



CALIFORNIA HEALTHCARE FOUNDATION



RN Role Reimagined:
How Empowering Registered Nurses
Can Improve Primary Care

AUGUST 2015

Contents

About the Authors

The Center for Excellence in Primary Care (CEPC) is a research and policy center within the University of California, San Francisco, Department of Family and Community Medicine. CEPC identifies, develops, tests, and disseminates promising innovations in primary care to improve the patient experience, enhance population health and health equity, reduce the cost of care, and restore joy and satisfaction in the practice of primary care (cepc.ucsf.edu).

Thomas Bodenheimer, MD, MPH, is professor emeritus, UCSF Department of Family and Community Medicine and CEPC co-director. Laurie Bauer, RN, MSPH, is a senior practice coach and health coach trainer at CEPC. Sara Syer, MS, PA-C, is a physician assistant, health coach trainer, and practice improvement consultant at CEPC. J. Nwando Olayiwola MD, MPH, FAAFP, is associate professor, UCSF Department of Family and Community Medicine and CEPC associate director.

About the Foundation

The California HealthCare Foundation (CHCF) is leading the way to better health care for all Californians, particularly those whose needs are not well served by the status quo. We work to ensure that people have access to the care they need, when they need it, at a price they can afford.

CHCF informs policymakers and industry leaders, invests in ideas and innovations, and connects with changemakers to create a more responsive, patient-centered health care system.

For more information, visit www.chcf.org.

©2015 California HealthCare Foundation

3 Background

4 Methods

6 Strategies for Changing the RN Role

1. Provide RNs with additional training in primary care skills, so they can make more clinical decisions
2. Empower RNs to make more clinical decisions, using standardized procedures
3. Reduce the triage burden on RNs to free up time for other responsibilities
4. Include RNs on care teams, allowing them to focus on their team's patients
5. Implement RN-led new-patient visits to increase patient access to care
6. Offer patients co-visits in which RNs conduct most of the visit, with providers joining in at the end
7. Deploy RNs as "tactical nurses"
8. Provide patients with RN-led chronic care management visits
9. Employ RNs' skills to care-manage patients with complex health care needs
10. Train some RNs to take responsibility for specialized functions
11. Schedule RNs to perform different roles on different days
12. Preserve the traditional RN role and focus on training MAs and LVNs to take on new responsibilities

14 Two Visionary Practices

Community Health Center, Inc. (CHCI)
Norrahammar Health Center

16 Discussion

17 Conclusion

18 Endnotes

19 Appendix A: Example of RN Prescription Refill Standardized Procedure

Demand for primary care is on the rise, and the number of primary care clinicians — including physicians, nurse practitioners, and physician assistants — is dwindling. Safety-net providers are looking to a team model of care to meet the needs of large panels of patients. In this model, responsibility for the health of the patient panel is shared among members of the team, and nonclinician team members are empowered to provide care to patients independently of clinicians.¹

It is within this primary care transformation that the question arises: What is the role of the registered nurse (RN) in primary care? It is particularly in community health centers and county health systems — many of which employ RNs — that the RN role is being actively debated.

This report explores how safety-net clinics are responding to the challenge of using RNs' skills. The report focuses on community health centers and county health systems in California; two health centers outside California are included as highly successful models of expanding the RN role in primary care.

Background

With the current primary care provider shortage in the United States, the field of primary care is unable to deliver all the acute, chronic, and preventive care services that the community needs.

Primary care providers recognize the need for an inter-professional team to help them provide this care. Many providers who work in primary care settings with registered nurses appreciate their ability to fill in the care and communication gaps that are inevitable in a busy practice. Overburdened providers are some of the strongest advocates for expanding nursing roles in primary care. One clinic medical director affirmed, "RNs are highly skilled and can address many patients' needs independently."

Nurses are a large and dynamic workforce that can be tapped to promote patient engagement and help patients attain the skills and knowledge needed to improve their health. Untethered from the confines of fee-for-service payment systems, in the future, more and more primary care will be delivered by alternative methods such as telephone visits and electronic

communication, thus improving the convenience and care experience for patients and their families. Nurses are in a unique position to build on trusting patient relationships to fill these needs as the health coaches, health educators, and chronic care managers of the future.

In this context, safety-net providers are asking, "What is the proper role of RNs in primary care?" Primary care practices face four main challenges in answering this question:

1. RNs spend much of their day triaging patients, leaving little time for expanding their role.
2. Present-day RN education programs do not focus on primary care.
3. RNs are expensive.
4. RNs do not bring in revenue.

Private primary care practices typically respond to these dilemmas by not using RNs at all.

CHALLENGE 1: Time-consuming triage needs

Due to the shortage of primary care providers, many primary care practices are unable to provide all patients with same-day access to care. This situation requires that patient requests for care be appropriately triaged. A person with RN-level clinical judgment must decide who simply needs telephone advice, who can wait for an appointment, who needs to be seen in the next day or two, and who needs to go directly to the emergency department (ED). Triage can occur by phone, at the clinic for walk-in patients, and through electronic medical record (EMR) in-box messages. Triage can occupy most of the average primary care RN's day. Many RNs report frustration with triage taking up a large proportion of their time. Because RNs are traditionally not empowered to make clinical decisions, they are often unable to address the patient's problem directly without provider referral.

CHALLENGE 2: The need for more primary care nursing education

Though RNs are highly trained, most nursing schools focus primarily on hospital and home care nursing and have not created a primary care track that arms RNs with all the knowledge and skills required to assume responsibility for primary care patients.

The US Bureau of Labor Statistics reports that in 2012, 61% of RNs were employed in hospitals, 7% in long-term care facilities, 6% in home care, 6% in government facilities such as the Veterans Health Administration, and 7% in physician offices.² The percentage in community health centers is not provided but makes up a small proportion of total RN jobs. Many nurses working in primary care are advanced practice nurses — in particular, nurse practitioners. Because most nursing jobs are outside the primary care sector, nursing schools have traditionally de-emphasized the teaching of primary care nursing skills.

A nurse leader of a large health system explained, “Working in outpatient settings can be challenging for nurses. Nursing schools need to adapt and teach ambulatory care nursing skills. In an inpatient setting, you have a set of routine orders and report off to the next shift. In ambulatory care, you don’t have physician orders guiding your actions, and you need to decide what can wait until tomorrow.”

In primary care clinics, patient populations present with hundreds of diagnoses and psychosocial issues. Some RNs, with much of their training focused in hospital medicine, lack experience with this breadth of clinical problems and do not feel comfortable in the primary care environment. One health center nurse leader explained, “Nursing schools focus on inpatient nursing and don’t see primary care nursing as a specialty unto itself.” Yet proposals for nursing education reform tend to emphasize advanced practice nursing rather than a primary care-oriented curriculum in undergraduate nursing programs.³

CHALLENGE 3: High nursing salaries

As highly educated and skilled professionals, RNs in California are expensive to hire for the under-resourced primary care sector. According to the US Bureau of Labor Statistics, the average national 2014 salary for an RN was \$69,790. For California, the average salary was \$98,400. Nationally, the average licensed vocational nurse/licensed practical nurse (LVN/LPN) earned \$43,420 (up to \$51,700 in California), and the average medical assistant (MA), \$31,220 (\$34,790 in California).⁴ While RN salaries in California community health centers are below the average hospital salary, health centers still have to justify to their chief financial officer why hiring additional RNs, as opposed to LVNs/LPNs or MAs with lower salaries, is a sensible choice.

