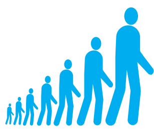

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Nursing-Sensitive Indicators in Ambulatory Care

Executive Summary

- Ambulatory nursing care can be difficult to comprehend in all its complexity.
- In August 2013, the American Academy of Ambulatory Care Nursing commissioned a task force to identify nursing-sensitive indicators specific to ambulatory care settings.
- Given the great variation in settings, staff mix, patient populations, role dimensions, skill sets, documentation systems, and resources, determining metrics that apply across the entire continuum of care is a daunting task.
- However, it is incumbent upon nurse leaders to define the metrics that will promote the value of the registered nurse in ambulatory practice and care coordination.
- Once initial measures are identified, piloted, and validated, the infrastructure can be created for ongoing benchmarking and collaboration.
- The long-term goal is to leverage professional nursing practice, based in the ambulatory care setting, to improve quality, safety, and cost in health care.

Kathleen Martinez

There has never been a better time to be a nurse. Especially for those nurses fortunate enough to practice in ambulatory care settings. The Patient Protection and Affordable Care Act of 2010 focuses on prevention and wellness as well as improving quality and health system performance. One of the provisions of the law is to develop a national quality improvement strategy that will improve the delivery of services, patient outcomes, as well as population health. It will also create a process to develop and select quality measures to be used for reporting and payment (Kaiser Family Foundation, 2013). Carter, Zhu, Ziang, and Porell (2014) found that 62% of medically serious adverse medical events (AMEs) occur in the outpatient setting. They suggest efforts to monitor and prevent AMEs should be undertaken. Developing nursing-sensitive indicators in the ambulatory care environment can highlight the contributions nurses make to patient outcomes.

Current Environment: Ambulatory Care Settings

While the numbers of hospital admissions are decreasing, the numbers of outpatient visits are estimated to increase to over a billion per year (Haas, Swan, & Haynes, 2013). Models of care in the ambulatory setting are evolving rapidly. In the last few years, new concepts have been introduced, such as *care coordination, transition management, health literacy, patient-centered care, patient navigator,* and *patient medical home.* Ambulatory surgery centers and radiology centers are offering more advanced and sophisticated treatments and services. Further, adults and children with conditions of breathtaking complexity are often cared for in their home, supported in their schools, and managed by their primary care provider.

Embracing the Challenges

In the midst of this turbulent change, ambulatory care nurses are stepping up to the challenge to identify and quantify the value of the registered nurse (RN) in the ambulatory setting. There are increasing opportunities to practice at the top of their license (Institute of

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Medicine, 2010) and influence health care as never before. One way to do that is to look at those actions that are uniquely managed by nursing, and evaluate the impact on patient outcomes. This is exactly what nursing-sensitive indicators (NSIs) attempt to do. By definition "Nursing-sensitive indicators identify structures of care and care processes, both of which in turn influence care outcomes" (Montalvo, 2007, para. 4).

In 1998, the National Database for Nursing Quality Indicators (NDNQI®) was established for acute care settings. The creation of nursing-sensitive indicators for RNs in ambulatory care settings is a necessary first step so that performance can be benchmarked, goals for improvement can be identified, and the RN role can be utilized in the most effective way.

However, "Ambulatory care is more logistically complex and challenging than acute care since infrastructures frequently provide less optimal support for managing care than in hospitals" (Swan, 2008, p.199). In other words, in the acute care setting, the nurse has significant control over the patient environment, interventions, medications, and responses to treatment. In the ambulatory setting, the patient visit is often limited to 15 minutes once per quarter or less. The rest of the care occurs at home, where environmental conditions are uncontrolled variables, and medications and therapeutic interventions are delivered by the patient or an untrained caregiver. In acute care settings the nurse can use all five senses to assess the patient, and that assessment is enhanced by technology such as monitors and telemetry. Much of the care provided in the ambulatory setting occurs over the phone, where the phone is the stethoscope and the patient is guided through a self-assessment so he or she can be the eyes and hands of the remote caregiver.

