Collaborating with Rural Practice Partners to Address the Need for Registered Nurses in Primary Care

Robin Brown, PhD, RN[1]

Heidi Mennenga, PhD, RN, CNE[2]

Alham Abuatiq, PhD, RN[3]

Linda Burdette, PhD, RN[4]

Leann Horsley, PhD, RN, CHSE, CNE [5]

Christina Plemmons, PhD, RN-BC, CNE[6]

[1]Assistant Professor, College of Nursing, South Dakota State University, robin.brown@sdstate.edu

[2]Associate Professor, College of Nursing, South Dakota State University, heidi.mennenga@sdstate.edu

[3]Assistant Professor, College of Nursing, South Dakota State University, alham.abuatiq@sdstate.edu

[4]Assistant Dean and Associate Professor, College of Nursing, South Dakota State University, linda.burdette@sdstate.edu

[5] Assistant Dean and Associate Professor, College of Nursing, South Dakota State University, leann.horsley@sdstate.edu

[6]Assistant Dean and Clinical Assistant Professor, College of Nursing, South Dakota State University, christiana.plemmons@sdstate.edu

Abstract

Purpose: Primary care in rural areas of the U.S. urgently need competent healthcare providers, especially registered nurses (RNs). Registered nurses are ideal team members to help meet the

primary care needs in rural communities, yet RNs are underutilized in primary care settings and rarely practice to the full scope of their license in these settings. The purpose of the project was to conduct a needs assessment with rural primary care practice partners to address the need for RNs in primary care.

Sample: A needs assessment was sent to nurse leaders at 13 rural primary care facilities via an online survey in December 2018.

Methods: This descriptive exploratory study utilized an online needs assessment survey to gather information from 13 rural clinical practice partners regarding their knowledge, interest, and use of RNs in primary care.

Results: Twelve of the 13 rural clinical practice partners completed the needs assessment survey. A majority of the clinical partners indicated they felt knowledgeable about the RN full scope of license and expressed a high interest in the expanded role of the RN in primary care. The clinical practice partners reported interest in providing independent RN chronic and acute care visits, care management, medication management, and collaborative provider and RN visits.

Conclusion: Conducting a needs assessment and collaborating with rural primary care practice partners to address the need for RNs in primary care is the first step in developing policies and utilizing RNs to the full scope of their license.

Keywords: primary care, rural, registered nurses

Collaborating with Rural Practice Partners to Address the Need for Registered Nurses in Primary Care

Healthcare in the United States (U.S.) is constantly changing and primary care is not immune to these changes. There is a growing shortage of healthcare providers and increased

prevalence of chronic disease (Association of American Medical Colleges [AAMC], 2018; Bauer & Bodenheimer, 2017; Flinter et al., 2017). Registered Nurses (RNs) comprise one of the largest segments of the U.S. workforce, with more than 3.2 million RNs nationwide employed in nursing (AACN, 2019). Only 16% of RNs are employed in rural settings (Human Resources and Services Administration [HRSA], 2013) and fewer than 10% of RNs are employed in primary care (Auerbach et al., 2013).

Primary care in rural areas of the U.S. urgently needs competent healthcare providers, especially RNs. Registered nurses are ideal team members to help meet the primary care needs in rural communities, yet RNs are underutilized in primary care settings and rarely practice to the full scope of their license in these settings. Utilizing RNs in primary care has a positive effect on patient satisfaction, patient outcomes, and the cost with chronic disease management (Borges Da Silva et al., 2018; Smolowitz et al., 2015).

Academia and clinical partners play a major role in addressing the nursing supply demands to meet the needs of patients in rural primary care. The purpose of the project was to conduct a needs assessment with rural primary care practice partners to address the need for RNs in primary care. The primary care partners identified in this project were in rural and medically underserved (MUA) areas as defined by the U.S. Census Bureau. According to the U.S. Census Bureau, rural is defined as all populations, housing and territory not included within an urban area (50,000 or more people) (HRSA, n.d.).

