2018). Nurse residency programs help to provide structure and supportive environments; unfortunately, these programs are limited in the public health setting (Larsen et al., 2018). New graduate nurses working in public health may also benefit from NRPs,
where nursing is practiced in a more independent setting (Larsen et al., 2018). Therefore, one way to address issues and support PHNs is by way of implementing NRPs.

The need to retain PHNs is critical for addressing the nursing shortage and to promote a healthy community. This paper will discuss the importance of retaining PHNs, how an NRP can impact the retention rates in a public health facility, and the recommended plan to implement and evaluate an NRP in a public health facility. More specifically, the current trends in healthcare and the important role of PHNs in the community will be discussed. The background of NRPs and the difference between a general orientation and NRPs will also be explained. There will then be a detailed recommended plan to implement and evaluate an NRP in a public health facility that will be presented.
CHAPTER II
WHAT IS THE IMPORTANCE OF RETAINING PUBLIC HEALTH NURSES?

In a world where health issues range from deadly viruses to preventable diseases, the need for an effective public health system is essential. According to the Centers for Disease Control and Prevention ([CDC], 2018d), “public health is the science and art of preventing disease, prolonging life, and promoting health through the organized efforts and informed choices of society, organizations, public and private communities, and individuals” (para. 1). Additionally, the CDC (2018d) reports that public health responses—such as outbreak investigations, prevention strategies for diseases, and health system improvements to quality and performance—require timely, accurate health information. According to Yeganeh (2019), healthcare and human health are recognized as the most cherished assets in the engine of economic growth and prosperity. Human health is also a predominant occupation of policymakers, business leaders, and citizens of the United States (U.S.) (Yeganeh, 2019). An ongoing increase in health-care-related industries and occupations is expected; in contrast to an uneven national job picture, the growth of employment among nurses has shown to be steady (U.S. Bureau of Labor Statistics, 2017). During the 2007-2010 recession, overall employment in the nation declined by 5.4 percent; by contrast, employment of nurses rose by 7.6 percent (U.S. Bureau of Labor Statistics, 2017). Despite an economic decline, the need for nursing not only remains but continues to increase.
Although the healthcare sector is constantly transforming, there are significant trends such as unsustainable costs, suboptimal outcomes, an aging population, decreased life expectancy in recent years, health and healthcare disparities, the digital transformation of healthcare, and the shortage of nurses (American Academy of Family Physicians [AAFP], 2018; American Association of Colleges of Nursing [AACN], 2020; American Nurses Association [ANA], n.d.-a; ANA, n.d.-c; Artiga et al., 2020; Balikuddembe & Reinhardt, 2020; CDC, 2018a; CDC, 2020c; Kneipp et al. 2018; ; Rutherford, 2017; Salmond & Echevarria, 2017; Tikkanen & Abrams, 2020; U.S. Bureau of Labor Statistics, 2017; Vogenberg & Santilli, 2019; Woolf & Schoomaker, 2019; World Health Organization [WHO], n.d.-a; WHO, 2018; Yeganeh, 2019). These trends in healthcare require adequate and competent staff to support the well-being of the community. Public health professionals need to be familiar with the trends and changes in healthcare to be able to effectively provide needed services to communities.

Nursing is one of the disciplines contributing to the transformation of healthcare into communities of care (Burge & Sullivan, 2012), and public health nurses (PHNs) are a vital part of this change. The role of PHNs is to promote and protect the health of the communities and the population (American Public Health Association [APHA], 2013a; Kulbok et al., 2012). Therefore, PHNs play a significant role in mitigating various public health issues, especially during emergencies and in pandemic situations (ANA, n. d.-b; Association of Public Health Nurses Public Health Preparedness Committee, 2014; Edmonds et al., 2020; Walden University
Education for Good, n.d.). To protect the health of communities, it is crucial to understand the factors related to the retention and satisfaction of nurses. This chapter discusses the importance of retaining PHNs to address current trends in healthcare, the primary roles of PHNs, the role of a PHN in an emergency response situation, and the factors related to the retention of nurses.

**Trends in Healthcare**

Some factors that drive healthcare transformation include unsustainable costs, suboptimal health outcomes, an aging population, decreased life expectancy in recent years, health and healthcare disparities, the digitization of healthcare, and a shortage of nurses (AACN, 2020; AAFP, 2018; ANA, n.d.-a; ANA, n.d.-c; Artiga et al., 2020; Balikuddembe & Reinhardt, 2020; CDC 2018a; CDC, 2020c; Kneipp et al., 2018; Rutherford, 2017; Salmond & Echevarria, 2017; Tikkanen & Abrams, 2020; U.S. Bureau of Labor Statistics, 2017; Vogenberg & Santilli, 2019; WHO, n.d.-a; WHO, 2018; Woolf & Schoomaker, 2019, Yeganeh, 2019). As the healthcare sector undergoes financial, clinical, demographic, and technical transformations, governments and businesses are attempting to control costs and provide quality services to individuals (Yeganeh, 2019). Controlling costs while providing quality services can be a challenge in a constantly changing environment.

**Unsustainable Costs**

Healthcare costs are growing at unsupportable levels for governmental budgets, employers, patients and the economy as a whole within the current system (Keehan et al., 2020; Rutherford, 2017; Salmond & Echevarria, 2017; Vogenberg &
Santilli, 2019). The U.S. spends more on healthcare than any other nation (Organisation for Economic Co-operation and Development, 2019; Salmond & Echevarria, 2017; Sawyer & Cox, 2018; Tikkanen & Abrams, 2020). The literature suggests there are several reasons for rising costs in healthcare (Berwick & Hackbarth, 2012; Cutler, 2018; Keehan et al., 2020; Magnan & Teutsch, 2020; Squires & Anderson, 2015; Vogenberg & Santilli, 2019). Advancements in medical technology, anticipated increases in inflation for medical goods and services, a greater consumption of prescription drugs, and higher healthcare spending for medications and procedures are among the largest healthcare expenditures (Cutler, 2018; Keehan et al., 2020; Squires & Anderson, 2015; Vogenberg & Santilli, 2019). Furthermore, wasteful spending and inefficient delivery of care, prevention failures, misallocated treatments such as spending on care that is not clinically valuable or not spending on preventative services, overtreatment, excessive administrative costs, fraud and abuse, and unnecessary services contribute to the escalating costs in the U.S. healthcare system (Berwick & Hackbarth, 2012; Cutler, 2018; Magnan & Teutsch, 2020). In comparing the two viewpoints, the difference in costs is important to consider when analyzing how the money can be used towards achieving better quality of care in the community. As national health expenditures are projected to increase at an average annual rate of 5%, for 2019-2028 (Keehan et al., 2020), it is important to analyze if these high expenditures support healthy outcomes in the community.
Suboptimal Health Outcomes

Individuals suffering from chronic health conditions are a significant concern within the U.S. (Salmond & Echevarria, 2017; Tikkanen & Abrams, 2020; Yeganeh, 2019). Chronic diseases such as heart disease, cancer, diabetes, stroke, and obesity are the leading causes of death and disability affecting an estimated 133 million people; they are also the most common or preventable of all health problems and utilize the greatest number of healthcare resources (CDC, 2020d; Salmond & Echevarria, 2017). With healthcare costs increasing, the overall quality of health for the population would be expected to concurrently increase. However, this is not the case. The U.S. health system ranks low compared with six other developed nations including Australia, Canada, Germany, the Netherlands, New Zealand, and the United Kingdom on quality, access, efficiency, equity, and healthy lives (Commonwealth Fund, 2014; Tikkanen & Abrams, 2020). Specific problems in the U.S. include higher rates of avoidable deaths compared to peer nations, higher maternal mortality ratios, an increase in lower extremity amputations due to diabetes, higher rates of medical and medication errors, higher disease burden, higher number of hospitalizations from preventable causes, and lower life expectancy rates at birth (Cox et al., 2015; Cox & Sawyer, 2017; Peterson-KFF Health System Tracker, n.d.; Sawyer & Cox, 2018; Tikkanen & Abrams, 2020). Many chronic diseases are caused by tobacco use and exposure to secondhand smoke, poor nutrition including diets low in fruits and vegetables, diets high in sodium and saturated fats, lack of physical activity, and excessive alcohol use (APHA, n.d.; CDC, 2020d; WHO, n.d.-b). Approaches to
prevent or reduce the severity of chronic diseases can be addressed and managed by public health officials in an attempt to achieve healthy people in healthy communities (CDC, 2020b). Additionally, non-communicable diseases (a disease that cannot be spread between people), also pose a major threat to public health. Over the next 10-15 years, people throughout the world will endure more death and disability from non-communicable diseases than from infectious and parasitic diseases (Yeganeh, 2019). Public health nurses are needed to interact at a community level to work with families and populations to mitigate chronic health issues.

**An Aging Population**

The rising number of people aged 65 years and over is expected to impact healthcare services (Rutherford, 2017; U.S. Bureau of Labor Statistics, 2017; Yeganeh, 2019). In 2013, this population comprised 14.1% of the U.S. population and is expected to increase to 21.7% by 2040, and to 25% by 2060 (CDC, 2020c; Salmond & Echevarria, 2017). This increase in the aging population also comes with some concerns. Due to the gradual decrease in physical and mental capacity during aging, there is a growing risk for disease (WHO, 2018). These changes are correlated to an increase in the prevalence of chronic diseases such as hypertension, diabetes, arthritis, and dementia (CDC, 2018a; WHO, 2018). In addition, some variations in the aging population’s health are due to their physical and social environments, which have long-term effects on how one ages (WHO, 2018). Also, one-third of older adults have limitations in activities such as preparing meals and housekeeping (CDC, 2018a). A comprehensive public health response must address this extensive range of
the aging population’s needs (WHO, 2018). Furthermore, additional trends in healthcare, such as the average life expectancy should also be reviewed so that supportive interventions are adjusted accordingly to meet the appropriate needs of a healthy community.

**Decreasing Life Expectancy**

Despite an increase in the aging population, research has shown that the average life expectancy in the U.S. has shifted in recent years (AAFP, 2018; Murphy et al., 2018; Squires & Anderson, 2015; Woolf & Schoomaker, 2019). Life expectancy in the U.S. went from an average of 39 years a century ago to 70 years in 1960 due to various factors including improvement in nutrition, housing, sanitation, hygiene, education, and new advances in science and technology (AAFP, 2018; Medina et al., 2020; Yeganeh, 2019). However, recent studies have reported that life expectancy in the U.S. has decreased (AAFP, 2018; Murphy et al., 2018; Woolf & Schoomaker, 2019). Life expectancy in the U.S. slowed after 1979, plateaued in 2011, and decreased after 2014 (Woolf & Schoomaker, 2019). Contributing to the reduced life expectancy is an increase in cause-specific mortality rates in the midlife age group (aged 25 to 64 years) involving deaths from drug overdoses, alcohol abuse, suicides, and organ system diseases such as hypertensive diseases, alcoholic liver disease, infectious diseases, liver cancer, mental and behavioral disorders, obesity, and pregnancy (Murphy et al., 2018; Woolf & Schoomaker, 2019). Each of these contributing factors are affecting the mortality age, which appears to be reducing the life expectancy overall. The recent downtrend in life expectancy warrants further
support from PHNs to assess communities and adequately support current needs of the population.