Early Efforts

In the late 1990s and early 2000, there was significant focus on identifying and quantifying the work of the RN in the ambulatory care setting. The American Nurses Association (ANA) appointed a committee in 1997 to expand nursing-sensitive quality indicators beyond acute care (Sawyer et al., 2002). The initial recommendations of the ANA were never operationalized. Although there was a good understanding of the role of the nurse in the ambulatory setting, outcome measures were underdeveloped and untested. As the initial committee members stated in their summary:

> Indicator development requires extensive time and money. The Committee members urge all nurses and nursing organizations, both in the United States and internationally, to join with the ANA to continue expanding this work. Now, more than ever, it is incumbent upon organized nursing to demonstrate the contributions of professional nursing practice to improved health outcomes and cost-effective healthcare (Sawyer et al., 2002, p. 59).

Unfortunately, after the early 2000s, work on establishing ambulatory care NSIs slowed significantly. The necessary time and money were not forthcoming and no progress was made. In 2008, Swan wrote a compelling article challenging nurses to move forward with the work of identifying, testing, and validating ambulatory care NSIs.

Nursing-Sensitive Indicators: New Initiatives

In the summer of 2013, the American Academy of Ambulatory Care Nursing (AAACN) put out a call to its members to create a task force to investigate the possibility of establishing nursing-sensitive indicators. Members of the task force represented all geographic regions of the United States and a broad range of practice settings. One of the members of the task force is a member of the original ANA Committee that looked at NSI for ambulatory care settings in 1997 and brought a wealth of experience and knowledge. Another member is the nurse scientist with the Collaborative Alliance for Nursing Outcomes and has experience with data collection and tool validation.

AAACN Task Force: Initial Steps

The initial meetings were focused on reviewing key literature related to NSIs and the current ambulatory care environment. In the meeting that followed, task force members brainstormed current trends and potential indicators based on participants' background and experience. A list of existing ambulatory measures was compiled, including the National Quality Forum (NQF), the National Committee on Quality Assurance (NCQA), Centers for Medicare & Medicaid Services, and the Joint Commission. The need for a broader literature review was identified and a framework was created to evaluate published studies and standards for possible inclusion.

ANA Efforts

In December 2013, AAACN learned the ANA, in conjunction with the American Nurses Credentialing Center (ANCC), had a similar initiative to identify ambulatory care NSIs. The key driver and urgency for this work was the new Magnet® Manual which requires ambulatory care NSIs for hospitals applying for Magnet designation starting in 2016. The ANA noted the growing prominence of ambulatory care that resulted from the advancement of the Patient Protection and Affordable Care Act and recognized the time was right to move forward with national benchmarking.

ANA Summit. In January 2014, the ANA held a 1-day Ambulatory Measurement Summit. Forty-five experts from across the ambulatory care continuum participated, including eight from the AAACN

Ambulatory NSI Task Force. Prior to the summit, preliminary work was done to evaluate existing ambulatory quality measures from the NQF and the NCQA that might serve useful as nursing quality measures. Special emphasis was put on measures in which nursing care or input is necessary or expected. At the summit, participants were informed that the work needed to be completed quickly. As Magnet requires the submission of eight quarters of data for all indicators, the timeline was very tight to identify, test, and validate the selected measures for hospitals planning a 2016 Magnet application.

Summit processes and outcomes. The participants divided into six small focus groups, with the task of selecting the top five to ten measures that met selection criteria from a pre-populated list. The requirements for selection on an indicator included:

- Measure will work across all age groups and populations.
- Supporting data for the measure can be extracted easily from the medical record.
- Nurses had a direct impact on the measure.
- There was an acknowledged link between the measure and improved health.

Interestingly, there was very high consensus among all the groups with four measures selected by all groups, and the fifth selected by four of the six groups. The five measures selected by the ANA to be used as NSIs for the ANCC Magnet Recognition Program are (Lewis, 2014):

1. Medication reconciliation.
2. Controlling high blood pressure.
3. Depression assessment conducted.
4. Pain assessment and follow-up.
5. Hospital re-admissions.

AAACN Task Force Response to Summit Outcomes

The AAACN Task Force left the summit feeling that, while the above indicators were helpful, some important dimensions of ambulatory care nursing had been excluded, such as telehealth (including telephone triage), patient education, and the patient experience. Still, other challenges unique to ambulatory care settings include variability in the use of electronic health records in the ambulatory setting and the role of the ambulatory care nurse as a member of a larger team makes it difficult to tease out independent actions (Haas & Swan, 2011).