CHALLENGE 4: Little nursing reimbursement

Public and private insurers in the dominant fee-for-service reimbursement environment rarely pay for RNs to independently care for patients. The issue of RN reimbursement becomes crucial for the financial sustainability of primary care practices.

To address this issue, some health centers have implemented co-visits (also called “flip visits”), during which the RN takes the patient’s history, may do a physical exam, orders diagnostic studies, and makes a provisional assessment and plan. A provider then enters the room and receives a brief report from the RN, who then may serve as scribe, documenting the provider’s diagnosis and care plan. The RN implements the care plan, including patient education. Co-visits can often be billed as provider visits as long as the documentation complies with the payer’s regulations. Some clinics also use the billing code 99211 for RN-only visits if the visits conform to this code’s regulations; however, reimbursement is low under this billing code.

Despite these challenges, in the current atmosphere of growing expectations for primary care, RNs in safety-net clinics are being asked to do more than ever before. This report describes the attempts of several safety-net clinics to navigate this difficult terrain.

Methods

The Center for Excellence in Primary Care (CEPC) of the Department of Family & Community Medicine at the University of California, San Francisco, led this project. The CEPC project team, with the help of the project’s funder, California HealthCare Foundation, identified community health centers, county health systems, and one integrated delivery system in California with reputations of building strong primary care teams. Clinic leaders were contacted by email and asked whether they or others had made institutional changes to the primary care RN role.

This process generated a list of 21 organizations, of which 11 reported having made changes in the RN role. In addition, the project team was aware of two health

centers outside California that leverage RN skills in innovative ways. Including these non-California clinics, a total of 13 organizations contributed to this report. (See Table 1.) The project team also identified and interviewed a few individuals who are knowledgeable about the legal scope of RN practice in California.

The CEPC team conducted hour-long phone interviews with leaders of nine primary care facilities using a standard questionnaire developed by the CEPC team. Six were with California community health centers, one with a California county health system, one with a California integrated delivery system, and one with an out-of-state community health center. The project team conducted three site visits in California, to one community health center and two county health system-affiliated clinics.

During these visits, team members spoke with leaders and shadowed frontline RNs during their daily work. Prior to the initiation of this project, two of the project team members had visited a primary care center in Sweden, where the RN role had been greatly expanded. Researchers consulted notes from these previous visits for this project. In addition, the research team conducted phone interviews, using a focused questionnaire, with seven experts on the California RN scope of practice.

This report describes some of the different strategies for changing the role of the RN in the primary care setting, using examples from the California-based organizations contacted. The two out-of-state examples, which greatly expand the RN role, are described separately.

Table 1. Primary Care Sites Interviewed

	COMMUNITY HEALTH CENTER	COUNTY HEALTH SYSTEM	INTEGRATED DELIVERY SYSTEM
In California			
Coastal Health Alliance, Marin County	X		
Neighborhood Healthcare, San Diego County	X		
Northeast Valley Health Corporation, Los Angeles County	X		
Palo Alto Medical Foundation sites, Alameda County			X
Petaluma Health Center, Sonoma County	X		
San Bernardino County's Arrowhead Regional Medical Center		X	
San Francisco Department of Public Health's SF Health Network		X	
Santa Rosa Community Health Centers, Sonoma County	X		
Shasta Community Health Center, Shasta County	X		
Silver Avenue Family Health Center, SF Health Network		X	
West County Health Centers, Sonoma County	X		
Outside California			
Community Health Center, Inc., Connecticut	X		
Norrahammar Health Center in Jönköping County, Sweden			X

Strategies for Changing the RN Role

A wide variety of strategies are being used by the clinics studied to optimize the RN role in primary care, ranging from employing fewer RNs in primary care to giving RNs responsibility for a large proportion of primary care encounters. (See sidebar.)

Strategies for Enhancing the Role of RNs in Primary Care

1. Provide RNs with additional training in primary care skills, so they can make more clinical decisions.
2. Empower RNs to make more clinical decisions, using standardized procedures.
3. Reduce the triage burden on RNs to free up time for other responsibilities.
4. Include RNs on care teams, allowing them to focus on their team's patients.
5. Implement RN-led new-patient visits to increase patient access to care.
6. Offer patients co-visits in which RNs conduct most of the visit, with providers joining in at the end.
7. Deploy RNs as "tactical nurses."
8. Provide patients with RN-led chronic care management visits.
9. Employ RNs' skills to care-manage patients with complex health care needs.
10. Train some RNs to take responsibility for specialized functions.
11. Schedule RNs to perform different roles on different days.
12. Preserve the traditional RN role and focus on training MAs and LVNs to take on new responsibilities.

1. Provide RNs with additional training in primary care skills, so they can make more clinical decisions

Nurse training programs have traditionally focused on hospital and home care and have not concentrated on primary care.

Because Coastal Health Alliance leaders believe that nursing schools generally do not offer students sufficient training in primary care nursing, the organization has created a curriculum to train its new RN hires to make certain decisions — that are within the RN's scope of practice — independent of providers.

The organization's curriculum, led by a nurse practitioner, lasts five weeks and includes taking histories, doing physical exams, making brief case presentations to providers, solving common triage situations, and mastering clinic workflow. Clinical topics include the basics of cardiovascular disease, diabetes, common mental health issues, domestic violence, and patient education for many chronic conditions. A competency checklist for each RN includes about 100 items they are expected to master.

At Petaluma Health Center, training is considered key to the expanded RN role. New RNs participate in a one-month orientation, which includes triage management, use of various protocols, and prescription refills, among other skills. New RNs are then paired with an established RN for three to four weeks. The nurse manager has developed competency lists, which RNs use for self-evaluation, followed by a nurse manager review. Each week the nurses meet with a provider at lunchtime for follow-up training.

2. Empower RNs to make more clinical decisions, using standardized procedures

The California Board of Registered Nursing allows an expanded RN scope of practice using standardized procedures, which can empower RNs to make more independent decisions. (See page 13 for a detailed discussion of standardized procedures.)

Shasta Community Health Center has established an extensive protocol that empowers RNs and LVNs to order

medication refills. The protocol includes over 100 medications and provides guidance for standardized refills of each medication after accounting for the patient's last visit, results of laboratory tests, and other clinical considerations. Neighborhood Healthcare has a similar protocol for RNs to refill cardiovascular medications. West County Health Centers has standardized procedures for RNs to refill medications except those that are controlled or psychotropic and also has titration protocols for patients at high risk of cardiovascular events. The standardized procedures for these three clinics are written and monitored to assure compliance with the California Board of Registered Nursing requirements.

Petaluma Health Center has developed standardized procedures for medication refills, tuberculosis testing, anticoagulation management, clozapine monitoring, and chronic disease management. The standardized procedures are approved first by the center's compliance and risk manager, with final approval by the chief medical officer (CMO). Petaluma is considering a pilot program that would allow RNs to propose adjustments in certain medication doses, with providers making the final decision.

An example of a standardized procedure medication refill protocol is provided in Appendix A.

3. Reduce the triage burden on RNs to free up time for other responsibilities

Because they are rarely empowered to make independent clinical decisions, RNs are often frustrated with the many hours spent on patient triage.

In their expanded role at Shasta Community Health Center, LVNs answer some triage calls, acquire pertinent information, solve the problem if possible, and then connect the patient with an RN, thereby saving RNs time. Even with LVNs taking on some triage tasks, Shasta RNs still handle 15 to 25 triage calls each day plus walk-in triage, taking an estimated four hours of each RN's time per day. To make triage more productive, RNs at Shasta are authorized to consult a provider quickly to solve a triage issue without requiring a provider visit.