**Health and Healthcare Disparities**

Understanding and addressing health and healthcare disparities are clear foci for nurses to make a targeted impact within underserved populations in the community (Artiga, et al., 2020; Burge & Sullivan, 2012; Kneipp et al., 2018). Health disparities are described as preventable health differences experienced by socially, economically, and/or environmentally disadvantaged racial, ethnic, and other population groups (Artiga, et al., 2020; CDC, 2017; Office of Disease Prevention and Health Promotion, 2020). Comparatively, healthcare disparities are described as differences in access to or availability of medical facilities and services and/or quality of care between groups that are linked to social, economic, and/or environmental disadvantages (Agency for Healthcare Research and Quality [AHRQ], n.d.; Artiga et al., 2020).

While there have been some improvements in overall rates and reductions in some health disparities, disparities still exist (AHRQ, 2018; Health Resources & Services Administration, 2019; Office of Disease Prevention and Health Promotion, n.d.). For example, research shows that there are high rates of diseases such as cancer, cardiovascular disease, diabetes, and stroke among certain racial and ethnic minorities (Davis et al., 2017; Health Resources & Services Administration, 2019; Salmond & Echevarria, 2017). Additionally, people of color face greater barriers to accessing care as well as receiving adequate care compared to Whites (Artiga, 2020; AHRQ,
Addressing disparities in health and healthcare is important for improving health more broadly by achieving improvements in the overall quality of care and population health (Artiga, 2020). Public health nurses are positioned to interact with their communities and address these issues. Monitoring health status, outcomes, behaviors, and exposures by population groups to assess trends and target interventions are of utmost importance in working to improve disparities (CDC, 2013). Working to find ways to improve disparities through the use of digital tools is occurring.

**The Digital Transformation of Healthcare**

The healthcare sector is presently undergoing a digital transformation aimed at improving services for the public (Balikuddembe & Reinhardt, 2020; Nilsson & Fagerstrom, 2018; Rutherford 2017; Sathiavathi, 2015; Walsh & Rumsfeld, 2017; WHO, n.d.-a; Yeganeh, 2019). The digitization of healthcare includes technologies such as telemedicine/virtual care, mobile health, remote monitoring, artificial intelligence, big data analytics, robotics, smart wearables, software platforms, tools enabling data exchange, and sharing of relevant information (WHO, n.d.-a.; Yeganeh, 2019). Digitization may encourage companies to offer health kiosks and mobile applications where patients can video conference with physicians who have access to their personal medical records (Yeganeh, 2019). These technologies create a continuum of care which have proven to increase health outcomes by improving medical diagnoses, data-based treatment decisions, self-management of care, and person-centered care (WHO, n.d.-a).
According to the CDC (2018b), 85% of all health data is now electronic. Paperwork that is converted into digital format through digital health records or electronic health records allow healthcare providers to use available tools and technologies to analyze information, generate insights, and make well-coordinated decisions that can streamline clinical workflows, optimize care, strengthen doctor-patient relationships, improve outcome, and improve population health (CDC, 2018b; Sathiyavathi, 2015; WHO, n.d.-a). Bridging the electronic exchange of information between public health and healthcare is important for timely, accurate, and accessible disease surveillance (CDC, 2018b). The rising digitization of healthcare information has led to improved quality of care and services, efficiency in the healthcare delivery process, and improved health outcomes (Sathiyavathi, 2015). Successful digital transformation also requires complementary workforce transformation to ensure the workforce can meet patient needs and that necessary roles are in place to support the transformation (Eden et al., 2019).

**Shortage of Nurses**

The shortage of nurses is a long-standing issue that is projected to continue through 2030 (AACN, 2020; ANA, n.d.-a; ANA, n.d.-c; Haddad et al., 2020; Sigma Global Nursing Excellence, n.d.; Young et al., 2014; Zhang et al., 2018). Nursing is the largest health care profession in the U.S. and a registered nurse (RN) plays a pivotal role in healthcare delivery with a wide range of responsibilities involving patient care (Zhang et al., 2018). Zhang et al. (2018) projects that there will be a shortage of 336,336 RNs by 2025 and 510,394 RNs by 2030.
Research shows that the current and projected nursing shortage is primarily because of the aging RN workforce, the growing elderly population, the reduction in the number of younger nurses, and a shortage of nursing school faculty and educators (AACN, 2020; Haddad et al., 2020; Sigma Global Nursing Excellence, n.d.; Zhang et al., 2018). Furthermore, insufficient staffing raises the stress level of nurses which impacts job satisfaction resulting in high nurse turnover rates (AACN, 2020). It is important to continue to monitor the dynamics of the nursing workforce in the next 10 to 15 years and to prepare an adequate number of nurses to meet the growing demands of healthcare (Zhang et al., 2018). According to the ANA (n.d.-a), nurses are the largest staffing group of the healthcare system utilizing nearly 40% of operating costs. Unfortunately, nurses have been a target for a reduction in hours and other cutbacks that come at the expense of patient well-being and nurse safety (ANA, n.d.-a). Nursing shortages lead to errors, higher morbidity and mortality rates, and a higher number of preventable events (ANA, n.d.-a; Haddad et al., 2020).

Therefore, organizations should be creative in meeting the needs of nurses while providing the best and safest care to the patients through an environment that empowers and motivates nurses to sustain the nursing workforce (Haddad et al., 2020). Nurses across various disciplines facilitate the entire health journey from hospital admission to discharge, giving themselves unique perspective and power to facilitate positive patient outcomes (ANA, n.d.-a). The public health nursing workforce is facing declines in staffing during a time of increasing demand for public
health professionals to meet existing and emerging societal needs (Young et al., 2014).

**Role of Public Health Nurses**

Public health nurses play a vital role in public health infrastructure as they promote and protect the health of communities and the population (APHA, 2013a; Kulbok et al., 2012). Public health nursing practice focuses on population health through surveillance and assessment of the multiple determinants of health with the intent to promote health and wellness, prevent disease, disability, and premature death, and improve quality of life (ANA, 2013). Such efforts are addressed through primary prevention approaches, including identification, implementation, and evaluation of evidence-based programs and services that provide preventive interventions to achieve health equity (ANA, 2013). According to the APHA (2013a), PHNs use knowledge from nursing, social, and public health sciences and work in specialty practice within nursing and public health. In addition, PHNs attend to different determinants of health through advocacy, policy development, planning, and addressing the issues of social justice (APHA, 2013a).

Mitigating public health issues can be a challenge, but PHNs are trained to influence communities through education and providing resources on lifestyle changes, preventative care, and disease management. In addition, nurses are positioned to lead interprofessional teams to make transformative changes in healthcare (Salmond & Echevarria, 2017). The need for PHNs is especially important
to protect a healthy community through their expertise and guidance during critical times.

**Role of PHN in an Emergency Response Situation**

Public health nurses play an essential role during emergency response situations (ANA, n.d.; Association of Public Health Nurses Public Health Preparedness Committee, 2014). Nurses must be prepared to respond directly to public health crises, from outbreaks of disease to natural disasters (ANA, n.d.). According to the Association of Public Health Nurses Public Health Preparedness Committee (2014), PHNs must be able to perform population-based practice in disaster preparedness, response and recovery operations. Public health nurses are capable of developing disaster policies, comprehensive plans, and conducting and evaluating preparedness and response drills, exercises, and training (Association of Public Health Nurses Public Health Preparedness Committee, 2014). Public health nurses are vital members in response operations and command centers, as well as in the field where they provide frontline population health and core public health services (Association of Public Health Nurses Public Health Preparedness Committee, 2014). Across the world, PHNs have been on the frontline of the public health crisis responding to the coronavirus disease of 2019 (COVID-19); this pandemic has been highly uncertain, is changing constantly, and nurses are providing practical, solution-based perspectives in an effort to help mitigate risks and to strengthen the health service response (Edmonds et al., 2020; Schwerdtle et al., 2020). The community relies on effective guidance when it comes to their health, and
PHNs play a critical role in disaster situations which affect the well-being of the entire community. Despite the critical role of PHNs, their positions have been underfunded, left vacant, eliminated, or replaced in the last few decades (Edmonds et al., 2020). Such a critical role would require adequate support, education, and training for nurses to choose and continue this role during challenging times.

Factors Related to the Retention of Nurses

To keep up with the trends of the current state of the healthcare system, nurses must be available to fill the roles that directly affect the health of the community. Staffing issues in the public nursing realm include nursing shortages and problems with retention and turnover (APHA, 2013b; Beck & Boulton, 2016; Campaign for Action, 2018; Georgia Department of Public Health, 2019; National Association of County & City Health Officials [NACCHO], 2020; Yeager & Wisniewski, 2017). Increasing nurse retention is a crucial aspect with regards to improving the healthcare system. Healthcare organizations should provide nurses with fair wages, opportunities for advancement or promotion, opportunities for training or continuing education, support on balancing work and family responsibilities, flexible work schedules, competitive benefits, and additional support for preceptors (APHA, 2013b; Beck & Boulton, 2016; Dimattio et al., 2010; Georgia Department of Public Health, 2019; Harper et al., 2015; Hudgins, 2016; Hungerford & Hodgson, 2013; Issel et al., 2016; Liss-Levinson et al., 2015; Sellers et al., 2015; Yeager et al., 2015, Yeager & Wisniewski, 2017). In relation to these factors that influence retention, the following
sections will focus on job satisfaction, wages, opportunities for advancement or promotion, and opportunities for training or continuing education.

**Job Satisfaction**

Studies suggest that a higher level of job satisfaction is inversely related to whether employees leave their organizations (Baik & Zierler, 2019; Harper et al., 2015; Hudgins, 2016; Liss-Levinson et al., 2015). Understanding that job satisfaction is related to retention should be considered by further identifying what job satisfaction means to various employees. An increase in job satisfaction is related to supervisory support (including respect and good relationships), organizational support (includes training, communication, and workload), pay satisfaction, and employee involvement (Harper et al., 2015; Leider et al., 2016; Rahnfeld et al., 2016). However, there needs to be a better understanding between the determinants of job satisfaction and retaining staff (Leider et al., 2016), which would allow healthcare organizations to increase job retention. Therefore, it would be important for healthcare organizations to focus on finding different ways to support PHNs through identifying and increasing job satisfaction for successful retention (Harper et al., 2015; Liss-Levinson et al., 2015).