Background

The demand for primary care is on the rise and the number of primary care providers is declining. By 2030, the estimated shortage for primary care physicians is between 14,800 to 49,300, which will negatively impact primary care (AAMC, 2018). Sinsky et al. (2013) describe

the current decade's practice model in primary care as "unsustainable" (p. 276). Inefficiencies in today's primary care delivery model are fueling burnout amongst primary care physicians (Sinsky et al., 2013). Access, quality, and affordability of primary healthcare are all negatively impacted by primary care physician burnout and an overall decline in primary care providers. Primary care physician burnout may be due to daily performance of clinical tasks that do not require physician training. After observing 23 innovative U.S. primary healthcare practice sites, Sinsky et al. (2013) found improved practitioner satisfaction when a "physician-centric model" was replaced by a "shared-care model" (p. 277). The high functioning teams of the shared-care model distributed work and responsibilities according to their professional scope. Shared clinical care was accomplished through expanded rooming protocols, standing orders, and panel management. Standing orders, for example, empowered RNs to independently diagnose and treat "streptococcal throat infections, conjunctivitis, ear infections, head lice, sexually transmitted diseases, uncomplicated urinary tract infections, and warfarin management" (p. 275). In a shared-care model, standing orders can eliminate the need for physician involvement for patients with a variety of problems. By realigning the roles of the healthcare team, innovative primary care clinics can improve capacity, care, and practitioner satisfaction (Sinsky et al., 2013).

In primary care, RNs seldom practice to the full scope of their license (Bauer & Bodenheimer, 2017; Flinter et al., 2017). Full scope of practice may include independent RN visits using standing orders for acute or chronic conditions, medication management, leading complex care management teams to help improve care and reduce the cost of care for patients with multiple diagnoses, and coordination of care between hospital, primary care, and home settings (Bodenheiner & Bauer, 2016; Flinter et al., 2017). In a review of 16 U.S. primary healthcare practice sites that utilized team-based care, Smolowitz et al. (2015) identified three general patient

care contexts in which RNs collaboratively or independently provided care. These team-based primary care environments utilized RNs practicing to the full scope of their license in (a) "episodic and preventive care delivery," (b) "chronic disease management," and (c) "practice operations" (p. 133). In all contexts, RN contributions to patient care were notable and positive. RN delivery of episodic and preventive care replaced billable time of primary care providers, increased patient capacity, averted emergency department use, and increased patient satisfaction. RN management of chronic diseases and post hospital care prevented emergency department visits and hospital readmissions and averted hazardous medication interactions. Overall, RNs practicing to the full scope of their license in these 16 U.S. team-based primary healthcare practices improved capacity, care, patient satisfaction, and practice financial viability (Smolowitz et al., 2015).

Watts and Sood (2016) performed a retrospective review of nearly 4,000 veterans who received diabetes care management from specially trained RNs in one of 11 team-based primary care clinics. These high-risk patients (all of whom had pre/post-glycosylated hemoglobin [A1C] values documented) had A1C values of at least 9%, with an average value of 10.6% at baseline. Systematic RN care management included focused patient education for diabetes self-management, monitoring of patient status/safety, and assessment of blood glucose trends. Intensive chronic disease management of this type requires more time than is typically allowed for a primary care visit. For patients receiving RN case management, which lasted between just over one year to two years, average A1C values were lowered to 8.5% - a significant reduction ($p < 0.001$). As soon as the A1C values were stabilized, the patient's RN diabetes care management ceased. RN case management, provided by specially trained RNs, provided benefits to patients by reducing A1C values below 9%; thus, reducing risk of hyperglycemia related microvascular complications and decreasing risk of diabetes related death (Watt & Sood, 2016).

Innovative primary care models, such as shared care and team-based care are realigning the roles of primary healthcare teams to increase access to and quality of primary care. When RNs practice to the full scope of their license in primary care, benefits include increased access to care, improved patient care, increased practitioner satisfaction, improved patient satisfaction, and cost containment (Borges Da Silva et al., 2018; Smolowitz et al., 2015; Sinsky et al., 2013). In addition, RN certified diabetes educators or RNs with care management experience who receive diabetes management training can provide effective intervention and education for high-risk patients with diabetes (Watts & Sood, 2016).

Primary care practices need to redesign their delivery models to fully utilize the skills and expertise of RNs (Josiah Macy Jr. Foundation, 2016). Employing RNs in primary care and promoting practice to the full scope of their license may assist in meeting the unmet healthcare needs of the millions of people in the U.S. with chronic disease and public health issues (Bauer & Bodenheiner, 2017; Smolowitz et al., 2015). The impact of RNs practicing to the full scope of their license in rural and MUA primary settings presents an opportunity for further study. More research is needed on the knowledge and use of RNs practicing to the full scope of their license in rural primary care.