Coastal Health Alliance views acute RN visits as an extension of triage. RNs spend approximately 70% of their time doing phone triage. For walk-in triage, RNs may

turn the triage encounter into an independent RN visit if the RN has the training and authority, or as a co-visit with a clinician. Approximately 80% to 90% of all triage encounters end up with a provider visit or co-visit; 10% to 20% of the time, RNs are able to address the patient's issue independently.

West County Health Centers rotate responsibility for the triage function, with each RN performing triage for the entire site two to three half-day sessions per week. On their nontriage half-days, RNs respond to EMR in-box messages from patients on their team and spend the majority of their time doing complex care management, transition care, and other care management tasks.

At Palo Alto Medical Foundation's Fremont practice, RNs rotate between triage advice, in-box management, and other duties so that RNs are not responsible for triage every day. When they are on triage duty for internal medicine (adult patients), RNs may spend a major portion of their day handling in-box messages and providing phone advice. An internal study conducted several years ago found that approximately 70% of RN triage and in-box issues at this practice required provider input, whereas 30% could be handled by RNs independently.

4. Include RNs on care teams, allowing them to focus on their team's patients

When RNs are responsible for providing care across an entire practice, they are not able to develop strong relationships with individual patients. Placing RNs on care teams allows RNs to focus only on those patients empaneled to their team. This strategy is only successful in clinics with stable teams caring for a defined panel of patients. Those working in primary care generally prefer to be well acquainted with a specific group of patients as this relationship makes the care more meaningful for health workers and increases patient trust. Research has shown that patients want to know their care team members and want the team to know them.⁵ The team-based RN strategy enhances patient, provider, and RN satisfaction.

At West County Health Centers, a group of patients is empaneled to a four-member care team, including a provider, RN, MA, and front desk person. The RN-to-provider ratio is 1:1.2. With this model, the patients get to know

their team RN, and the RN develops relationships with each patient. West County's teams are similar to the team structure used throughout the Veterans Health Administration, which has been widely studied.⁶

Each RN at West County has multiple responsibilities, including addressing EMR in-box messages, which can consume several hours each day; performing chronic care visits; and managing the small number of patients on their team with complex care needs through RN visits and home visits. West County RNs also provide transitional care for patients on their team who have been hospitalized: They communicate with a transitional care RN at the hospital, conduct a home visit within 48 hours of discharge, and continue focused transition care for 30 days after discharge. RNs huddle with their teammates each day and discuss, for example, which patients may need a chronic care RN visit that day, when the RN will be away doing a home visit, or what to do about a patient on chronic opioid medications who is not adhering to the pain contract. Responsibility for triage is shared among RNs throughout the practice; each RN is responsible for two to three half-day triage sessions per week.

At Santa Rosa Community Health Centers, RNs previously took four-hour shifts each day doing triage for all patients at their site, and also had a half-day shift each week doing triage at the organization's centralized call center. The RNs did not like the triage responsibility because they were rarely empowered to make clinical decisions. In 2012, the process was changed at the Vista site so that RNs provided triage only for their own team's patients. RNs preferred this model because it meant that triage took up less of their day and they often knew the patients they were triaging. One nurse shared, "We used to hate the amount of triage; now we are much more satisfied." Clinic leaders estimated that RNs could handle about half of triage encounters without needing provider input. The RNs use a triage protocol book and can access the "doc of the day" for urgent consults if needed.

Petaluma Health Center has implemented a "teamlet model" in which a few two-person provider/MA dyads are grouped together into one larger team. The larger team includes two RNs for each of four to five teamlets. RNs are generally responsible only for patients empaneled to their team. The morning huddle begins with the entire team, followed by teamlet huddles. The RNs circulate among the teamlet huddles to plan which patients need RN visits. One of the two RNs on each team is the

resource RN; the other is the team RN. The team RN is responsible for phone and walk-in triage, in-box management, telephone advice, refilling prescriptions using protocols, and responding to the needs of the team providers. Team RNs take new-patient histories and enter the information into the EMR. Team RNs have protocol books for triage and are estimated to handle 80% of triage encounters without a provider. (For ob/gyn patients, 50% of encounters require a provider visit.) Resource RNs see their own patients in 30-minute co-visits; they have about four of these visits per day.

5. Implement RN-led new-patient visits to increase patient access to care

At Shasta Community Health Center, new patients were waiting several weeks for their first appointment. The health center addressed this problem by having the call center schedule first-time patients with an RN, instead of a clinician, for their new-patient visit, which greatly reduced the patient wait time. These RN new-patient visits take 45 to 60 minutes and include building a comprehensive history in the chart, including documentation of social history, ordering pertinent laboratory work, and assessing the patient's acuity. Some patients are squeezed into a provider's schedule the same or next day; others receive later appointments. If diagnostic imaging is needed, the RN may contact a provider to order the appropriate study. A template and protocol for these visits is in the EMR. Most of the clinic's RNs conduct these visits; the RNs may be scheduled for four to five new-patient visits each day. Other RNs may be scheduled for one visit each day, during which the RN arranges for another RN to fill triage and other duties. The visits are not billed but can generate some pay-for-performance revenue.

At Silver Avenue Family Health Center, borrowing an innovation pioneered by San Francisco's Chinatown Public Health Center, some RNs do new-patient orientation clinics, with up to three visits in the morning and three in the afternoon. They can conduct these visits in English, Spanish, or Cantonese. The RNs can order labs following protocols. The visits are similar to those performed at Shasta and are also not billed.

6. Offer patients co-visits in which RNs conduct most of the visit, with providers joining in at the end

Co-visits, sometimes called “flip visits,” are visits in which the RN independently handles the first portion of the patient appointment, which may involve taking the history, doing portions of the physical exam, and making a provisional assessment of the problem. The provider joins the RN and patient at the end of the visit, therefore making it billable.⁷

At Santa Rosa Community Health Centers, RNs start the visit for most new pre-natal patients and conduct 80% of the visit for well-baby care. At one site, for new patients over 60, RNs begin the visits, which are completed by the provider.

At Neighborhood Healthcare, RNs specially trained as RN panel managers are piloting flip visits with one physician for two common clinical conditions: pre-diabetes and *H. pylori*. The latter condition is treated with a complicated medication regimen, which patients often do not understand, so the RNs explain the regimen in detail. During pre-diabetes visits, RNs educate patients about their condition and coach them on making lifestyle changes. The physician comes in at the end of the visit. The clinic hopes to expand to more clinical conditions and more providers.

At Palo Alto Medical Foundation’s Fremont site, some RNs engage in a type of co-visit called a “linked visit.” Rather than having the RN start the visit and the provider complete it, the provider conducts the visit without the time-consuming patient education and care plan explanation, which is done by the RN immediately after the provider leaves.

Petaluma Health Center’s co-visits are performed by the team’s resource RN. Typical visits for the resource RN involve diabetic wound care, diabetes maintenance, blood pressure checks, new-patient visits, warfarin management, treatment of upper respiratory and urinary tract infections, and care for strep throats. Working under protocols, the nurses document each visit in the EMR and assign the visit to a co-visit provider. If the patient’s primary care provider is available, that provider finishes the co-visit; if not, the “provider of the day” is typically available for co-visits. The team RN doing triage may add

a co-visit to the resource RN’s schedule. Because the co-visits are billed, they provide financial justification for the health center to be staffed with two RNs per team.