**Wages**

Research shows that non-competitive wages are factors contributing to the retention of PHNs (APHA, 2013b; Beck & Boulton, 2016; Georgia Department of Public Health, 2019). Non-competitive wages keep nurses from applying for jobs in public health, and many potential applicants do not move forward with the
application process when they learn about the wages (Georgia Department of Public Health, 2019). There are some inverse correlations between low level of satisfaction with wages and either leaving or the intent of leaving the organization (Liss-Levinson et al, 2015; Sellers et al., 2015). However, Issel et al. (2016) found that while PHNs from local health departments reported dissatisfaction with their lower wages compared to hospitals, they also reported high satisfaction with their jobs. So, while the level of wages is a factor in influencing retention for many nurses, it also appears to not be the only factor for PHNs.

**Opportunities for Advancement or Promotion**

Opportunities for advancement or promotion are an issue in health departments (Beck & Boulton, 2016; Issel et al., 2016). Beck and Boulton (2016) found that a majority of the 21 responding states surveyed agreed or strongly agreed that promotion opportunities are often unavailable to RNs. Additionally, Issel et al. (2016) found that only half of the LHDs that were studied in 2010 paid a differential for a supervisory role, in comparison to the hospitals where all 11 paid that differential. One could infer that not properly compensating nurses for supervisory roles would deter nurses from advancing in their career. Healthcare organizations can further address opportunities for advancement by supporting nurses in other ways.

**Opportunities for Training or Continuing Education**

Providing opportunities for training and continuing education is a critical retention factor amongst nurses, and are needed to support PHNs in their role (Harper et al, 2015; Hungerford & Hodgson, 2013; Sellers et al., 2015; Yeager et al., 2015;
Opportunities for training and continuing education can be provided in various ways such as establishing possible career paths for entry-level positions, creating learning environments supportive of achieving new skills and experience on the job, providing an educational program within the existing organization, and providing reimbursements to PHNs for continuing education (Hungerford & Hodgson, 2013; Issel et al., 2016; Yeager et al., 2015). Harper et al. (2015) suggest that the largest impact for improving organizational support and job satisfaction is through assessing training needs. In addition to improving skills and performance, investment of time and money into addressing training needs will increase job satisfaction (Harper et al., 2015). Therefore, healthcare organizations can attempt to increase nursing retention by finding ways to support nurses through opportunities for training or continuing education.

**Summary**

Retaining satisfied PHNs is essential in promoting and protecting the health and well-being of the community. Public health nurses mitigate public health issues while dealing with the changing trends in healthcare, such as the digital transformation of healthcare, growing healthcare costs, effect of preventable chronic diseases on the health of the population, increasing rates of avoidable deaths, changing demographics of an increasing aging population with a decreased life expectancy, mental and behavioral disorders, drug overdoses, alcohol abuse and suicides, continued existence of health and healthcare disparities, and a nation-wide shortage of nurses (AAFP, 2018; Artiga et al., 2020; CDC, 2018a; CDC, 2020d;
Kneipp et al., 2018; Rutherford, 2017; Salmond & Echevarria, 2017; Squires & Anderson, 2015; Tikkanen & Abrams, 2020; U.S. Bureau of Labor Statistics, 2017; Vogenberg & Santilli, 2019; WHO, 2018; Woolf & Schoomaker, 2019; Yeganeh, 2019). Not only do PHNs promote and protect the health of communities, they also play an essential role during emergency response situations (ANA, n. d.; APHA, 2013a; Association of Public Health Nurses Public Health Preparedness Committee, 2014; Kulbok et al., 2012). Unfortunately, nursing shortages and problems with retention are an issue in the public health infrastructure (APHA, 2013b; Beck & Boulton, 2016; Campaign for Action, 2018; Georgia Department of Public Health, 2019; National Association of County & City Health Officials [NACCHO], 2020; Yeager & Wisniewski, 2017). Factors that influence nurse retention reviewed in this paper include the level of job satisfaction in relation to whether employees leave their organizations or change employers, non-competitive wages contributing to the shortage of PHNs, opportunities for advancement or promotion in health departments, and the need for training and continuing education to support PHNs (APHA, 2013b; Beck & Boulton, 2016; Georgia Department of Public Health, 2019; Harper et al., 2015; Hudgins, 2016; Hungerford & Hodgson, 2013; Issel et al., 2016; Liss-Levinson et al., 2015; Sellers et al., 2015; Yeager et al., 2015; Yeager & Wisniewski, 2017).

Ultimately, these issues can influence a nurse’s decision to enter the public health sector or to remain in this specialty. A powerful public health system depends on well-educated public health professionals like PHNs to effectively shape the programs and policies needed to improve the health of the community. Reviewing
and addressing the different factors that influence staff retention should be considered when making changes in a public health department in order to retain PHNs.
CHAPTER III

HOW CAN A NURSE RESIDENCY PROGRAM IMPACT THE RETENTION RATES IN A PUBLIC HEALTH FACILITY?

To combat high nursing turnover rates by way of increasing support for new graduate nurses (NGNs), the implementation of a nurse residency program (NRP) in a public health facility with the intent of increasing retention is recommended. “The Future of Nursing” report by the Institute of Medicine (IOM) (2011) details suggestions to guide the nursing profession into leading positive transformation and advancing health. One of those suggestions include implementing an NRP (IOM, 2011). Specifically, IOM (2011) recommends that state boards of nursing, accrediting bodies, the federal government, and health care organizations take actions to support the completion of an NRP for nurses after they have completed a prelicensure degree program or when they are transitioning into a new clinical practice area. A nurse residency program can be implemented to support NGNs in their influential role serving patients and their communities. This chapter discusses how an NRP can impact the retention rates in a public health facility by reviewing the background of NRPs, differences between NRPs and a general nurse orientation, studies on NRPs improving retention rates in various healthcare organization settings, the role of the preceptor as a driving force for NGNs, the recommended length of time for an NRP, and the financial implications for NRPs.
Background of Nurse Residency Programs

Nurse residency programs are a recent phenomenon that arose within the last two decades (Walsh, 2018). In concurrence with the lack of adequate support for NGNs in the early 2000s, the field of nursing was also entering a time of increased healthcare demands due to a nursing shortage exacerbated by decreasing retention rates of new nurses (Walsh, 2018). As a result, the first NRPs were started in 2004 which were led by the collaborative efforts of the American Association of Colleges of Nursing and University HealthSystem Consortium (Barnett et al., 2014). These programs were intended to be one year in length, to offer monthly residency sessions with expert facilitators, and to be affiliated with at least one local school of nursing as an academic partner (Barnett et al., 2014). With these intentions, NGNs could be supported by these NRPs.

Nurse residency programs are postgraduate training programs for NGNs that provide additional support and training by enhancing the nurses’ knowledge, skills (clinical competencies), and professional competencies upon entering the workforce (Cline et al., 2017; Larsen et al., 2018; Letourneau & Fater, 2015; Owings & Gaskins, 2020; Pelletier et al., 2019). These programs are an evidence-based approach aiming to create a highly educated nursing workforce and are an effective way to reduce turnover as it has shown to increase support and job satisfaction (Cline et al., 2017; Larsen et al., 2018; Pelletier et al., 2019;). Furthermore, NRPs provide NGNs opportunities to build skills in real clinical settings and promote engagement by facilitating a successful transition to professional practice as well as being a cost-
effective strategy to improve retention of NGNs (Letourneau & Fater, 2015; Owings & Gaskins, 2020; Wolford et al., 2019).

A new job can be stressful and challenging as nursing students transition to their role as an NGN (Van Camp & Chappy, 2017; Wildermuth et al., 2020). The demands of the new nurse have increased as patient populations present with complex health conditions and new healthcare technology continues to emerge (Silvestre et al., 2017; Walsh, 2018). The demands of critical thinking, delegating tasks, and interacting with physicians are advanced skills for an inexperienced professional nurse who may feel inadequately prepared; this may lead to high turnover rates in the first two years of practice (Friday et al., 2015). Kramer et al. (2011) talks further about the perception of “reality shock” experienced by new graduates starting their career, which was identified by Kramer’s work in 1974; NGNs expect what they learned in school to be completely operational in the bureaucratic, hospital work system (Kramer et al., 2011). Furthermore, there is a widening gap between an NGN’s comfort level, confidence, skills, and ability to deliver safe and adequate care (Walsh, 2018). This shock appears to still be an experience for many NGNs who feel inadequately prepared (Rush et al., 2019; Van Camp & Chappy, 2017). With a greater demand for nurses, and an increased emphasis on retaining new graduates, NGNs continue to face challenges when transitioning to the workforce (Rush et al., 2019). Therefore, it is crucial for healthcare organizations to find ways to properly respond to the demands of new nurses, high turnover rates, and the support needed by NGNs during their transition periods.
The transition period from nursing student to an NGN can be supported by NRPs. Successfully transitioning NGNs into practice is crucial; providing NRPs for NGNs can provide a structured and supported environment (Larsen et al., 2018; Silvestre et al., 2017). One primary concern that points to the need for NRPs is the turnover of nurses (Cadmus & Wurmser, 2019). Organizations are looking to NGNs to fill expected staffing shortages over the next decade, and to avoid high rates of turnover by improving the onboarding experience of NGNs (Friday et al., 2015). As a retention strategy, many organizations have developed formal NRPs for NGNs, and they have been shown to be an effective tool in helping nurses transition from novice or advanced beginner to competent nurse (Pelletier et al., 2019; Pillai et al., 2018; Van Camp & Chappy, 2017; Walsh, 2018). Not only are NRPs a key strategy to support positive and successful transition into practice (Wildermuth et al., 2020), but they are also recommended. Nurse residency programs could offer additional support to new graduate nurses that they otherwise would probably not receive.

**Differences Between Nurse Residency Programs and General Orientation**

Nurse residency programs provide more support and a more formalized structure for skills and knowledge compared with healthcare organizations who follow a more generalized orientation program, without an NRP in place (Owings & Gaskins, 2020; Pelletier et al., 2019). A general orientation program provides orientation to new employees on basic background information about the organization such as the philosophy, goals, role expectations, general hospital policies and procedures, review of clinical skills common to all acute care units, and review of
familiar clinical problems faced by nurses (Hurley et al., 2020; Larsen et al., 2018; Silvestre et al., 2017). Most organizations have a hospital orientation that lasts one week followed by nursing and unit orientation lasting for another two weeks to three months (Cadmus & Wurmser, 2019). Nurse residency programs offer a more extensive orientation focusing on skill improvement, professional development and role transition, and adequate supervision and support through mentoring; NRPs have the potential to provide a better-prepared workforce for organizational leaders (Barnett et al., 2014; Hurley et al., 2020).

Nurse residency programs may also be complementary to a comprehensive formal clinical nursing orientation program and include components of leadership, workplace resources, and socialization designed to build confidence, enhance professional relationships, and assist in the transition into the role of registered nurse (Cline et al., 2017; Friday et al., 2015; Hurley et al., 2020; Silvestre et al., 2017). Nurse residency programs traditionally consist of two focal areas, clinical orientation which addresses the training of the new nurse in the clinical practice setting, and entry to practice content which addresses professional development, concepts, and skills (Cline et al., 2017). It is recommended that general orientation and an NRP should accompany one another (Larsen et al., 2018). For example, Pillai et al. (2018) reported an NRP started with 2 weeks of general orientation and continued with a 12-week structured program (total of 14 weeks). Other forms of NRP programs allow the NGN to proceed to a unit-based orientation that has a duration of six weeks to 15 months for continued learning and support consisting of classes that provide
professional development and a specialized knowledge and clinical time (Cochran, 2017; Friday et al., 2015). These additional focused trainings help to provide support for the NGNs in their new role.