Purpose

The purpose of the project was to conduct a needs assessment with rural primary care practice partners to address the need for RNs in primary care. Academic partners developed and distributed an online needs assessment survey to rural clinical practice partners regarding their knowledge, interest, and use of RNs in primary care.

Methods

Design

This descriptive exploratory study utilized an online needs assessment to gather information from 13 rural clinical practice partners regarding their knowledge, interest, and use of RNs in primary care.

Sample & Instrument

The project team invited 13 clinical practice partners to complete the *Needs Assessment of Healthcare Facilities*. The 23-item needs assessment survey was developed by the project team based on a review of literature. Two questions related to knowledge and confidence of RNs practicing to the full scope of license were included from the Community Academic Partnership for Primary Care Nursing Transformation (CAPACITY) Needs Assessment for RNs, an existing survey developed and shared by individuals from Emory University. The CAPACITY Needs Assessment is a 36-item instrument asking detailed questions about eight different domains (Hillman & Amobi, n.d.). The project team did not use the entire CAPACITY Needs Assessment because of the length and time needed to complete the survey. The 23-item needs assessment survey developed by the project team was reviewed internally. No additional reliability or validity has been established for the needs assessment.

The needs assessment was sent to nurse leaders at 13 rural primary care facilities via an online QuestionPro (QuestionPro Inc., San Francisco, CA, USA) survey in December 2018. Questions were included regarding (a) current use of RNs in primary care, (b) examples of current responsibilities of RNs in primary care, (c) desire to use RNs in primary care (if not currently utilized), (d) level of knowledge and confidence of RNs practicing to the full scope of their license, and (e) educational needs of facility staff or leadership in order to achieve future goals of RNs in

primary care. Participants were told the survey would take approximately 15 to 20 minutes to complete.

Clinic managers, who were RNs, or a RN staff member with knowledge about the clinic were asked to complete the survey. Researchers wanted to ascertain the level of understanding regarding full scope of license for a RN. A 5-point Likert-scale with the following definitions was provided to enhance accuracy in response: novice – minimal or "textbook" knowledge without connecting it to practice; beginner – working knowledge of key aspects of practice; competent – good working and background knowledge in area of practice; proficient – depth of understanding of discipline and area of practice; and expert – authoritative knowledge of discipline and deep understanding of its application to practice. Additionally, participants were asked to rate their level of confidence in applying their knowledge of the RNs' full scope of practice within the practice setting. A 4-point Likert-scale with definitions for clarity was provided as follows: not confident – I have a hard time seeing the connections between full scope of license; somewhat confident – I have a good awareness of actions and approaches; confident – I usually have a good idea of what actions/approaches to use; and very confident – I know what actions/approaches to use, how and when to use them.

The needs assessment survey contained dichotomous questions related to the use of licensed practical nurses (LPNs) and RNs within the primary care setting followed by items to explore deeper as to their responsibilities and just how their skills are being utilized. One item asked if standing orders were used within the primary care site followed by questions asking for specific examples of standing orders and potential areas to consider for RNs to practice at their full scope of practice in the future. Final items on the survey were included to rate their interest in exploring the use of RNs in primary care practicing to the full scope of their license, perceived