In the inpatient setting, documentation structures make it is easy to identify the care delivered by the nurse, whereas with ambulatory care documentation systems, tracking specific interactions and interventions can be difficult. There is a need for improved information infrastructure development to support data collection and quality improvement activities in outpatient settings. There was a general sense the work was not complete, and task force members resolved to continue work to identify indicators that accurately reflected the role of the ambulatory care RN.

AAACN Task Force Seeks Peer Input

In May 2014, the AAACN Task Force reported the results of the ANA Ambulatory Summit at the AAACN Annual Conference. Focus groups were formed and feedback solicited from members and conference attendees. The goal was to identify important measures that may have been missed. These interviews yielded rich data about setting, scope, staff mix and education, roles, and the practice of ambulatory care nursing in the United States. Task force members served as leaders and scribes, facilitating conversation and taking notes. After the conference, a small group assessed the data and teased out overriding themes. These constructs were entered into a grid using Donabedian's (1966) framework of structure, process, and outcomes. Two additional categories were included for barriers and recommendations. (See Table 1 for a complete list of themes.)

Next Steps

Feedback at the AAACN Annual Conference and recommendations for next steps were presented at the 2014 Fall AAACN Board of Directors meeting. After careful consideration, the AAACN Board of Directors determined the role of the task force will be to inform, educate, and advocate for the creation and implementation of ambulatory care nursing-sensitive indicators. At this time, the scope of the NSI task force does not include research and development of nursing-sensitive indicators. AAACN recognizes that other key partners, including NDNQI, have greater expertise and resources in this area. Collaboration with key partners will be critical to complete the final product. The advocacy role of the task force will involve working closely with identified key organizations to advance the establishment of NSI for the ambulatory care environment.

The immediate focus of the AAACN NSI Task Force includes comparing the structure, process, and outcome measures identified by the ambulatory care focus groups with the inventory of existing measures. Task force members will then identify three indicators that are determined to be measurable across all ambulatory care settings. Given the diversity of care settings, this will be a challenge. During the 2014 AAACN Annual Conference Town Hall, phone call management and telephone triage were strongly supported by AAACN members as a separate and unique function of nursing. Nurses felt this element of care delivery crosses all ambulatory care settings and requires consideration as an NSI. From conversations with AAACN members during the town hall focus groups, it is clear efforts are in place across multiple settings to capture the value of the RN in ambulatory care. Once the initial three indicators are determined,

Table 1.
Nursing-Sensitive Indicator Themes

Structure: Ambulatory Work Setting	Process *Data collection includes meaningful use and E measures from EPIC, Cerner, ACO requirements, RN Navigator Tool Call Centers*	Outcome	Barriers	Recommendations
Varying skill mix – MA, RN, PCT, CNA, LPN – a few were 100% RN and a few had no RNs at all Highest percent of staff were MAs. Multidisciplinary practice Setting such as school, clinic, home, telephone, community setting			RN functions are not billable. Hospital care coordinators don't interact with ambulatory clinics. Skill mix is variable and dominated by MAs. Physicians do not understand difference of scope, role, and benefit of RNs. APRNs are underutilized.	Overall ambulatory issues are recognized, but we need more tools to gather data. Establish RN-managed clinics for chronic disease. Define caseload for care coordination. Advocacy to educate other health care disciplines as well as traditional inpatient setting.
RN more visible in higher-acuity and specialty areas	• Disease-specific indicators – HTN management – A1C levels – Hyperlipidemia – Asthma – Wound care – Infection control – Re-admissions • Patient education • Self-care measures • Care coordination • Transition management • Patient satisfaction	BP levels Percentage of patients at level___ ED/Hospital admissions	Inconsistent measurement of outcomes/analyzing data from charting. Few national benchmarks for ambulatory care data.	Need standardized tools for care coordination. Develop a self-efficacy score. Define caseload for care coordination AAACN should approach Press Ganey, discuss nurse-sensitive indicators and benchmarking.
	• Screening and review – Immunizations – Depression – Pain – Medication review • Patient education • Self-care measures • Care coordination • Transition management • Patient satisfaction	Pain Medication review/ reconciliation	Computer systems don't talk to one another. Interventions for positive depression screen are not standardized. Few national benchmarks for ambulatory care data.	
	Meaningful use Falls: Humpty Dumpty model		Computer systems don't talk to one another. Fall data do not reflect ambulatory care practice (rather fall risk).	