Therefore, NGNs are attracted to NRPs, as it is an evidence-based curricula that delivers extensive orientation and content on skill improvement, leadership, patient outcomes, and professional development for new nurses transitioning into practice (American Association of Colleges of Nursing, n.d.; Barnett et al., 2014). Hospital leaders are attracted to NRPs because they have the potential to reduce costs related to turnover and to provide a better-prepared workforce (Barnett et al., 2014). It is important to have a greater focus on managing the transition from school to practice due to low retention among NGNs (IOM, 2011).

**Studies on Nurse Residency Programs Improving Retention Rates**

Studies show that implementation of NRPs essentially improve retention rates on NGNs (Asber, 2019; Cline et al., 2017; Eckerson, 2018; Letourneau & Fater, 2015; Owings & Gaskins, 2020; Pillai et al., 2018; Rosenfeld & Glassman, 2016; Rush et al., 2019; Silvestre et al., 2017; Van Camp & Chappy, 2017; Walsh, 2018; Wolford et al., 2019). Eckerson (2018) found that there is a need for healthcare organizations to develop NRPs in place of traditional orientation to prepare NGNs to practice. Improved retention rates demonstrate the effectiveness of NRPs and are the quantitative measure of the success of an NRP to support the case for NRP implementation (Owings & Gaskins, 2020; Pillai et al, 2018).
Nurse residency programs provide essential support needed for NGNs to make a successful transition into the practice setting while improving their comfort with organizing and prioritizing patient care (Owings & Gaskins, 2020; Rosenfeld & Glassman, 2016). New graduate nurses reported improvements in their ability to communicate with healthcare team members, perform technical nursing skills, and maintain high levels of job satisfaction throughout the program (Owings & Gaskins, 2020; Van Camp & Chappy, 2017; Wolford et al., 2019). The support received by the NGNs during their time in an NRP made them feel more valued in the organization, and thus they remained in their jobs; the support promoted resilience and prevented burnout. Future research focusing on what factors of the NRP specifically leads to increased retention would be beneficial to gather evidence of the value of an NRP (Wolford et al., 2019).

Hospitals (Acute Care Settings) and Academic Medical Centers

The direct effect on nurse retention from NRPs are seen in many studies on acute care settings and academic medical centers. Nurse residency programs in these settings have a consistent and positive effect on retention of NGNs, with a one-year retention rate ranging from 74-100% (Asber, 2019; Friday et al., 2015; Owings & Gaskins, 2020; Rosenfeld & Glassman, 2016; Van Camp & Chappy, 2017; Walsh, 2018; Wolford et al, 2019). While NRPs have been implemented in acute care settings and academic medical centers, NGNs in public health settings who practice in a more independent setting, may benefit from NRPs similar to those offered in the acute care setting as well (Larsen et al., 2018). With the overwhelming amount of
evidence confirming that NRPs improve retention rates on nurses in acute care settings and academic medical centers, it is still uncommon in public health and other settings (Delack & Martin, 2015; IOM, 2011; Larsen et al., 2018; Walsh, 2018).

**Public Health and Other Settings**

Few studies on NRPs outside of acute care settings and academic medical centers exist, but those that do prove that NRPs lead to higher retention rates from 86% to 97.1% in hospice settings, long-term care, psychiatric-mental health nursing compared to a rate of 33.5% to 53.8% prior to NRP implementation (Hurley et al., 2020; Nichols, 2019; Pelletier et al. 2019; Salmond et al., 2017). Although the acuity of care may be different in settings outside of acute care, NGNs still need to work through the transition to independent practice as they encounter different, but equally important challenges (Walsh, 2018). Not all new NGNs choose to work in the acute care setting upon graduating from nursing school (Walsh, 2018). Nurses in some specialty areas of practice such as public health, care of older adults in home settings, transitional services and school settings deal with chronic illness management and work with vulnerable populations (IOM, 2011; Shen et al., 2018). These settings often hold independent and decision-making roles (Shen et al., 2018). The changing demands of the healthcare system and demographics is changing, including the shift of care from acute care institutions to the community requiring NRPs to be developed to prepare nurses for these roles as well (Delack & Martin, 2015; IOM, 2011). A larger emphasis must be placed on nurses who work in public health, primary care, geriatrics, disease prevention, health promotion, and other topics beyond the
provision of nursing care in acute care settings to assure that nurses are ready to practice in an evolving health care system (IOM, 2011). An NRP can serve as a retention strategy that lowers overall turnover rates in a specialty area such as public health (Pelletier et al. 2019).

While NRPs are encouraged in public health settings, there are currently few NRPs that exist in these settings, and those that were identified in the literature have only recently been implemented into practice across the United States (U.S.) (County of San Diego, n.d.; Manske et al., 2017; Shelby County Health Department, 2017; The University of Tennessee Health Science Center, 2019). For example, Shelby County Health Department (2017) collaborated with The College of Nursing at The University of Tennessee Health Science Center to implement a 12-month NRP whose first public health nurse residency class in the state graduated in 2018 (The University of Tennessee Health Science Center, 2019). Their NRP focuses on allowing NGNs to develop quality improvement and evidence-based practice skills, develop and implement public health initiatives significant to their county health department’s needs, accomplish selected core competencies for PHNs, and develop and advance innovative approaches to strengthen public health nursing practice (The University of Tennessee Health Science Center, 2019). However, going forward, the NRP is in the development phase of being rebranded with program goals of addressing issues of recruitment, retention, and education, providing 12 months of mentoring, specialist public health nursing education, training, and support, and helping to advance NGNs
from novice level to competent nurse with specialized skills (The University of Tennessee Health Science Center, 2019).

Another public health NRP, The County of San Diego (n.d.), California has a 10-week Public Health Nurse Residency Program to help nurses’ transition to public health nursing. Their NRP’s goals include deploying a PHN workforce with the skills to become professional nurse leaders, ensure program integrity through a standardized, centralized and evidence-based approach, and provide a variety of learning opportunities that foster team work and relationship building (County of San Diego, n.d.) Both programs seek to assist NGNs in their transition to public health nursing, foster PHNs with specialized skills as well as implementing an evidence-based approach within their program. However, despite the fact that both NRPs use an evidence-based approach, the duration of each of their NRPs are vastly different, and trying to determine which duration influences the retention of NGNs would be beneficial. Because of the lack of NRPs in the public health settings, there is a lack of studies in evaluating the relationship to the retention of PHNs with NRPs. Therefore, analyzing the different factors in NRPs that could impact the retention rates in various settings will be reviewed.

**Duration of Nurse Residency Programs**

Nurse residency programs are not standardized across the nation, and research has shown that most NRPs range from ten weeks to 18 months depending on the setting and specialty (Asber, 2019; Cadmus & Wurmsre, 2019; Cline et al., 2017; Cochran, 2017; County of San Diego, n.d.; Friday et al., 2015; Hurley et al., 2020;
More specifically, Barnett et al. (2014) found that a majority (40%) reported a program length of 12 months, 33% reported program lengths of less than or equal to 12 weeks, 27% reported program lengths between 14 and 50 weeks, 16% reported program lengths less than or equal to 10 weeks, 13% reported program lengths 12 weeks, and 3% reporting program lengths greater than 52 weeks. Studies show that the most effective NRPs that improve retention rates range from ten weeks to 18 months in hospital, hospice, and long-term care settings (Asber, 2019; Cochran, 2017; Friday et al., 2015; Hurley et al., 2020; Larsen et al., 2018; Owings & Gaskins 2020; Rosenfeld & Glassman, 2016; Salmond et al., 2017). It is important to consider the details of the data when looking at the different program lengths and how it can impact the retention rates for certain settings. Evidence exists that NGNs should be enrolled in NRPs for 12 months because it was linked to increased retention among different types of NGNs (Cochran, 2017; Larsen et al., 2018; Owings & Gaskins, 2020; Rosenfeld & Glassman, 2016; Salmond et al., 2017). Salmond et al.’s (2017) study on a long-term care facility showed an increased retention rate at 86% for their 12-month program compared to the average retention at beginning of the program of 53.8% in their state. Cochran (2017) found that NRPs that were 10-15 months in duration provided an adequate amount of learning experiences. The overall recommendation is that the duration of NRPs should be at least 12 months long (Rush et al., 2019; Walsh, 2018; Wolford et al., 2019).
Preceptors As a Driving Force

Studies show that preceptors in NRPs are essential and play a major role in the transition process to support NGNs (Cadmus & Wurmser, 2019; Cochran, 2017; Friday et al., 2015; Larsen et al., 2018; Rush et al., 2019; Salmond et al., 2017; Tiew et al., 2017; Walsh, 2018; Wildermuth et al., 2020). A preceptor is an experienced nurse who develops a one-to-one time-limited relationship with the NGN, helping to adapt to their new nursing role (Larsen et al., 2018). The preceptor is key in providing knowledge to the NGN and serves as a mentor who has experienced the transition and orientation process, allowing the NGN to orient in the clinical setting under their guidance (Larsen et al., 2018; Walsh, 2018). Evidence suggests that the orientation period with a preceptor is an important aspect of a successful transition from advanced beginner stage of skill acquisition to the competent stage of skill acquisition for independent practice, allowing the NGN to work on establishing organizational and prioritization skills in their new role (Cochran, 2017; Larsen et al., 2018; Walsh, 2018).

The stages from advanced beginner to competent nurse are part of Benner’s (1982) five stages of proficiency: novice, advanced beginner, competent, proficient, and expert. The advanced beginner can be attributed to NGNs who need support in the clinical setting and in setting priorities, while the competent nurse is one who is consciously aware of long-range goals with a feeling of mastery, practicing deliberate planning and achieving a level of efficiency and organization (Benner, 1982). Some studies show that NGNs feel greatly supported by their preceptors, providing a safe
environment to ask questions, provide learning opportunities, and professional guidance (Friday et al., 2015; Tiew et al., 2017; Wildermuth et al., 2020).

However, while studies have shown that preceptors are a good source of support for NGNs, there are some issues with preceptorship such as difficulty in finding preceptors, preceptors experiencing fatigue and burnout, lack of a structured training or education for the preceptors, and inconsistencies with number of preceptors that an NGN should have throughout the NRP (Cadmus & Wurmser, 2019; Delack & Martin, 2015; Friday et al., 2015; Rush et al., 2019; Salmond et al., 2017; Tyo et al., 2018). Evidence suggests there is difficulty in finding preceptors due to workload concerns and fatigue and burnout of preceptors, which impacts the NGN’s transition into practice (Cadmus & Wurmser, 2019; Delack & Martin, 2015). Overuse of the same preceptors with limited to no breaks in precepting along with minimal reward and extensive documentation was cited for the decreased interest (Cadmus & Wurmser, 2019). It was perceived that preceptor burnout then led to improper treatment of the NGN, making the new nurse feel inferior and burdensome to the preceptor (Cadmus & Wurmser, 2019).