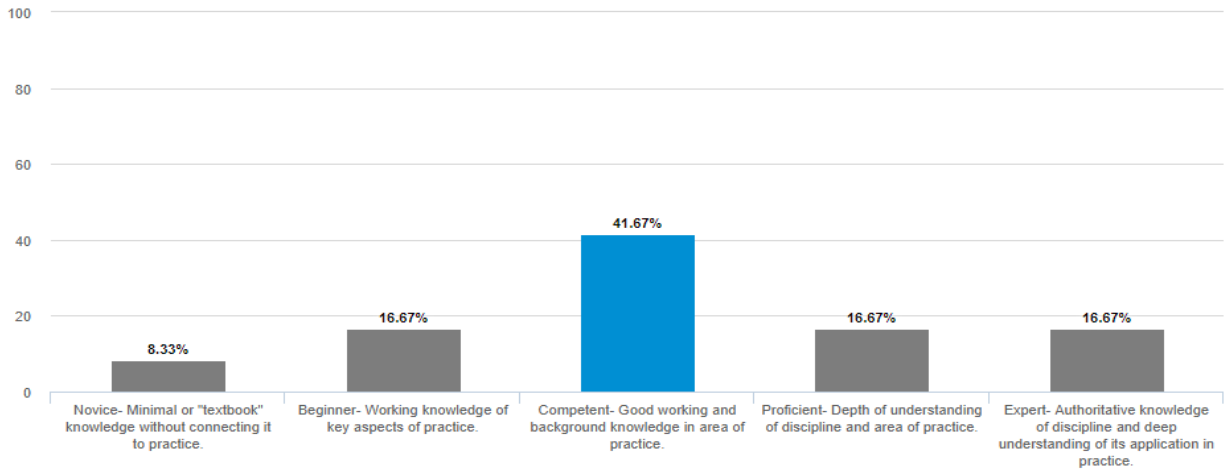
barriers, potential preceptors and what they would like to learn more about or assistance with at their facility. This research was considered program evaluation by the researchers' institution so therefore institutional review board approval was not required.

Results

An exploratory data analysis was conducted. Twelve of the 13 rural clinical practice partners (response rate= 92%) completed the needs assessment (N = 12). The clinical practice partners were asked about their level of knowledge related to the RN full scope of license. Most clinical partners (n= 5) indicated they had a competent level of knowledge (see Figure 1).

Figure 1

Level of Knowledge related to RN Full Scope of Practice



Additionally, when asked about their confidence in applying what they know about the full scope of license to their work in practice, most clinical practice partners (n= 5) were confident (see Figure 2). Clinical partners reported that role descriptions, workflow examples, and processes and policies from agencies currently utilizing RNs to the full scope of practice would be helpful.

Figure 2

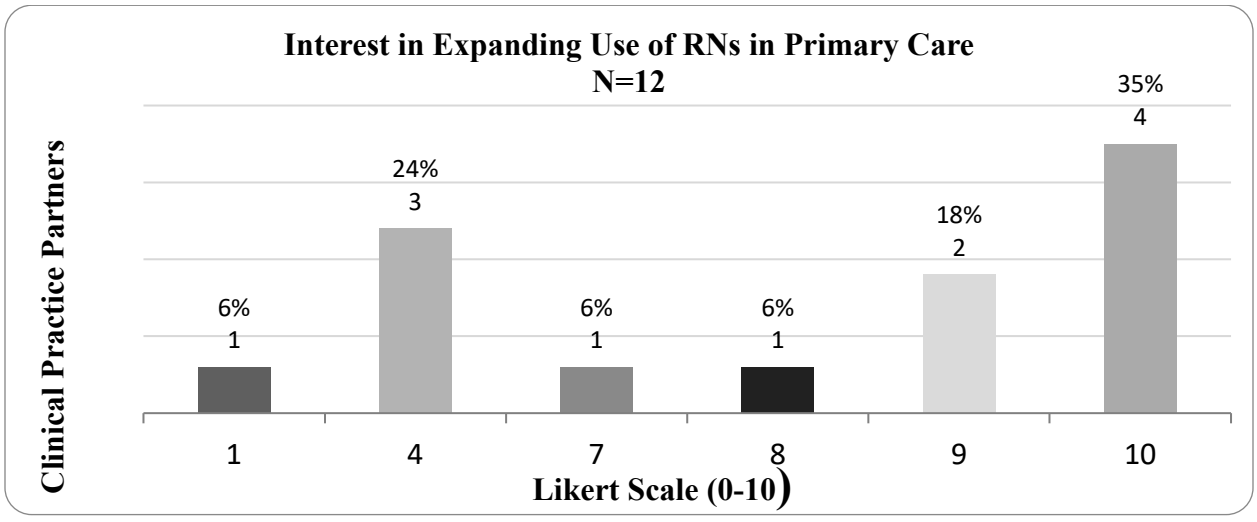
Level of Confidence related to Applying Full Scope of Practice