7. Deploy RNs as “tactical nurses”

At Petaluma Health Center, some RNs perform a role sometimes called the “tactical nurse,” a concept pioneered by human resources and professional coaching firm Coleman Associates.⁸ The tactical nurse develops plans with the care team during huddles each day, completes detailed histories for new patients on the schedule, conducts visits with patients who have complex care needs, performs phone and walk-in triage duties, and uses clinical judgment to anticipate what is needed on the team schedule that day. Petaluma’s tactical nurses, who are referred to as team RNs, provide services only for their team’s patients.

At Silver Avenue Family Health Center in San Francisco, a primary care site of the county’s SF Health Network, RNs take turns assuming the tactical nurse role on different days. When working as a tactical nurse, RNs have a schedule for the day with 20-minute time slots. Nurses add new visits from the huddle and see drop-in patients. As a tactical nurse, the nurse spends about 40% of the time with walk-in triage, 40% with RN co-visits identified during the huddle, 10% addressing any clinical issues that arise, and 10% managing the EMR in-box. In-box messages can originate from the team clinicians, front desk, or other nurses. The messages include such issues as patient requests for appointments, lab and imaging results, medication changes, and provider requests to call or meet with patients. The scheduled co-visits are identified in the huddle by the patient’s primary care clinician. In the co-visit, the RN takes vital signs, documents the patient’s medical history, and presents the patient to the clinician. Tactical nurses can turn triage encounters into drop-in visits. The front desk has a list of clinical issues that can be scheduled for the tactical nurse to see as drop-ins or co-visits.

8. Provide patients with RN-led chronic care management visits

When RNs assist in the care of patients with chronic conditions, clinical outcomes for these patients improve compared with physician-only care.⁹

RNs at Santa Rosa Community Health Centers perform chronic care visits, mainly with diabetic patients. These visits use RNs' clinical skills and save time for providers. The visits typically last 30 to 40 minutes and include patient education, medication reconciliation, medication adherence counseling, and behavior-change goal setting. The RNs do not order labs, nor do they initiate or titrate medications. Providers are not involved in these visits, and there is no reimbursement. To increase the number of these visits, the health center reduced the amount of triage time per RN and hired more RNs.

At Shasta Community Health Center, RNs do patient education, medication reconciliation, and behavior-change counseling for patients with chronic conditions. They do not initiate medications or intensify medication doses. The visits are best performed immediately after the provider visit so that patients will not have to make an additional trip to the clinic.

At West County Health Centers, RNs conduct chronic care visits for the patients on their team. For example, RNs meet with diabetes patients about medication adherence and healthy behavior change and teach asthma patients how to use their inhalers.

Petaluma Health Center's resource RNs perform chronic care management visits with patients on their team. These visits include patient education, medication reconciliation, diet and exercise counseling, review of labs (e.g., HbA1c and low-density lipoprotein levels), diabetic foot exams, and goal setting. For patients on anticoagulation medications, RNs handle dose changes for warfarin based on evidence-based protocols in a co-visit format.

9. Employ RNs' skills to care-manage patients with complex health care needs

A number of health care organizations around the United States have initiated RN-led programs to improve the care and reduce the costs of patients with complex care needs.^{10,11} These complex care management programs have become an important strategy for expanding the RN role in California's community health centers and county health systems.

Santa Rosa Community Health Centers developed an RN home visit program for patients with complex care

needs. This program was partially funded by Partnership HealthPlan of California, the main insurer of the health center's Medi-Cal patients and therefore the organization that is at risk for the health care costs of these patients. The RNs are paired with a care coordinator, who may accompany the RN on the initial home visit. The care coordinator, who has minimal clinical training, assists the patients in navigating the health care and social services systems. Every day, each RN conducts about three to four home visits and three to four follow-up phone calls. The RNs co-manage the patients with the primary care physician.

At the home visits, Santa Rosa RNs can do any of the following tasks:

- ▶ Perform an overall health assessment
- ▶ Take vital signs
- ▶ Monitor oxygen saturation
- ▶ Educate patients about their condition
- ▶ Conduct medication reconciliation, education, and adherence counseling
- ▶ Assess for fall risk
- ▶ Screen for depression

RNs maintain their own schedules for the home visit program. The RNs check on the implementation of the care plan and, if necessary, contact the primary care physician from the patient's home. The home visits are not billed.

At West County Health Centers, patients with complex care needs who are high utilizers of the health care system — as identified by Partnership HealthPlan or clinic providers — are managed by their team RN. Rather than referring all such patients to a specialized complex care manager RN, all RNs have four to six patients with complex care needs who are on their team's panel. Most of these patients receive home visits from their team RN, who carries an iPad and can set up videoconferencing with the patient's provider at the home visit to allow for a conversation among the patient, RN, and provider. The initial home visit includes a lengthy assessment and formulation of a care plan.

The RN's care team discusses the plan, which the RN or another team member then carries out. The care plan might involve other staff, such as social workers,

behavioral health professionals, or patient navigators. Every six months, teams schedule a mini case conference to discuss each patient for 30 minutes. In addition, RNs may raise concerns they have with their complex care patients during any morning huddle. All RNs in the clinic receive special training on caring for patients with complex needs.

Petaluma Health Center's RN staff includes case management RNs, who have caseloads of approximately 50 patients each, and a diabetes care manager with a caseload of about 100. Case management RNs take patient histories and focused physical exams, do medication reconciliation and health education, help coordinate the patient's care with specialists, and discuss end-of-life wishes using POLST (Physician Orders for Life Sustaining Treatment) forms. The patient's provider may be asked to check in with the patient at the end of the visit. The case manager RNs generally work with the same group of patients for long periods of time.

Arrowhead Regional Medical Center initiated a complex care management program in early 2015. Four RNs, embedded in three primary care clinics, are responsible for small caseloads of high-utilizing patients with complex needs. The RNs, working closely with the patients' primary care physicians, care for their patients by phone, in scheduled nurse visits, and in physician visits attended by the RN. RNs call their patients weekly to check on their understanding of what to do if symptoms worsen (e.g., if heart failure patients gain weight), on medication adherence, and on the patients' success in meeting their behavior-change goals. One care management RN described the results of this program: "Job satisfaction has skyrocketed. Patients are so appreciative that they can call us and we are available for them."

The San Francisco Department of Public Health's SF Health Network has a Complex Care Management Program for patients at three primary care sites. At each site, the program is staffed by an RN leader and a health coach, who have access to a physician for oversight and to social workers. Patients are referred to the program if they have had three or more hospitalizations in the past year, or if their primary care physician feels that they are at risk for hospitalization. The program includes patients with diabetes, hypertension, congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), asthma, chronic kidney disease, and chronic pain; many have four or five diagnoses. One-third to one-half have

substance abuse or mental health issues or both. Many program participants are marginally housed; about 10% are homeless.

The complex care management RNs leading this program do not have other clinical duties and do have extensive experience in primary care. A typical caseload for an RN-health coach team is 50 patients. The teams meet weekly with the social worker and the complex care medical director. When patients are enrolled in the program, the RN and health coach do a home visit to conduct an initial assessment, create a care plan, and decide on initial goals, which are a combination of the patient's and the provider's objectives. Patients with greater acuity are scheduled for weekly encounters, mainly with the health coach, with phone or in-person visits becoming less frequent as the patient's conditions improve. Patients may have clinic appointments with the RN, who becomes more involved in the patient's care when medical issues escalate. The RNs work under patient-specific orders, not through standardized procedures. Through patient-specific orders, RNs can titrate medications such as diuretics for patients with CHF or insulin for diabetic patients.