Studies show preceptors need specific education and more structured guidance to support their ability to precept NGNs (Delack & Martin, 2015; Hurley et al., 2020). For example, preceptors must understand principles of adult learning and a variety of teaching methods; they also need ongoing education to meet the emerging needs of NGNs (Delack & Martin, 2015). Having a structured preceptorship model would address new graduate skills of communication and organization through role
modeling, as well as aiding with stress management through the strengthening of a support network (Walsh, 2018).

Preceptors have traditionally been the most experienced nurse, however, the selection criteria varies at different stages (Cadmus & Wurmser, 2019; Delack & Martin, 2015). For example, certain people were better at different stages in the NGN’s learning from beginning, middle, to end or between basic and advanced preceptor to meet the needs of the NGNs (Cadmus & Wurmser, 2019; Delack & Martin, 2015). The selection methods for preceptors also vary from volunteer, to an application process (which allows for a selection of more qualified preceptors), to a requirement by the organization (Delack & Martin, 2015). Making precepting mandatory for all nurses would be an injustice to the NGNs, as well as the preceptors who are unwilling to take on the role. Additionally, the recommended number of preceptors assigned to each NGN considered to be the most effective to promote a smooth transition were inconsistent (Cadmus & Wurmser, 2019; Friday et al., 2015). Some NGNs preferred to have more than one preceptor because it gave an opportunity to see different ways of doing things, while others preferred to have one preceptor as they saw a lack of communication with multiple preceptors (Cadmus & Wurmser, 2019).

Part of maintaining a successful NRP is through maintaining the success of preceptors through challenging expectations (Cadmus & Wurmser, 2019; Cochran, 2017; Delack & Martin, 2015; Larsen et al., 2018). Challenges to maintaining the success of preceptors include competing time demands on preceptors and meeting the
increased demand for preceptors with vacancies (Delack & Martin, 2015). Preceptorship is an area that needs to be further addressed as preceptors often become overwhelmed with their own load and are unable to give the necessary time and energy to effectively precept and support the NGNs (Cadmus & Wurmser, 2019). Furthermore, there is a lack of effective recognition (which can be the form of financial, clinical, or professional appreciation) for preceptors who take on the additional but critical responsibility of helping NGNs transition into practice (Cadmus & Wurmser, 2019; Delack & Martin, 2015). Therefore, effective use of preceptorship and support for the preceptors creates a healthy work environment contributing to the success of NRPs, and an evidence-based preceptor curriculum should be developed (Cadmus & Wurmser, 2019; Cochran, 2017; Larsen et al., 2018).

Despite the evidence proving the importance of preceptors in supporting NGNs, there is still a gap in the literature. Studies about structures, process, and outcomes of preceptor development programs as well as issues related to the structure of preceptor support are lacking to provide the evidence needed to standardize and develop resources for effective preceptorship programs (Cadmus & Wurmser, 2019; Rush et al., 2019). A description of the experience of nurse preceptors and evaluating the preceptors are essential to ensure that expectations and standards are met, to provide guidance and direction for the preceptors, and to help with the evidence needed to standardize and develop the effective preceptorship programs (Cadmus & Wurmser, 2019; Delack & Martin, 2015).
Financial Effects

Recognizing the high costs associated with the retention of NGNs, many healthcare organizations in the U.S. have implemented NRPs to reduce these costs (Friday et al., 2015; Van Camp & Chappy, 2017). A concern that supports the need for NRPs are the cost of replacing nurses (Cadmus & Wurmser, 2019). The cost of hiring a replacement nurse ranges from $27,000 to $96,000 (Cadmus & Wurmser, 2019; Cline et al., 2017; IOM, 2011; Wolford et al., 2019). Friday et al. (2015) reports that depending on the number of new graduates hired in a year, budgeting $150,000 to $1 million annually for NRPs is common. Trepanier et al. (2012) reported that the cost of hourly wages and benefits for an NGN varies from about $21,571 per NGN (for an 18-week medical-surgical residency in the state of Florida) to $36,960 (for a 22-week intensive care residency in the state of California) with pre-residency turnover costs estimated at $17,977,500 and post-residency at $2,749,500 across 15 hospitals studied. However, there is a gap in current studies related to the cost per NGN in an NRP, which would be helpful to compare that number with the cost of replacing a nurse. It is believed that the increase in nursing retention helps to decrease costs by decreasing the reliance on contracted workers to fill staffing roles, as annual contract labor dollars per average daily census went from an average of $19,099 pre-residency to $5,490 post-residency (Trepanier et al., 2012; Walsh, 2018).

Summary

To combat low nursing retention rates, the implementation of an NRP in a public health facility is recommended. This chapter reviewed the background of
NRPs, difference between NRPs and a general nurse orientation, how NRPs have positively impacted the retention rates across various healthcare organization settings, how preceptors make a significant impact in the experience of NGNs, recommended length of time that the NRP should run for, and the financial implications for NRPs. Based on all these factors, one can see that an NRP can mitigate turnover and improve retention rates of NGNs. While NRPs are common in the acute care setting, it is still limited in public health (Larsen et al., 2018). The changing demands of the healthcare system with the shift of care to the community require NRPs to be developed to prepare NGNs for their independent and decision-making roles (Delack & Martin, 2015; IOM, 2011; Shen et al., 2018). This is especially important as there are currently few NRPs in public health settings, with most being implemented only recently. As NGNs enter the workforce in different settings, the ability to provide effective, evidence-based curricula tailored to their practice setting is important for nurse retention outcomes (Cline et al., 2017). Ultimately, the nursing profession benefits from a well-trained workforce (Cline et al., 2017). While NRPs can help NGNs transition effectively into the professional nursing workforce, developing an effective model for NRPs in nonhospital settings presents additional challenges such as structure, funding, and quality (Delack & Martin, 2015). Despite some of these challenges, healthcare administrators and/or leaders should not be discouraged from implementing an NRP, as it is still recommended in order to help build an effective nursing workforce and improve retention rates in a public health facility.
CHAPTER IV
WHAT IS THE RECOMMENDED PLAN TO IMPLEMENT AND EVALUATE A NURSE RESIDENCY PROGRAM IN A PUBLIC HEALTH FACILITY?

Nurse residency programs (NRPs) have become commonplace in acute care settings where new graduate nurses (NGNs) are employed (Delack et al., 2015; Larsen et al., 2018). However, in the public health settings, there are still limited NRPs available, and those that are available are based on acute care needs and are not adapted to meet the specific needs of public health (Larsen et al., 2018). The literature describes various resources available to assist with the implementation and evaluation of an NRP in a public health facility (County of San Diego, n.d.; Manske et al., 2017; Shelby County Health Department, 2017; The University of Tennessee Health Science Center, 2019). This chapter will focus on the need for stakeholder support and the inclusion of a theory as a framework for change (challenges and benefits will also be discussed) to support the change process and successful implementation of an NRP. (In addition, a post-implementation assessment, the need for longitudinal studies, and accreditation standards will be reviewed. This information can guide public health agencies in the creation and implementation of an NRP in an attempt to increase nurse retention in public health facilities. A longitudinal pilot study of an NRP within one county will be presented and recommendations for an NRP will be proposed (Cline et al., 2017; Delack et al., 2015; Manske et al., 2017; Pillai et al., 2018; Van Camp & Chappy, 2017).
Stakeholders

It is important to first identify stakeholders and their interest in the retention of public health nurses (PHNs). Stakeholders are individuals who are invested in a program, interested in the results of the evaluation, and/or with a stake in what will be done with the results of the evaluation (Program Performance and Evaluation Office [PPEO], 2012). For public health programs, key stakeholders may include those involved in program operations (management, program staff, and private funding agencies), those served or affected by the program like the greater community at large (patients or clients, advocacy groups, community members, and elected officials), and those who are intended users of the evaluation findings (an individual in a position to make decisions about the program such as partners, funding agencies such as national and state governments, and the general public or taxpayers). In addition, some other potential stakeholders in public health include local, state, and regional coalitions interested in the issue, local grantees of funds, local and national advocacy partners, state or local health departments and health commissioners, universities and educational institutions, local government, state legislators, state governors, health care systems, the medical community, and program critics (PPEO, 2012). Without stakeholder support, efforts may be ignored, criticized, or resisted as they can help or interfere with an evaluation being conducted; stakeholders take on particular importance in ensuring that results will be used to make a difference, and are more likely to support the efforts and act on the results and recommendations if they are
involved in the evaluation process (PPEO, 2012). The Institute of Medicine (IOM) (2011) recommends that:

- State boards of nursing in collaboration with accrediting bodies should support the NGNs’ completion of a residency program,
- The Secretary of Health and Human Services should redirect all graduate medical education to support the implementation of NRPs in rural and critical access areas,
- The Health Resources and Services Administration and Centers for Medicare and Medicaid Services should fund the development and implementation of NRPs, and
- Healthcare organizations who offer NRPs should evaluate the effectiveness of the programs (IOM, 2011).

IOM recommendations support NRP as a way to improve retention of nurses and expand competencies (IOM, 2011). Nurse residency programs should be guided by a theory, to help fully implement proposed changes.

**Lippitt’s Theory of Change**

Lippitt’s theory of change can be used as a framework for implementation of an NRP. Roussel (2013) identifies the seven phases of the change process and how these components affect change. Phase 1 involves diagnosing the problem (change agent involves those who will be affected, with group meetings being held). Phase 2 considers assessing the motivation and capacity for change (possible solutions are determined, pros/cons are calculated, organizational structure and cultures are
considered). Phase 3 looks at assessing the change agent’s motivation and resources (objectively looking at what is known of the interpersonal and organizational approaches and experiences). Phase 4 involves selecting progressive change objectives (the change process is defined, a detailed plan for the change is made, timetables and deadlines are set, responsibility is assigned, and change is implemented for a trial period and evaluated). Phase 5 looks at choosing the appropriate role of the change agent(s) (ensuring the person[s] who works with conflict/confrontation has a clear role[s]). Phase 6 is about maintaining the change (project is monitored for progress; those involved communicate with feedback on the progress). Phase 7 directs termination of the helping relationship (change agent withdraws after setting a written procedure or policy to perpetuate the change, but remains available for advice and reinforcement).