Answer	Count	Percent
Very confident- I know what actions/approaches to use, how and when to use them, and can describe these approaches to others.	3	25%
Confident- I usually have a good idea of what actions/approaches to use, and for the most part, know how and when to use them.	5	41.67%
Somewhat confident- I have a good awareness of actions and approaches, but find them challenging to put into practice.	2	16.67%
Not confident- I have a hard time seeing the connections between "full scope of license" concepts and how to use them in my work.	2	16.67%
Total	**12**	**100 %**

A 10-point Likert-scale (1= extremely low interest; 10= extremely interested) was utilized to indicate how interested clinical practice partners were in exploring the expanded use of RNs in primary care, they responded with a mean of 8.58 (SD = 2.97). Most partners (n= 7) were very interested in expanding the use of RNs in primary care; only one partner had extremely low interest (see Figure 3). Clinical practice partners reported interest in providing independent RN chronic and acute care visits, care management, medication management, and collaborative provider and RN visits.

Figure 3

Interest in Expanding Use of RNs in Primary Care



The project team requested information about staffing and responsibilities of LPNs and RNs in the primary care setting, to compare similarities and differences. Clinical practice partners employed both licensed practical nurses (LPNs) (n= 8, 66.7%) and RNs (n= 10, 83.3%) in primary care. Daily LPN responsibilities include rooming patients, vital signs, medication administration, telephone triage, medication refills, medication reconciliation, assisting providers follow-up calls, patient education, communicating test results, contributing to assessments and coordinating services. Daily RN responsibilities were similar except for RNs providing case management, intravenous therapy, and wound care.

When asked about standing orders, 58.3% (n= 7) of clinical practice partners indicated use of standing orders in primary care. Examples of standing orders used by clinical practice partners included orders for vaccinations, anaphylaxis, pain and fever management, and constipation and diarrhea management. In addition, one clinical partner reported standing orders for diabetes, hypertension, and asthma.

Clinical practice partners provided examples of how RNs are currently utilized to the full scope of their license in the primary care settings. One partner had RNs performing independent visits, three partners had RN care managers, and three partners utilized collaborative primary care provider/RN visits. In addition, 11 of the 12 clinical practice partners indicated they had future goals to utilize RNs to the full scope of their practice.

Discussion

The purpose of the project was to conduct a needs assessment with rural primary care practice partners to address the need for RNs in primary care. The two main results revealed from the needs assessment was the high interest in exploring the expanded use of RNs in primary care and the underutilization of RNs practicing to the full scope of their license in rural primary care

settings. The rural clinical practice partners identified a need for a better understanding of the RN full scope of practice in order to advance the role in primary care. Clinical partners reported that role descriptions, workflow examples, and processes and policies from agencies currently utilizing RNs to the full scope of practice would be helpful. In addition, the clinical practice partners reported interest in providing independent RN chronic and acute care visits, care management, medication management, and collaborative provider and RN visits.

Clinical practice partners also identified potential barriers to utilizing RNs to the full scope of their license. The partners were rural health clinics, with specific regulations allowing reimbursement only when a patient had a face-to-face encounter with a provider (physician, nurse practitioner, or physician's assistant). There were also concerns about potential resistance and difficulties in gaining support from the providers and administration. Bodenheimer and Mason (2017) reported similar barriers including that public and private insurers are just beginning to pay for services performed by RNs and administrators view RN work as an expense rather than a service of revenue. Medicare has introduced fee-for-service payments for RNs conducting wellness visits and chronic care management services (Bauer & Bodenheimer, 2016). Currently, there is an increase in demand for RNs as chronic care managers because of the growing rates of chronic conditions with the aging population (Bauer & Bodenheimer, 2016).

Lack of competitive pay for RNs in the primary care setting was another barrier identified from the needs assessment. Specifically, there was concern that RNs can receive higher wages in hospital settings and experience a reduction in pay when transitioning to practice in primary care. To date, this barrier has not been identified in the literature.

The second important finding from the needs assessment was the lack of RNs practicing to the full scope of their license in primary care in the rural setting. Daily RN responsibilities were

very similar to the LPN, except for a few RNs providing case management, intravenous therapy, and wound care. Other researchers report similar findings of RNs not practicing to the full scope of their license in primary care even though they have been found to improve patient care and reduce costs of care for patients (Bauer & Bodenheiner, 2017; Flinter et al., 2017).