Pre- and post-utilization data collected by the SF Health Network show a 50% reduction in hospital days one year after enrollment and a 10% reduction in ED visits. Patients reported that the team helped motivate them to change behaviors and helped them better navigate the health care system. Providers reported that the program saved them time and that they felt that their patients were receiving better care. While the program's visits and phone calls are not billed, the savings from reduced hospital days are thought to be sufficient to financially sustain the program.

10. Train some RNs to take responsibility for specialized functions

Some health centers have created specialized roles for RNs, with some RNs responsible for triage, others playing a tactical nurse role, and still others providing chronic care management.

At Petaluma Health Center, some RNs are specially trained as case manager RNs to work specifically with patients who have been admitted to or recently discharged from the hospital. Those patients with high rates

of hospital use are prioritized. The case manager RNs specialize in diabetes care, mental health care, working with homeless patients, and handling care transitions. At Santa Rosa Community Health Centers, two RNs spend 80% of their time conducting home visits for high-utilizing patients with complex care needs.

Neighborhood Healthcare created a new function, the RN panel manager, and two RNs plus the RN director of population management have been specially trained to take on this new role. RN panel managers conduct three types of RN visits: (1) routine monitoring of patients with diabetes, (2) cardiovascular risk reduction visits, and (3) flip visits with a physician. They do not perform triage or other routine back-office functions. The RN visits last 30 minutes, and the RNs keep their own schedule template. For the diabetes and cardiovascular care visits, the RN panel managers focus on medications, in addition to providing patient education and behavior-change counseling. Using medication algorithms and protocols, they enter orders in the EMR system for providers to sign and send to the pharmacy. They can independently refill about 30 medications using a detailed protocol approved by the CMO.

11. Schedule RNs to perform different roles on different days

At two Palo Alto Medical Foundation sites in Alameda County, RNs rotate between two different roles: triage and resource. The triage function includes phone triage, EMR in-box management, and phone advice for patients at the site. The resource RN handles general patient care at the site:

- ▶ Walk-in triage
- ▶ Chronic disease patient education
- ▶ Clinical procedures (e.g., catheterization, nebulizer treatments, antibiotic injections, wound care)
- ▶ Pediatric advice (e.g., newborn care, breast-feeding, toilet training)
- ▶ Inhaler teaching
- ▶ Patient counseling
- ▶ Self-management support for diet and exercise, depression, sleep hygiene
- ▶ Medication adherence counseling

This strategy of assigning different roles to RNs on different days reduces the amount of stress that is felt by primary care RNs who are traditionally multitasking throughout the day. At some sites, RNs switch roles each week.

At Silver Avenue Family Health Center, each RN dedicates one day each month to chronic disease visits. These visits are prescheduled. When working in this role, the nurse spends 90% of the time conducting patient visits and chronic care phone follow-up, with 10% of the time doing overflow walk-in triage.

12. Preserve the traditional RN role and focus on training MAs and LVNs to take on new responsibilities

It is hard for many resource-strapped safety-net clinics to hire additional RNs because RNs in California command high salaries, their work does not provide revenue for the health center, and Spanish-speaking RNs are hard to find. A strategy available to safety-net clinic leaders is to expand the roles of lower-paid care team members rather than hiring additional RNs.

Northeast Valley Health Corporation, a highly regarded community health center in Los Angeles County, has low RN-to-provider ratios at all sites; at one site there is only one RN for 20 providers. Northeast Valley RNs focus almost exclusively on triage duties that require an RN-level of clinical judgment, while MAs, LVNs, and bachelor's degree-level health educators are taking on expanded roles. MAs do panel management for the patients cared for by a provider-MA teamlet. LVNs and health educators receive extensive training as care coordinators, and they meet with chronic disease patients to provide patient education, self-management support, and patient navigation assistance. In this way, Northeast Valley saves itself the cost of paying for expensive, unreimbursed RNs and also does not face the problem of freeing RNs from triage duties to perform other functions, because many of those other functions are taken care of by the MAs and care coordinators.

For similar financial reasons, some Palo Alto Medical Foundation sites have few RNs on staff and are starting to replace RNs who leave with LVNs and MAs.

California Law on RN Standardized Procedures

The Board of Registered Nursing and the Medical Board of California have jointly promulgated guidelines for the development of standardized procedures for nursing practice that allow for the expansion of RN functions.

These guidelines have become California law: Title 16, California Code of Regulations; Division 14, Board of Registered Nursing; Article 7, Standardized Procedure Guidelines; Section 1474.¹²

1474. Standardized Procedure Guidelines

Following are the standardized procedure guidelines jointly promulgated by the Medical Board of California and by the Board of Registered Nursing:

- (a) Standardized procedures shall include a written description of the method used in developing and approving them and any revision thereof.
- (b) Each standardized procedure shall:
 - (1) Be in writing, dated and signed by the organized health care system personnel authorized to approve it.
 - (2) Specify which standardized procedure functions registered nurses may perform and under what circumstances.
 - (3) State any specific requirements which are to be followed by registered nurses in performing particular standardized procedure functions.
 - (4) Specify any experience, training, and/or education requirements for performance of standardized procedure functions.
 - (5) Establish a method for initial and continuing evaluation of the competence of those registered nurses authorized to perform standardized procedure functions.
 - (6) Provide for a method of maintaining a written record of those persons authorized to perform standardized procedure functions.
 - (7) Specify the scope of supervision required for performance of standardized procedure functions, for example, immediate supervision by a physician.
 - (8) Set forth any specialized circumstances under which the registered nurse is to immediately communicate with a patient's physician concerning the patient's condition.
 - (9) State the limitations on settings, if any, in which standardized procedure functions may be performed.
 - (10) Specify patient record keeping requirements.
 - (11) Provide for a method of periodic review of the standardized procedures.

The Medical Board of California, which governs physician practice in the state, has issued a formal written statement about nursing scope of practice: "Registered nursing practice is recognized as having overlapping functions with physicians. The RN scope of practice permits additional sharing of functions in the organized health care system that provides for collaboration between physicians and registered nurses. Standardized procedures include policies and protocols developed in collaboration with physicians, nurses, and administrators of facilities."¹³

Some organized health systems, including community health centers, following these 11 requirements have written standardized procedures to allow RNs to work to the top of their license.

For example, one California health system has developed standardized procedures for nurses to handle prescription refills. The procedures were created by an oversight committee and are reviewed monthly, and RNs are trained and annually tested for competency. After checking that a requested refill fulfills the protocol requirements and ordering any needed laboratory studies, RNs send the refill orders to the pharmacy. In addition, under standardized procedures, RNs can order routine health maintenance services such as immunizations and chronic disease labs. For medication titration, RNs are required to have a provider review and sign the order.

Two Visionary Practices

Two primary care clinics examined for this paper, Community Health Center, Inc., in Connecticut and Norrahammar Health Center in Jönköping County, Sweden, have pioneered expansions of the RN role that go well beyond the role changes implemented by the California clinics described in this report. These examples demonstrate that primary care practices are capable of transformational changes, and that RNs can be empowered to add considerable capacity to meet the nation's growing demand for primary care.

Community Health Center, Inc. (CHCI)

CHCI is a federally qualified health center caring for 130,000 patients in 13 sites throughout Connecticut. CHCI has a primary care provider-to-RN ratio of between 2:1 and 3:1, with the goal being 2:1. Over the past few years, CHCI has implemented independent RN visits, with over 30 RNs providing almost 25,000 RN visits from October 2013 to October 2014.