The change agent(s) may represent one or more people; while it may be a nursing leader, it can also be a nurse interested in taking on the role. During the early phases, it would be beneficial to have a designated qualified and experienced PHN in a separate and defined role to work as a change agent and be the point person of the NRP as the role of a coordinator, clinical educator, navigator, clinical nurse specialist or resource person. Studies show that having agents assigned to these specific roles (alternatively described as a resident facilitator, transition program coordinator, clinical development nurse, practice trainer, mentor, resource person, or navigator) will help to connect with NGNs. These PHN change agents can respond to any issues or concerns that might arise during their time in the program and help to support
NRPs that are successful (Delack et al., 2015; Owings & Gaskins, 2020; Pillai et al., 2018; Rush et al., 2019). Pillai et al. (2018) recommends that the program be coordinated by a dedicated master’s prepared nurse who gives feedback to the NGN on a weekly basis. The use of a full-time clinical nurse specialist to oversee the program and support multiple new graduates as an alternate model of support resulted in an increase in retention rates (Asber, 2019; Rush et al., 2019). Having someone in this designated role full-time will ensure a smooth transition of the planning, implementation, and evaluation phases.

The use of Lippitt’s Change Theory as described by Roussel’s (2013) seven phases can serve as a guide for incorporating an NRP within a given healthcare organization. An NRP needs to be individualized with objectives tailored to meet the needs of NGNs (Delack et al., 2015). An assessment of the issue(s) is needed to identify strategies that can be used to support early adopters and supporters (such as the public health nursing staff, and other leaders in the organization involved in the change process). Meeting and communicating with the other leaders in the organization can include the sharing of evidence-based literature to support the change and improve the retention of PHNs. Furthermore, if change is approved by other leaders, then additional stakeholders (including staff) would be incorporated as part of the change process. In addition, continuously re-assessing and making changes as needed over time will be an important aspect of the change process to ensure that NRP implementation is successful in the public health setting. Lippitt’s Change
Theory as described by Roussel’s (2013) seven phases provide the process and framework for implementing the NRP changes.

**Post-implementation Assessment of Nurse Residency Programs**

The effectiveness of an NRP can be achieved by assessing, re-assessing, and evaluating the program. Healthcare organizations have used the Casey-Fink Graduate Nurse Experience Survey to compare data on nurse retention rates pre-NRP and post-NRP implementation. This tool can help evaluate the effectiveness and measure the success of an NRP (Cadmus & Wurmser, 2019; Delack et al., 2015). The Casey-Fink Graduate Nurse Experience survey is the most frequently cited evaluation tool used in NRPs (Cadmus & Wurmser, 2019; Delack et al., 2015). This tool includes various sections that address skills, job satisfaction, transition difficulties and supports, stressors, turnover and retention of NGNs (Cadmus & Wurmser, 2019; Delack et al., 2015). The survey takes 15-20 minutes and is frequently completed by NGNs at the beginning of the program, at six months, and at 1 year (Delack et al., 2015; Owings & Gaskins, 2020).

The Quad Council’s Core Competences of Public Health Nursing have also been used to evaluate NRP effectiveness; this instrument was developed to assess the level of confidence in performing the Core Competencies. The Quad Council’s Tier 1 Public Health Professionals Assessment/Evaluation Tool is completed by the participants and preceptors prior to and after completion of the NRP to analyze growth and measure participant satisfaction (Larsen et al., 2018; Manske et al., 2017; Quad Council Coalition Competency Review Task Force, 2018).
Challenges

Challenges are to be expected during any stage of a change process. Planning for an entirely new program will involve resources such as people, time, and money to support a new plan for change within a facility. Nurse residency programs have been implemented in many healthcare organization settings and can serve as a guide for expectation. Studies show two challenges for NRPs: obtaining qualified preceptors and upfront costs needed to start an NRP (Cadmus & Wurmser, 2019; Delack et al., 2015; Institute of Medicine [IOM], 2011; Owings & Gaskins, 2020).

Obtaining Qualified Preceptors

One of the most challenging issues for NRPs is finding qualified preceptors who have proper training, providing recognition for preceptor’s efforts, and finding preceptors who are not “burned out” (Cadmus & Wurmser 2019; Delack et al., 2015). Preceptors are essential in the transition process for an NGN as they are the key in providing knowledge and support to the new nurse resident (Cadmus & Wurmser, 2019; Larsen et al., 2018). Cadmus and Wurmser (2019) identify the difficulty in finding preceptors due to workload concerns such as frequency of precepting and limited breaks between precepting. Preceptors often become overwhelmed with their own workload requirements and are unable to provide the time and energy to effectively precept and support the NGNs (Cadmus & Wurmser, 2019). As a result, preceptors may not treat the NGN in a civil manner; this was perceived as preceptor burnout and can compromise preceptor satisfaction and success (Cadmus & Wurmser, 2019; Delack et al., 2015). In addition, preceptors may
attend only one day of training with no ongoing training or assessment of skills (Cadmus & Wurmser, 2019). With the lack of preparation, there is also a lack of effective recognition for the preceptor in a role that is minimally rewarded with an excessive amount of required paperwork (Cadmus & Wurmser, 2019).

Support for the preceptor and preceptor buy-in are a key component to success for the NGN (Larsen et al., 2018). To help support preceptors in NRPs, best practice includes proper preceptor training, including a standardized preceptor program (Rush et al., 2019; Salmond et al., 2017; Tyo et al., 2018). Without any preceptor support, qualified nurses might be deterred from fulfilling this important role.

**Upfront Resources/Costs**

Another challenge that a healthcare organization could face when implementing an NRP are the upfront costs associated with the program. Funding is a major challenge and barrier in developing NRPs for new nurses as there is often no organizational support or resources to achieve effective practice competencies, and limited assistance to develop and maintain structured NRPs (Delack et al., 2015; IOM, 2011; Owings & Gaskins, 2020). Depending on the number of NGNs hired in one year, the length of the program, and the region, NRPs can cost $93,100 to $535,424; the average cost of replacing one NGN is $44,086 to $92,000 (IOM, 2011; Trepanier et al., 2012; Wolford et al., 2019). The cost of orienting an NGN is five times the cost of orienting an experienced nurse. For organizations to recoup the investment of an NGN, new hires must work for 12 months, as compared to six months for an experienced nurse (Pillai et al., 2018).
The financial burden of turnover can represent a considerable portion of a healthcare organization’s labor costs (Friday et al., 2015). Depending on the number of NGNs hiring per year, budgeting $150,000 to $1,000,000 annually for NGN orientation is common; however, this is an expense that some organizations are unwilling or unable to afford (Friday et al., 2015). The public health sector is already a poorly funded system with a reduced number of public health nursing positions (Larsen et al., 2018). Despite the upfront costs involved in starting and implementing an NRP, the data should be assessed to determine if the benefits outweigh the challenges.

**Benefits**

While there will most likely be challenges when planning for and implementing an NRP in a public health facility, one must also review the needs and benefits of the program. While NRPs are common in acute care settings, they are practically nonexistent in public health settings (Manske et al., 2017). It is important to review the benefits achieved within other health settings to support similar outcomes in public health departments. Unfortunate events like the coronavirus (COVID-19) pandemic bring public health to the forefront, and serve as a catalyst for investing in public health nursing (Edmonds et al., 2020). In order to think about why it is important to invest in public health nursing, one must look at the benefits that could arise from investing in an NRP. Additional benefits to NRPs include a correlation between a positive return on investment (ROI) and increased job satisfaction/retention over time. Improved retention and reduced turnover rates are the
quantitative measure of NRP success to support the implementation of an NRP (Owings & Gaskins, 2020).

**Financial Investment**

Nurse residency programs can be costly and while the costs may seem considerable, one must look at the long-term financial effects and monetary value of implementing an NRP. If the expected benefits are greater than the cost, a healthcare organization should consider an NRP as a transition for NGNs (Trepanier et al., 2012). Studies show that there is a favorable ROI, with evidence of cost savings when associated with implementing an NRP; an NRP should be viewed as an investment in resources (Ackerson & Stiles, 2018; Silvestre et al., 2017; Walsh, 2018; Wolford et al., 2019). Any ROI in NRPs would come from savings related to contract labor cost, turnover and retention, and improvements in the safety and quality of nursing care (Barnett et al., 2014; Owings & Gaskins, 2020; Trepanier et al., 2012).

Studies show that after implementation of an NRP, annual contract labor costs (what is paid to an external agency to provide nursing care) dropped from $19,099 to $5,490 per average inpatient daily census (Cochran, 2017). Taking the NRP annual cost into consideration, there is a savings from decreased turnover that covered program costs with the additional savings (Cochran, 2017; Letourneau & Fater, 2015; Trepanier et al, 2012; Walsh, 2018). In addition, Silvestre et al. (2017) found that the total ongoing maintenance cost per NGN was $3,185, which included the new nurse and preceptor costs, site coordinator time to organize and maintain the program, and ongoing web maintenance and module revisions. When the net replacement cost
savings with total cost per NGN were compared, there was a net cost savings of $1,458 per NGN retained. After accounting for the initial program development cost ($723 per NGN), the cost savings was $735 per NGN retained. When comparing the net replacement cost savings with total cost per NGN to maintain the program and accounting for the initial program development cost, there was a cost savings of $7,265 per NGN retained (Silvestre, et al., 2017). This suggests that NRPs should not be viewed as costly expenses but should be seen as a positive ROI.

**Increased Job Satisfaction/Retention Over Time**

In addition to a favorable ROI, support of NGNs through NRPs increase job satisfaction and retention over time (Eckerson, 2018; Hudgins, 2016; Manske et al., 2017; Owings & Gaskins, 2020; Silvestre et al., 2017; Walsh, 2018). Studies suggest that an investment in an NRP correlates to increased nurse retention and financial savings (Eckerson, 2018; IOM, 2011; Manske et al., 2017; Silvestre et al., 2017; Walsh, 2018). Trepanier et al. (2012) suggest that the ROI of an NRP can be decided through comparing the costs associated with traditional preparation of NGNs and savings related to a decrease in NGN turnover. After implementation of an NRP, there was a decrease in turnover from 36.8% to 6.41% (Trepanier et al., 2012). This is important for nursing administrators, as even small organizations with a few nurses can expect a cost savings when implementing and maintaining an NRP (Silvestre, 2017).

An increase in nursing retention decreases the reliance on contracted workers to fill staffing vacancies; improvement in nursing retention is not only beneficial for
NGNs, but it also decreases the cost of recruitment and orientation in the long term (Delack et al., 2015; Manske et al., 2017; Walsh, 2018). Additionally, there is a direct relationship between job satisfaction and anticipated retention/turnover rates (Hudgins, 2016; Owings & Gaskins, 2020; Walsh, 2018). NGNs who participated in an NRP indicated a positive influence on their communication and leadership skills, ability to organize and prioritize care, enhancement of knowledge, organizational commitment, and perceptions of providing social support. These NGNs were less fearful of causing harm, more confident in the nursing role, and provided high levels of satisfaction through the program (Manske et al., 2017; Owings & Gaskins, 2020; Pelletier et al., 2019; Walsh, 2018). As a result, turnover rates of NGNs were half the rates of those who did not participate in the NRP. In addition, the rates decreased over time with each cohort as health care organizations benefited with improved retention of competent, properly trained, and confident NGNs. This in turn can have implications on quality of care and satisfaction of patients (Owings & Gaskins, 2020; Walsh, 2018). This healthy work environment contributed to the success of NRPs (Cochran, 2017).