Conclusion

Conducting a needs assessment and collaborating with rural primary care practice partners to address the need for RNs in primary care is the first step in developing policies and utilizing RNs to the full scope of their license. Most of the clinical partners who participated in this study expressed a high interest in the expanded role of RNs in primary care. Utilizing RNs in primary care may positively impact patient outcomes, increase patient satisfaction, and decrease overall cost of managing chronic illnesses especially in a rural setting

Acknowledgement

The authors wish acknowledge the other members of the project team: Valborg Kvigne, Beth Walstrom, Cassy Hultman, and Marie Schmit.

References

American Association of Colleges of Nursing AACN. (2019). *Nursing fact sheet*. https://www.aacnnursing.org/News-Information/Fact-Sheets/Nursing-Fact-Sheet

Association of American Medical Colleges. (2018). *New research shows increasing physician shortages in both primary and specialty care*. Retrieved from https://news.aamc.org/press-releases/article/workforce_report_shortage_04112018/

Auerbach, D. I., Staiger, D. O., Muench, U., & Buerhaus, P. I. (2013). The nursing workforce in an era of health care reform. *New England Journal of Medicine*, *368*(16), 1470-1472. https://doi.org/10.1056/NEJMp1301694

Bauer, L. & Bodenheimer, T. (2017). Expanded roles of registered nurses in primary care delivery of the future. *Nursing Outlook, 65,* 624-632. https://doi.org/10.1016/j.outlook.2017.03.011

Bodenheimer, T. & Bauer, L. (2016). Rethinking the primary care workforce – An expanded role for nurses. *The New England Journal of Medicine, 375*, 1015-1017. https://doi.org/10.1056/NEJMp1606869

Bodenheimer, T. & Mason, D. (2017). *Registered Nurses: Partners in transforming primary care.* Josiah Macy Jr. Foundation: New York, NY.

Borges Da Silva, R., Brault, I., Pineault, R., Chouinard, M., Prud'homme, A., & D'Amour, D. (2018). Nursing practice in primary care and patients' experience of care. *Journal of Primary Care & Community Health, 9*,1-7. https://journals.sagepub.com/doi/10.1177/2150131917747186

Flinter, M., Hsu, C., Cromp, D., Ladden, M., & Wagner, E. (2017). Emerging new roles and contributions to team-based care in high-performing practices. *Journal of Ambulatory Care Manager, 40*(4), 287-296. https://doi.org/10.1097/JAC.0000000000000193

Hillman, J., & Amobi, C. (n.d.). *Community Academic Partnership for Primary Care Nursing Transformation (CAPACITY) Needs Assessment for RNs-Evaluator Guide.* Atlanta, GA: Emory Nell Hodgson Woodruff School of Nursing.

Human Resources and Services Administration [HRSA]. (n.d). *U.S. Census Bureau Definition*. Retrieved from https://www.hrsa.gov/rural-health/about-us/definition/index.html

Human Resources and Services Administration [HRSA]. (2013). *The U.S. nursing workforce: Trends in supply and education.* https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/nursingworkforcetrendsoct2013.pdf

Josiah Macy Jr. Foundation. (2016). *Registered nurses: Partners in transforming primary care. Recommendations from the Macy Foundation Conference on preparing registered nurses for enhanced roles in primary care.* https://macyfoundation.org/assets/reports/publications/macy_monograph_nurses_2016_webpdf.pdf

Sinsky, C. A., Willard-Grace, R., Schutzbank, A. M., Sinsky, T. A., Margolius, D., & Bodenheimer, T. (2013). In search of join in practice: A report of 23 high-functioning primary care practices. *Annals of Family Medicine, 11*(3), 272-278. https://doi.org/10.1370/afm.1531

Smolowitz, J., Speakman, E., Wojnar, D., Whelan, E., Ulrich, S., Hayes, C., & Wood, L. (2015). Role of the registered nurse in primary health care: Meeting health care needs in the 21st century. *Nursing Outlook, 63*, 130-136. https://doi.org/10.1097/JAC.0000000000000193

Watts, S. A., & Sood, A. (2016). Diabetes nurse case management: Improving glucose control: 10 years of quality improvement follow-up data. *Applied Nursing Research, 29,* 202-205. https://doi.org/10.1016/j.apnr.2015.03.011