Teamwork

All RNs are members of a care team, or pod, composed of two primary care providers, two MAs, one RN, and usually a behavioral health provider. Each RN is responsible for nursing support of two specific panels of patients, approximately 2,000 patients. Pods are spatially co-located to facilitate minute-to-minute team communication. RNs participate in the 10-minute morning team huddle. As part of their responsibilities, RNs enroll patients with complex care needs in care management. A tailored nursing care management plan details problems, self-management goals, clinical targets, progress toward goals, and interprofessional collaboration in the care of that patient, particularly with behavioral health but also with external organizations. The chief nurse officer monitors the number of patients actively enrolled in care management to limit each nurse's caseload to a reasonable size.

Independent RN Visits

An observational study of 10 CHCI RNs in eight sites found that 18% of RN time was spent conducting nursing visits independent of a provider, while another 10% of RN time was spent speaking with patients by phone. The independent visits addressed a wide variety of clinical issues¹⁴:

- ▶ Anticoagulation management
- ▶ Tuberculin skin test administration and interpretation
- ▶ Diabetes retinopathy screening using a retinal camera
- ▶ Hypertension medication adjustment
- ▶ Pregnancy testing and counseling
- ▶ Smoking cessation
- ▶ Screening and administering treatment for sexually transmitted diseases

CHCI RNs do acute and chronic care visits under standing orders and delegated order sets. Standing orders are condition- or complaint-based and are designed to cover most patients presenting with certain conditions or complaints. Delegated orders are patient-specific, written by the primary care provider for that patient only. Each nurse is expected to conduct five independent visits per day; some RNs do up to 10. These one-on-one, face-to-face visits are scheduled for 20 or 40 minutes, depending on the clinical problem being addressed, and the patients are placed in the nursing schedule. The CHCI RNs report that they like doing these independent visits and feel that they are engaged in patient care that fully uses their skills.

Like California's standardized procedures, the standing orders used at CHCI are written and approved by the CHCI Medical Quality Improvement Committee and signed by the chair of that committee, the CMO. After a standing order for nursing is approved, all RNs are trained and assessed by nurse managers. Detailed protocols and EMR templates are created for each standing order. The standing orders include:

- ▶ Uncomplicated urinary tract infections (UTIs)
- ▶ Vulvovaginal candidiasis
- ▶ Emergency contraception
- ▶ Pregnancy testing
- ▶ Comprehensive diabetes management
- ▶ Basal insulin titration
- ▶ Telemedicine-based diabetic retinopathy assessment with pupil dilation
- ▶ Emergency situations (e.g., naloxone for opioid reversal)

- ▶ Maintenance of long-acting antipsychotic medications
- ▶ Direct observation treatment for latent tuberculosis infection
- ▶ Tobacco cessation, including provision of medications
- ▶ Spirometry
- ▶ Immunizations

Provider-directed delegated orders include RN follow-up for blood pressure titration, follow-up after antidepressant initiation, wound care, and chronic pain support. (See sidebar for an example of a delegated order.)

Typical independent visits that CHCI RNs provide are chronic care visits for patients with diabetes, hypertension, asthma, or COPD. In these visits, RNs do patient education, medication reconciliation and adherence counseling, patient goal setting, and behavior-change counseling.

PCP-Delegated Nursing Order: An Example

The PCP (primary care provider) completed a visit for a patient with hypertension (HTN), in which they started a new blood pressure medication, hydrochlorothiazide (HCTZ) 12.5 mg once a day, with systolic blood pressure (SBP) target around 140 mm Hg based on the patient profile. The PCP requested that the patient return in one week for a nursing visit to follow up blood pressure and documented these follow-up orders in the EMR:

- ▶ If SBP >180, conduct full HTN screening visit, order metabolic panel and EKG [electrocardiogram], increase HCTZ to 25 mg daily, and add benazepril 5 mg daily. Return in one week with PCP.
- ▶ If SBP between 160 to 179, increase HCTZ to 25 mg daily. Return in one week with RN and check metabolic panel at that time.
- ▶ If SBP between 140 to 159, repeat in one week and send results to PCP.

In this example, the nurse can manage the medications because the provider, in advance of the nursing visit, through delegated orders, provided explicit instructions.

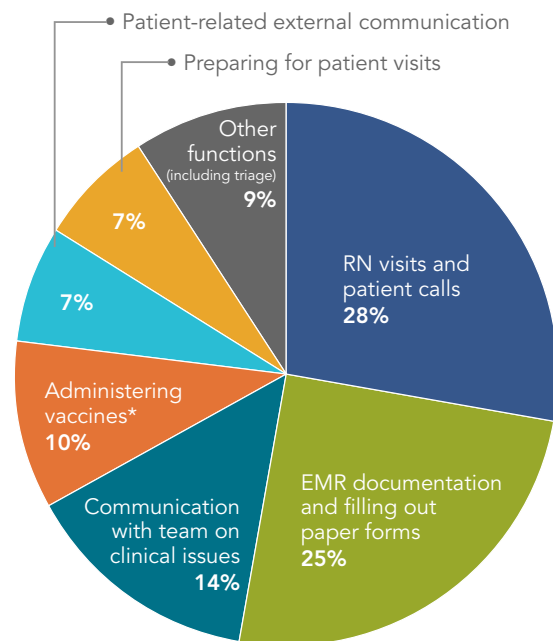
While RNs at CHCI are empowered to conduct independent visits, they always have the option of consulting with a provider for additional guidance. RNs reported that they feel greatly empowered and supported to perform at the top of their clinical expertise.

Reduced Triage Burden

CHCI has reduced the triage burden on RNs by successfully ensuring that their patients have timely access to care. Most patients can get provider appointments “today, tomorrow, or the next day.” Even with such good access to care, some patient triage is still necessary.

CHCI has dramatically reduced the triage responsibility for most RNs by having two full-time nurses dedicated solely to triage. To complement the full-time triage nurses, other RNs rotate through triage less than once a week. Triage nurses address about 70% of triage calls without a provider visit. An observational study found that RNs spent about 10% of their time on patient phone calls and that only some of those calls were triage calls.¹⁵ For most RNs at CHCI, triage takes up a small amount of their time. (See Figure 1.)

Figure 1. How RN Time Is Spent at CHCI



*May be completed by MAs in California, but not in Connecticut, where this falls only in the scope of practice of the nurse or the provider.

Source: Anderson DR, St. Hilaire D, Flinter M. “Primary Care Nursing Role and Care Coordination: An Observational Study of Nursing Work in a Community Health Center.” *Online J Issues Nurs.* 2012;17(2):3.

Medications

If appropriate under standing orders, CHCI nurses initiate medications for acute issues such as UTIs and candidal vulvovaginitis. They may call in or fax these medications to the pharmacy but cannot do electronic prescribing. Under delegated orders from providers, they can increase blood pressure medication doses in RN blood pressure follow-up visits if the blood pressure has not come down to the goal set by the provider. In these cases, the provider does not need to sign the RN's medication order because the provider's specific order was documented in advance.

CHCI has transformed the nursing function. RNs at CHCI conduct a significant number of independent visits for acute and chronic clinical issues, including initiating and changing medications under standing and delegated orders. According to one CHCI nursing leader, "RNs wanted to be more involved with patients and elevated from the triage role. RNs sharing in the care was designed to reduce clinician burnout, improve the efficiency and satisfaction of the care team, and [provide] more satisfaction for the patients."