**Need for Longitudinal Studies**

While studies demonstrate the benefits of increased nurse retention, nurse satisfaction, and financial savings for healthcare organizations with NRPs, the research is lacking on how these programs maintain the benefits long-term. Studies demonstrate that NRPs help to improve nurse retention after six months (93%) and one year (>87%) (Ackerson & Stiles, 2018; Cline et al., 2017; Friday et al., 2015;
However, it is also revealing that nurse retention rates decreased and were not maintained incrementally at years two and three (69-91%) (Ackerson & Stiles, 2018; Cline et al., 2017; Friday et al., 2015; Pillai et al., 2018; Rosenfeld & Glassman, 2016; Van Camp & Chappy, 2017; Wolford et al., 2019). Wolford et al. (2019) suggests that the reason for the decrease in nurse retention rates in later years may be due to decreased work engagement for the NGNs over time, especially after they have completed the NRP. This indicates that the one to two year period after the NRP is a crucial time for the retention of NGNs and should include further research (Pillai et al., 2018).

There is limited evidence identifying the long-term impact of the NRP after the first year. As the number of years from NRP completion increases, so does the likelihood of nurses not continuing employment within the organization (Rosenfeld & Glassman, 2016; Van Camp & Chappy, 2017). It would be prudent for administrators to evaluate beyond first-year employment and to identify ways to improve the retention of nurses (Pillai et al., 2018). While the research demonstrates that NRPs improve retention rates among NGNs to an extent, additional longitudinal research is needed to effectively compare outcomes for long-term nursing retention (Van Camp & Chappy, 2017).

**Accreditation**

Few NRPs are accredited through an application process, and those that are set the global standard for residency programs that transition NGNs into new practice
settings and dictate their focus (American Nurses Credentialing Center [ANCC]; n.d.; Cline et al., 2017; Commission on Collegiate Nursing Education [CCNE]; 2015; Hurley et al., 2020). Accreditation for NRPs are available through the CCNE or the ANCC (ANCC, n.d.; Cline et al., 2017; CCNE, 2015). The national NRP accreditation standards dictate that these programs concentrate on clinical judgment and performance skills, interprofessional collaboration, evidence-based practice expertise, and professionalism (Hurley et al., 2020). As of February of 2021, the ANCC (n.d.) has 187 accredited programs while the CCNE (n.d.) has 33 accredited programs published.

Early efforts to provide standards for the administration of an NRP was pursued by the CCNE. This was done to guide the implementation of the seminal United Health Consortium/American Association of Colleges of Nursing (UHC/AACN) Post-Baccalaureate Nurse Residency Program (Hansen, 2015). The CCNE (2015) has 12 goals on which standards are based, with several focused on developing and implementing accreditation standards. These include:

- Fostering continuing improvement within NRPs,
- Establishing and implementing an evaluation and recognition process that is efficient, cost-effective, and cost-accountable for the healthcare organization and nurse resident,
- Assessing whether NRPs consistently fulfill their missions, goals, and expected outcomes,
• Ensuring program outcomes are in accordance with the scope of nursing practice to improve support for NGNs in areas of evidence-based practice, leadership, and the promotion of life-long learning.

• Encouraging NRPs to pursue academic excellence through improved teaching/learning and assessment practices,

• Ensuring NRPs engage in self-evaluation of personnel, procedures, and services, and that they facilitate ongoing improvement through planning and resource development, and

• Maintaining consistency, peer review, agency self-assessment, procedural fairness, identification and avoidance of conflict of interest in accreditation practices (CCNE, 2015).

The only organizations that achieve certification through the CCNE are those that are adhering to the UHC/AACN program; prior to ANCC, there was no process for a majority of NRPs to become accredited (Hansen, 2015).

The ANCC (n.d.) established an internationally renowned credentialing program to certify and recognize healthcare organizations that promote nursing excellence while providing safe and positive work environments. Their program creates a framework for transitioning NGNs, meets one of the recommendations of the Institute of Medicine’s Future of Nursing, applies a peer review process, and integrates national competencies (ANCC, n.d.). Programs that are accredited with the ANCC have improved structures and processes for NGN’s transitions into and within the profession (ANCC, n.d.). However, because accreditation for NRPs is a relatively
new practice, there is a gap in the literature surrounding standardized guidelines and best practice to inform nurse leaders (Tyo et al., 2018). Despite the fact that this is a relatively new practice, this should not deter administrators from implementing an NRP into their organization or applying for accreditation.

**Best Practices Guidelines - Pilot Program in the Public Health Setting**

Since there are few NRPs in public health settings, and those that are active have recently been implemented, best practice recommendations are still evolving. Therefore, best practice recommendations from the literature on various types of healthcare organizations are presented in this section. The following six guidelines should be implemented in a nurse residency pilot program in the public health setting using Lippitt’s Change Theory:

1). The first recommendation is to secure stakeholder buy-in by involvement during the entire process of NRP planning, implementation, and evaluation in an attempt to gain full support (Meyer, 2013; PPEO, 2012). Grant funding is necessary and assists toward obtaining organizational partnerships and support monies (Delack et al., 2015).

2). The second recommendation is to mobilize all resources available and implement Lippitt’s Change Theory. Additionally, a full-time program coordinator with clearly defined roles to help guide the efforts in implementing an NRP should be considered (Meyer, 2013; Pillai et al., 2018; Roussel, 2013).

3). The third recommendation is to review existing research and data on implemented NRP with designated stakeholders. The benefits and barriers can be
identified and a plan for the NRP can be adopted (Ackerson & Stiles, 2018; Eckerson, 2018; Hudgins, 2016; Manske et al., 2017; Meyer, 2013; Owings & Gaskins, 2020; Silvestre et al., 2017; Walsh, 2018; Wolford et al., 2019).

4). The fourth recommendation is to create a program that is 12 months long with qualified preceptors who have support and have undergone preceptor training (Cadmus & Wurmser, 2019; Cochran, 2017; Larsen et al., 2018; Meyer, 2013; Rush et al., 2019; Walsh, 2018; Wolford et al., 2019).

5). The fifth recommendation is to utilize an evaluation tool such as the Casey-Fink Graduate Nurse Experience Survey and the Quad Council’s Tier 1 Public Health Professionals Assessment/Evaluation Tool to evaluate the effectiveness and success of the NRP, and to support a continuous program improvement process (Cadmus & Wurmser, 2019; Delack et al., 2015; Larsen et al., 2018; Manske et al., 2017; Meyer, 2013; Quad Council Coalition Competency Review Task Force, 2018).

6). The sixth recommendation includes a plan for sustaining the program, an ongoing communication plan with stakeholders, and a costs/benefits analysis of the NRP (Ackerson & Stiles, 2018; Meyer, 2013; Pillai et al., 2018; Rosenfeld & Glassman, 2016; Silvestre et al., 2017; Trepanier et al., 2012; Van Camp & Chappy, 2017; Walsh, 2018; Wolford et al., 2019).

**Pilot Program**

A workgroup of Wisconsin PHNs was formed to coordinate a pilot program for a Public Health Nurse Residency Program. This workgroup chose to align part of their program through six monthly four-hour sessions with the following six
foundational areas in public health: Public Health Overview; Communicable Disease; Chronic Disease and Injury Prevention; Environmental Public Health; Maternal, Child, and Family Health; and Access to and Linkage with Clinical Care (Manske et al., 2017). Content experts who include epidemiologists, health officers, health educators, dietitians, and experienced PHNs across governmental agencies, were encouraged to utilize adult learning principles in their presentation to inspire collaborative interdisciplinary relationships, and to promote and protect health at a population level (Manske et al., 2017). The workgroup evaluated the effectiveness of the pilot NRP by looking at participant satisfaction and found that 70% of the NGNs rate the overall program as excellent and 30% rate the overall program as very good (Manske et al., 2017). While no data was found to evaluate the retention rates from this pilot program, the findings of NGNs’ satisfaction of the program should be considered, due to the relationship between job satisfaction and anticipated nurse retention rates.

Pilot programs can serve as a guide for planning, implementing, and evaluating an NRP. Data should be collected prior to program implementation and compared to post-evaluation data as a means for measuring the success of the NRP (Cline et al., 2017). While NRP s have not been widely used in public health agencies, pilot programs can be implemented as a way to introduce a best practice process which has proven to be successful.
Summary

A longitudinal pilot study of an NRP within one county that aims to gather information on the retention rates in the public health setting for NGNs is recommended. In order to implement this pilot study of an NRP in a public health setting, stakeholder support is needed to initiate efforts to start the program. Implementing an NRP may be guided by the 7 phases of Lippitt’s Theory of Change (Roussel, 2013). Evaluating the effectiveness of the program after NRP implementation should be taken into consideration in an attempt to improve it. Most healthcare organizations use the Casey-Fink Nurse Experience Survey to compare data on nurse retention numbers as well as to address skills, job satisfaction, transition difficulties and supports, and stressors pre and post-NRP to help evaluate the effectiveness and measure the success of an NRP (Cadmus & Wurmser, 2019; Delack et al., 2015). Other studies have evaluated program effectiveness specifically in the public health setting by using the Quad Council’s Core Competences of Public Health Nursing Assessment/Evaluation Tool. This tool is completed by the participants and preceptors prior to and after completion of the NRP to analyze growth and to measure participant satisfaction (Larsen et al., 2018; Manske et al., 2017; Quad Council Coalition Competency Review Task Force, 2018). Obtaining qualified and trained preceptors as well as funding or start-up costs can be challenging (Cadmus & Wurmser 2019; Delack, et al., 2015; IOM, 2011; Owings & Gaskins, 2020). Despite these challenges, one must consider the benefits of supporting an NRP. Nurse residency programs should be seen as a financial investment; savings related to
contract labor, turnover costs, and job satisfaction and retention support creation of an NRP (Ackerson & Stiles, 2018; Barnett et al., 2014; Eckerson, 2018; Hudgins, 2016; Manske et al., 2017; Owings & Gaskins, 2020; Silvestre et al., 2017; Walsh, 2018; Wolford et al., 2019).