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Table 1. (continued)
Nursing-Sensitive Indicator Themes

Structure: Ambulatory Work Setting	Process *Data collection includes meaningful use and E measures from EPIC, Cerner, ACO requirements, RN Navigator Tool Call Centers*	Outcome	Barriers	Recommendations
RN handles all triage calls	• Patient education • Self-care measures • Telehealth – Phone call management (triage and virtual health visits) – Discharge phone calls • Care coordination • Transition management • Response time to answer calls • Patient satisfaction – Engage, educate, entertain – Re-admissions	Re-admission in 30 days Patient satisfaction	Inconsistent measurement of outcomes/analyzing data from charting. Few national benchmarks for ambulatory care data Computer systems don't talk to one another.	Consider telehealth: Call ins, call backs, track reason for call, track resolution of patient problem. Need standardized tools for care coordination. Define caseload for care coordination.
QI committee	Incident reports Management of abnormal labs Review of data from triage calls	Nurse protocols, documentation practices		
Shared governance				RN leader needs to be a part of planning for and implementing new/updated IT systems to identify what about RN practice is valuable and what to count to demonstrate that value.

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Recommendations: Follow up with a second survey to collect missing information. Number of RN staff in clinics, RNs in supporting roles, number of providers, number of visits, what does the nurse do in the clinic setting

a survey will be distributed to all AAACN members in an attempt to capture current work in these identified areas as well as ongoing work related to the five measures selected by the ANA, in the hopes of capitalizing on successful strategies already underway. Once initial measures are identified, piloted, and validated, the infrastructure can be created for ongoing benchmarking and collaboration. The long-term goal is to leverage professional nursing practice, based in the ambulatory care setting, to improve quality, safety, and cost in health care.

Ambulatory nursing care can be difficult to comprehend in all its complexity. This article represents our first goal of informing and educating RNs on the work being done on NSI in ambulatory care. Given the great variation in setting, staff mix, patient populations, role dimensions, skill sets, documentation systems, and resources, determining metrics that apply across the entire continuum of care is a daunting task. However, it is incumbent upon us to define the metrics that will promote the value of the registered nurse in ambulatory practice and care coordination. **$**

REFERENCES

Carter, M.W., Zhu, M., Ziang, J., & Porell, F.W. (2014). Investigating the long-term consequences of adverse medical events among older adults. *Injury Prevention, 20*(6), 408-415.

Donabedian, A. (1966). Evaluating the quality of medical care. *The Milbank Memorial Fund Quarterly*, *44*(3, Pt. 2), 166-203.

Haas, S., & Swan, B.A. (2011). Health care reform: Current updates and future initiatives for ambulatory care nursing. *Nursing Economic$, 29*(6), 331-334.

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Haas, S., Swan, B.A., & Haynes, T. (2013). Developing ambulatory care registered nurse competencies for care coordination and transition management. *Nursing Economic$, 31*(1), 44-49.

Institute of Medicine. (2010). *The future of nursing: Leading change, advancing health*. Washington, DC: National Academies Press.

Kaiser Family Foundation. (2013). *Summary of the Affordable Care Act*. Retrieved from http://kff.org/health-reform/fact-sheet/summary-of-the-affordable-care-act/

Lewis, L.C., (2014) Charting a new course: Advancing the next generation of nursing-sensitive indicators. *Journal of Nursing Administration, 44*(5), 247-249.

Montalvo, I. (2007). The National Database of Nursing Quality Indicators (NDNQI®). *OLIN: The Online Journal of Issues in Nursing,* 12(3). Retrieved from http://nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume122007/No3Sept07/NursingQualityIndicators.html

Sawyer, L.M., Berkowitz, B., Haber, J.E., Larrabee, J.H., Marino, B.L., Martin, K.S., … Walker, M.K. (2002). Expanding American Nurses Association nursing quality indicators to community-based practices. *Outcomes Management, 6*(2), 53-61.

Swan, B.A. (2008) Making nursing-sensitive quality indicators real in ambulatory care. *Nursing Economic$,* 26(3), 195-205.

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