Norrahammar Health Center

Norrahammar is one of over 10 ambulatory health centers run by the Jönköping County's health system in Sweden. Sweden has created separate health systems for each county, and Jönköping's system in the southern part of Sweden has been recognized as one of the finest health systems in the world, with excellent clinical outcomes, high patient satisfaction, and low costs.¹⁶ Norrahammar is a town of 9,000 people located eight miles from the county seat, the city of Jönköping. In 2006, the health center employed four family doctors and 12 nurses, with a total of 35 employees.

Most visits at Norrahammar Health Center are nurse visits. Physicians focus their time on the most complicated patients. When patients call the health center, a highly trained nurse, rather than a nonclinical receptionist, answers the phone. Each day, two to three of these triage nurses answer about 100 calls. Using protocol books and their own experience, they give phone advice or schedule patients with a nurse, midwife, physician, or physical therapist at the health center.

Patients with a sore throat, earache, or dysuria, or those needing a follow-up visit for diabetes, hypertension,

asthma, or COPD, would see a nurse, unless their history reveals a more complicated story requiring a physician visit. Patients with a psychosocial problem see a behavioral health provider. Pregnancy checkups, contraception issues, and Pap smears are handled by a nurse-midwife, and pediatric care is mostly handled by nurses. Patients with musculoskeletal problems go directly to a physical therapist and are referred to physicians only if worrisome symptoms or physical findings are found.

In 2006, of the approximately 800 face-to-face visits provided each week, 59% were nurse visits, 24% physician visits, 13% physical therapy visits, and 4% behavioral health visits. Seventeen percent of nurse visits resulted in a full physician visit or a brief conversation with a physician for advice. Prior to the introduction of nurse visits in 2000, 56% of physician visits were for minor complaints and 36% for major illnesses; in 2004, 31% of physician visits were for minor diagnoses and 66% for major illnesses. Some of the Norrahammar nurses have specialized training in diabetes, asthma/COPD, heart failure, and acute patient complaints.

Because Jönköping County pays its health centers with a lump-sum global budget, there is no visit-based reimbursement. This payment design allows Norrahammar to offer visits with nurses and other nonphysician providers without financial concerns.

Norrahammar demonstrates how a high-performing health system can dramatically elevate the role of nurses in primary care.

Discussion

The RN role in primary care is coming full circle. Years ago, RNs in some communities were the primary care providers. In the first few decades of the twentieth century, some rural areas and inner cities created community-based health systems entirely run by RNs — for example, the Frontier Nursing Service in Appalachia, with RNs providing all primary care. Yet the urban and rural nurse-run models of care waned during the middle years of the century. With the advances in medical knowledge and technology, hospitals evolved from places where patients died to places where patients got better. Primary care and community-based nursing declined in prestige as hospitals became the center of activity for nursing education and practice.¹⁷ To this day, the majority

of RNs — 61% in 2012 — work in hospitals.¹⁸ Because RNs have been largely defined as hospital nurses, nursing education has focused primarily on hospital care.

Primary care nursing is now experiencing a revival. Health policy and nursing thought leaders are recognizing that fewer patients are being admitted to hospitals and more are being cared for in ambulatory settings, especially primary care. Moreover, primary care has a growing need for skilled professionals, and the over-2.5 million RNs make up the largest pool of skilled health professionals in the United States.

The Institute of Medicine report on the future of nursing affirms that “Nurses are being called upon to fill primary care roles and to help patients manage chronic illnesses, thereby preventing acute care episodes and disease progression.”¹⁹

The American Academy of Ambulatory Care Nursing (AAACN) recognizes that “The evolving medical home concept reinforces the critical need for registered nurses to provide chronic disease management, care coordination, health risk appraisal, health promotion, and disease prevention services.”²⁰ The AAACN is advocating for ambulatory RN residency programs to enhance RN primary care skills. In its 2014 white paper, the AAACN acknowledged: “Misconceptions and myths related to ambulatory nursing practice abound. Many experienced nurses and non-nurses think that ambulatory practice is less taxing than acute [hospital] care and a place where nurses go to retire. There are false impressions that paint the ambulatory nurse as less knowledgeable or skilled than the acute care nurse.”²¹ Moreover, “Residency programs for new or transitioning RNs are rarely carried out in ambulatory care.”²² The AAACN also noted: “There is often confusion about scope of practice and lack of clear understanding about the appropriate utilization of registered nurses and other health care personnel.”²³

While academic nursing leaders understand the need for reform of nursing education and RN scope of practice, it is likely that the main impetus for a rebirth of primary care nursing will come from primary care practices themselves. In particular, safety-net clinics — because they hire many RNs — have become a crucible of innovation in transforming the RN primary care role.

There is now significant literature describing these innovations in primary care settings across North America:

- ▶ Observations in three primary care networks in Canada²⁴
- ▶ Phone interviews with 16 practices from across the US²⁵
- ▶ A review of the Patient Aligned Care Teams in the Veterans Health Administration²⁶
- ▶ Site visits with 30 high-performing primary care practices conducted by the Learning from Effective Ambulatory Practices (LEAP) project²⁷

Conclusion

New trends in primary care nursing are addressing the main challenges to primary care nursing. Two of these challenges are related: RNs spending much of their time in triage, and the weakness of RN primary care training. If nursing schools elevate primary care competencies in their curricula or if RN primary care residencies take hold, then RNs will have the skills to solve the majority of triage encounters they currently refer to physicians. The combination of the evolution of scope-of-practice standardized procedure regulations and greater RN primary care skills and knowledge will expand the ability of primary care RNs to deliver a broader range of services and shift from the predominant role of triage that currently exists.

The other challenges described in this report are also linked: the relatively high California RN salaries, and low or absent reimbursement for RN patient visits. Currently, California is exploring a model of capitation for community health centers instead of provider visit-based fees. If this new payment model gains momentum, safety-net clinics could expand independent RN visits and could make compelling arguments for hiring and retaining RNs. RN salaries would be justified by their ability to add substantial primary care capacity.

Society is asking primary care to do more for patients; yet the numbers of primary care providers are falling while their burnout rates are rising.²⁸ Empowering and expanding the role of registered nurses, the largest pool of skilled health care professionals in the country, provides the perfect formula for the survival and transformation of primary care. Conditions are ripening for the rebirth of registered nurses in primary care.