Longitudinal studies that measure the benefits beyond one-year of an NRP are necessary. To help maintain a quality NRP based on evidence-based practice, one may also consider applying for accreditation to maintain standards. Introducing a pilot program like the one started by the Wisconsin PHNs could provide guidance for a small scale NRP. Long-term benefits of the NRP could then be assessed and evaluated to determine if the program could be permanently implemented (Manske et al., 2017). Effective implementation of an NRP would assist administrators in addressing the challenges of nurse retention and should be considered as a mechanism for mitigating high turnover and job satisfaction in public health settings.
CHAPTER V
DISCUSSION/RECOMMENDATIONS

Nursing shortages and problems with retention and turnover exists in the public health system (APHA, 2013b; Beck & Boulton, 2016; Campaign for Action, 2018; Georgia Department of Public Health, 2019; National Association of County & City Health Officials [NACCHO], 2020; Yeager & Wisniewski, 2017). Public health nursing administrators must find a resolution to address these staffing issues. Retaining public health nurses (PHNs) can be supported by nurse residency programs (NRPs) through aiding new graduate nurses (NGNs) during their transition into the nursing workforce. Research has shown that not only do NRPs improve retention rates in hospitals, academic medical centers, and other settings, but they are also a financial investment for the healthcare organization who implements them (Asber, 2019; Cline et al., 2017; Eckerson, 2018; Hurley et al., 2020; Nichols, 2019; Owings & Gaskins, 2020; Pelletier et al., 2019; Pillai et al., 2018; Rush et al., 2019; Salmond et al., 2017; Silvestre et al., 2017; Walsh, 2018; Wolford et al., 2019). A longitudinal pilot study of an NRP within one county that aims to gather information on retention rates on NGNs in public health departments is recommended.

The current trends in healthcare require capable staff to support the well-being of the community. Staff like PHNs working on the forefront need to be supported to effectively provide needed public health services to the population. Unsustainable costs, suboptimal health outcomes, an aging population, decreased life expectancy in
recent years, health and healthcare disparities, the digitization of healthcare, and a shortage of nurses are just some of the factors that are currently driving healthcare transformation (AACN, 2020; AAFP, 2018; ANA, n.d.-a; ANA, n.d.-c; Artiga et al., 2020; Balikuddembe & Reinhardt, 2020; Centers for Disease Control and Prevention [CDC], 2018a; CDC, 2020c; Kneipp et al., 2018; Rutherford, 2017; Salmond & Echevarria, 2017; Tikkanen & Abrams, 2020; United States [U.S.] Bureau of Labor Statistics, 2017; Vogenberg & Santilli, 2019; Woolf & Schoomaker, 2019; World Health Organization [WHO], n.d.-a; WHO, 2018; Yeganeh, 2019). While navigating through this transformation, PHNs also promote and protect the health of the community; this is even more critical during times of emergency, such as the current coronavirus (COVID-19) pandemic (ANA, n.d.-b.; American Public Health Association [APHA], 2013a; Association of Public Health Nurses Public Health Preparedness Committee, 2014; Kulbok et al., 2012). Despite the pivotal role of PHNs, their positions have been underfunded, left vacant, or eliminated in the last few decades (Edmonds et al., 2020). Strengthening this role would require adequate support, education, and training during challenging times, especially for NGNs.

Increasing nurse retention is important for improving the healthcare system; healthcare organizations should focus on improved nurse job satisfaction, competitive wages, opportunities for advancement or promotion, and support for training and continuing education (APHA, 2013b; Baik & Zierler, 2019; Beck & Boulton, 2016; Georgia Department of Public Health, 2019; Harper et al., 2015; Hudgins, 2016; Hungerford & Hodgson, 2013; Issel et al., 2016; Liss-Levinson et al., 2015; Sellers et
al., 2015; Yeager et al., 2015; Yeager & Wisniewski, 2017). Ultimately, these issues can influence a nurse’s decision to enter and remain in the public health sector. A powerful public health system depends on well-educated and satisfied PHNs to effectively address and improve the health of the community.

Nurse residency programs are an evidence-based approach that provide additional support and training for NGNs who may otherwise feel inadequately prepared (Cline et al., 2017; Larsen et al., 2018; Letourneau & Fater, 2015; Owings & Gaskins, 2020; Pelletier et al., 2019; Rush et al., 2019; Van Camp & Chappy, 2017). These programs create a highly educated nursing workforce and are an effective way to reduce turnover through increased support and job satisfaction for NGNs (Cline et al., 2017; Larsen et al., 2018; Pelletier et al., 2019). Studies show that 12-month NRPs improve retention rates on NGNs (Asber, 2019; Cline et al., 2017; Cochran, 2017; Eckerson, 2018; Larsen et al., 2018; Letourneau & Fater, 2015; Owings & Gaskins, 2020; Pillai et al., 2018; Rosenfeld & Glassman, 2016; Rush et al., 2019; Salmond et al., 2017; Silvestre et al., 2017; Van Camp & Chappy, 2017; Walsh, 2018; Wolford et al., 2019). The improved retention rates demonstrate the effectiveness of NRPs and provide a quantitative measure of success to support implementation (Owings & Gaskins, 2020; Pillai et al, 2018). The effectiveness of the NRP is dependent on preceptor support of NGNs.

Preceptors are essential and play a major role in the transition process to support NGNs in NRPs (Cadmus & Wurmser, 2019; Cochran, 2017; Friday et al., 2015; Larsen et al., 2018; Rush et al., 2019; Salmond et al., 2017; Tiew et al., 2017;
Walsh, 2018; Wildermuth et al., 2020). Issues such as workload concerns, fatigue and “burnout”, and lack of a structured training or education for the preceptors can impact interest in the preceptor role (Delack et al., 2015; Friday et al., 2015; Rush et al., 2019; Salmond et al., 2017; Tyo et al., 2018). Structured guidance and support of the preceptor is essential in maintaining a successful NRP (Cadmus & Wurmser, 2019; Cochran, 2018; Delack et al., 2015; Hurley et al., 2020; Larsen et al., 2018).

However, the public health system is poorly funded, resulting in a decreased number of public health nursing positions (Larsen et al., 2018) Unfortunate events like the COVID-19 pandemic brings public health to the forefront, and it can serve as a catalyst for investing in public health nursing (Edmonds et al., 2020). However, developing an effective model for NRPs in nonhospital settings presents additional challenges such as structure, funding, and quality (Delack et al., 2015). Nurse residency programs are limited in public health settings, and those that exist in public health agencies have only recently been implemented into practice across the U.S. (County of San Diego, n.d.; Larsen et al., 2018; Manske et al., 2017; Shelby County Health Department, 2017; The University of Tennessee Health Science Center, 2019). Many of the NRPs that are available are based on acute care needs and are not adapted to meet the specific needs of public health (Larsen et al., 2018). While most NRPs are implemented in acute care settings, public health organizations can adopt the structure of these programs for a public health setting. Individualizing NRPs tailored to meet the needs of NGNs in public health will provide a foundation specific
to the public health setting in which they work (Delack et al., 2015; Manske et al., 2017).

One way to proceed with implementing an NRP is to involve key stakeholders in the process (Program Performance and Evaluation Office [PPEO], 2012). The process of change can be guided by Lippitt’s Theory as described by Roussel’s (2013) seven phases. Coordination of the change can be done by a designated PHN to support the process (Delack et al., 2015; Owings & Gaskins, 2020; Pillai et al., 2018; Rush et al., 2019). To measure the success of NRPs, the Casey-Fink Graduate Nurse Experience Survey or The Quad Council’s Tier 1 Public Health Professionals Assessment/Evaluation Tool can be used. These tools address skills, job satisfaction, transition difficulties and supports, stressors pre/post NRP, and the level of confidence for NGNs. Data can be compared pre/post NRP and longitudinally to address agency retention rates (Cadmus & Wurmser, 2019; Delack et al., 2015; Larsen et al., 2018; Manske et al., 2017; Quad Council Coalition Competency Review Task Force, 2018). These longitudinal studies should be assessing the challenges encountered when trying to implement or maintain an NRP; such challenges include obtaining qualified preceptors and upfront costs when starting an NRP. While NRPs may expect to encounter these challenges, the benefits of these programs such as financial savings and increased job satisfaction and retention over time for the nurses should be considered (Ackerson & Stiles, 2018; Barnett et al., 2014; Cadmus & Wurmser, 2019; Delack et al., 2015; Eckerson, 2018; Hudgins, 2016; Institute of Medicine [IOM], 2011; Manske et al. 2017; Owings & Gaskins, 2020; Silvestre et al.,
An investment in an NRP correlates to increased nurse retention and financial savings (Eckerson, 2018; IOM, 2011; Manske et al., 2017; Silvestre et al., 2017; Walsh, 2018). One study showed how health care organizations benefited with improved retention of competent, properly trained, and confident NGN which translates to quality of care and patient satisfaction (Owings & Gaskins, 2020; Walsh, 2018).

As a way to introduce NRPs, pilot programs can be implemented on the basis of best practice recommendations to plan, implement, and evaluate the program. Once the NRP is implemented, public health entities can consider applying for accreditation to help set the global standard for residency programs based on evidence-based practice (American Nurses Credentialing Center, n.d.; Cline et al., 2017; Commission on Collegiate Nursing Education [CCNE]; 2015; Hurley et al., 2020). In the meantime, the following six guidelines should be considered in a nurse residency pilot program in the public health setting: a) secure stakeholder buy-in by involvement during the entire process of NRP planning, implementation, and evaluation; b) mobilize all resources available and implement Lippitt’s Change Theory and 7 phases (Roussel, 2013) as coordinated by a full-time PHN; c) review the existing research, data, and recommendations with stakeholders; d) create a 12 month long program with qualified preceptors who have undergone proper preceptor training; e) utilize the Casey-Fink Graduate Nurse Experience Survey and the Quad Council’s Tier 1 Public Health Professionals Assessment/Evaluation Tool to evaluate the NRP; f) and sustain the program long-term through an ongoing communication
program with stakeholders by comparing the applicable data pre and post-NRP implementation (Ackerson & Stiles, 2018; Cadmus & Wurmser, 2019; Cochran, 2017; Eckerson, 2018; Hudgins, 2016; Larsen et al., 2018; Manske et al., 2017; Meyer, 2013; Owings & Gaskins, 2020; Pillai et al., 2018; PPEO, 2012; Quad Council Coalition Competency Review Task Force, 2018; Roussel, 2013; Rush et al., 2019; Silvestre et al., 2017; Walsh, 2018; Wolford et al., 2019).

Despite the encouraging data on improved nurse retention rates from NRPs, there are still opportunities to improve. Continued research is necessary to evaluate how NRPs in public health settings can maintain the benefits long-term. Addressing this is also important so that the investment remains profitable and successful for healthcare organizations, NGNs, and the community permanently. Participation in implementing a NRP in the public health setting would help to provide data for further studies in determining the impact that NRPs have on the retention of NGNs in public health settings.

This paper sought to assist nursing administrators with implementation of an NRP in the public health setting to improve nurse retention rates. To help understand, evaluate, and gather more data on nurse retention in public health settings, there first must be NRPs in public health settings for further research. It is important to promote the use of NRPs to transition NGN effectively into the workforce (Delack et al., 2015). Implementing and evaluating an NRP will assist administrators in addressing the challenges of nurse retention and the financial deficit impact associated with nurse turnover (Cochran, 2017; Friday et al., 2015; Letourneau & Fater, 2015; Trepanier et
al, 2012; Walsh, 2018). Therefore, nursing leaders can help promote positive change in public health organizations. This can be done by implementing a longitudinal pilot study of an NRP with the intent to gather information on the retention rates and the program’s success in the public health setting for future NGNs.
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