Endnotes

1. Bodenheimer TS, Smith MD. "Primary Care: Proposed Solutions to the Physician Shortage Without Training More Physicians." *Health Aff.* 2013;32:1881-1886.
2. Occupational Employment Statistics. US Bureau of Labor Statistics. Registered nurses: www.bls.gov, licensed practical and licensed vocational nurses: www.bls.gov, and medical assistants: www.bls.gov. Updated March 25, 2015. Accessed July 21, 2015.
3. Institute of Medicine. *The Future of Nursing: Leading Change, Advancing Health*. Washington, DC: The National Academies Press; 2011.
4. See note 2.
5. Safran DG. "Defining the Future of Primary Care: What Can We Learn from Patients?" *Ann Intern Med.* 2003;138:248-255.
6. Rosland AM, Nelson K, Sun H, et al. "The Patient-Centered Medical Home in the Veterans Health Administration." *Am J Manag Care.* 2013;19:e263-e272.
7. Center for Care Innovations. In the Incubator: Flip Visits. www.careinnovations.org. Published May 20, 2014. Accessed July 21, 2015.
8. Traphagan L, Stratman M, DeBella D. Are You a Tactical Nurse? Patient Visit Redesign. www.patientvisitredesign.com. Accessed July 21, 2015.
9. See note 1.
10. Bodenheimer T. *Strategies to Reduce Costs and Improve Care for High-Utilizing Medicaid Patients: Reflections on Pioneering Programs*. Hamilton, NJ: Center for Health Care Strategies; October 2013.
11. Bodenheimer T, Berry-Millett R. *Care Management of Patients with Complex Health Care Needs*. Princeton, NJ: Robert Wood Johnson Foundation; December 2009. www.rwjf.org (PDF). Accessed July 22, 2015.
12. Board of Registered Nursing. Standardized Procedure Guidelines. California Department of Consumer Affairs. www.rn.ca.gov (PDF). Updated January 2011. Accessed July 21, 2015.
13. Medical Board of California. *Guide to the Laws Governing the Practice of Medicine by Physicians and Surgeons*. 7th ed. Sacramento, CA: Medical Board of California; 2013:42. www.mbc.ca.gov (PDF). Accessed July 21, 2015.
14. Anderson DR, St. Hilaire D, Flinter M. "Primary Care Nursing Role and Care Coordination: An Observational Study of Nursing Work in a Community Health Center." *Online J Issues Nurs.* 2012;17(2):3.
15. Ibid.
16. Bodenheimer T, Bojestig M, Henriks G. "Making Systemwide Improvements in Health Care: Lessons from Jönköping County, Sweden." *Qual Manag Health Care.* 2007;16:10-15.
17. Bodenheimer T, Grumbach K. "How Health Care Is Organized — II: Health Delivery Systems. In: Bodenheimer T, Grumbach K, eds. *Understanding Health Policy: A Clinical Approach*. 6th ed. New York, NY: McGraw-Hill; 2012:59-72.
18. See note 2.
19. See note 3.
20. American Academy of Ambulatory Care Nursing. "American Academy of Ambulatory Care Nursing Position Statement: The Role of the Registered Nurse in Ambulatory Care." *Nurs Econ.* 2012;30(4):233-239.
21. Levine J, Wells SN, Jones-Bell LJ, et al. "White Paper — The Need for an Ambulatory Nurse Residency Program." American Academy of Ambulatory Care Nursing. www.aaacn.org. Published March 2014. Accessed July 21, 2015.
22. Ibid.
23. See note 20.
24. Oelke ND, Besner J, Carter R. "The Evolving Role of Nurses in Primary Care Medical Settings." *Int J Nurs Pract.* 2014;20:629-635.
25. Smolowitz J, Speakman E, Wojnar D, et al. "Role of the Registered Nurse in Primary Health Care: Meeting Health Care Needs in the 21st Century." *Nurs Outlook.* 2015;63:130-136.
26. See note 6.
27. Primary Care Team Guide: The Registered Nurse (RN). Improving Primary Care. www.improvingprimarycare.org. Accessed July 21, 2015.
28. Bodenheimer T, Sinsky C. "From Triple to Quadruple Aim: Care of the Patient Requires Care of the Provider." *Ann Fam Med.* 2014;12:573-576.

Appendix A: Example of RN Prescription Refill Standardized Procedure

Clinical Protocol: Nurse Prescription Refill Procedure

Page 1 of 2. Protocol = 2 pages; medication list = 6 pages

	Effective date:	Policy & Procedure
	12/2012	#CSM.107
	Revision date:	11/2014
	Last reviewed:	Clinical QM committee
	Functional area(s):	
Document owner, title: Jim Schultz, MD		
Keywords: refills, prescription, medication, RN, eCW		

POLICY: It is the policy of Neighborhood Healthcare to allow qualified RNs to refill designated medications according to clinical protocol.

I. PROCEDURE:

A. Functions the RN may perform:

1. Medication refills using fax, phone or ePrescribing through eCW of those medications listed in the attached table according to the criteria defined for medication refills within this policy.
2. Substitutions within classification after confirming equivalent dosage with the patient's provider. Ensuring that the medication is on the formulary for the patient's insurance.
3. Order lab work listed under "Lab Requirement" in chart below for a prescribed medication.

B. Circumstances under which RN may perform function:

1. Setting – All Neighborhood Healthcare clinic sites.
2. Supervision – the RN may operate independently within the constraints and criteria of this policy.
3. Patient Conditions – Diagnosis of diabetes and/or hypertension and/or high cholesterol.
4. Other –
 - a) The RN must always consider the immediate risk to the patient of an abrupt cessation of medication.
 - b) Clinical correlation of the patient's condition, other medications prescribed, lab work and other factors which may influence care must be considered in a decision to refill or not refill a particular medication.
 - c) If refill criteria for lab and clinical considerations are met but patient needs appointment, have patient scheduled for an appointment and refill medication one time.
 - d) No early refills will be given under this protocol.
 - e) Narcotics/controlled substances may not be refilled by the RN and will be assigned to the clinician. Prior to assigning, the RN will research information the clinician needs to make the decision about refilling, such as most recent visit for the problem and whether a toxicology screen has been performed within the last 12 months.

C. Definitions:

1. Early Refill – a refill of a medication more than 5 working days earlier than its expiration date.
2. Refill Period – the time frame to refill a medication; this calculation should take into account the date of the last visit or lab work in determining the one-year period. Example: date of refill request 5/06, with last visit date 7/05; refill medication for two months.

D. Database – Nursing Practice

1. Subjective information will include, but is not limited to:
 - a) Relevant health history reported by the patient or documented in the medical record
 - b) Patient reports of possible side effects
2. Objective information will include, but is not limited to:
 - a) Lab reports
 - b) Documentation of prescriptions in the medical record
 - c) Patient visit history at Neighborhood Healthcare
 - d) Appointments schedule for future visits
 - e) Court requirements for children who are receiving medications under the auspices of JV220 (ward of the court)

E. Diagnosis

1. The medical diagnosis may be any chronic medical condition or disease

F. Plan

1. Treatment – refills of chronic and over-the-counter medications for period of up to one year if all criteria are met.
2. Patient condition requiring consultation – varies according to medication; see “Clinical Considerations” in chart below.
3. Education – if applicable to a particular medication
4. Follow-up – will be handled through the normal clinic process for medication management and not necessarily within the confines of this protocol.

G. Record keeping

1. All patient care, changes in medications or lab work, verbal or telephone communications with the clinician or patient/family, patient/family education and other relevant information shall be documented in the medical record.

II. REQUIREMENTS FOR REGISTERED NURSE:

A. Education/Licensure – the RN must have a California RN license and be in good standing with the Board of Registered Nursing [BRN].

B. Training –

1. The RN must have been trained by an RN staff member or provider experienced in medication refills according to Neighborhood Healthcare protocol.
2. The RN must be fully trained in use of eCW.

C. Experience – A minimum of one year’s experience (full-time or 2080 hours) as an RN is required.

D. Initial Evaluation – the competence of the RN will be assessed by the provider preceptor training him/her in medication refills.

E. Ongoing Evaluation – the Rx refill process will be audited at least annually by the Quality Improvement Department.

III. DEVELOPMENT AND APPROVAL OF THE STANDARDIZED PROCEDURE

A. Method – the procedure shall be developed using the most current references available from the BRN and the American Academy of Family Practice.

B. Review schedule – the procedure shall be assessed the first year at 3 and 6 months after implementation, and annually thereafter.

The protocol includes a list of over 40 medications with visit and lab requirements and specific clinical considerations.