



Ambulatory Care Nurse-Sensitive Indicators Series: Starting with Low-Hanging Fruit: Proposing the Adaptation Of Health Care Measures to the Role of the Nurse in Ambulatory Care

EXECUTIVE SUMMARY

- ▶ The American Academy of Ambulatory Care Nursing's Nurse-Sensitive Indicator Task Force was charged with identifying and developing meaningful measures for the ambulatory care environment.
- ▶ Several strategies were used to identify measures that would reflect the value of the role of the nurse in this setting.
- ▶ One such strategy was to conduct a comprehensive review of the health care environment as a whole and the measures within it, to identify measures that already existed that could easily be adapted to the role of the nurse in ambulatory care settings.
- ▶ Because of the complexity of the ambulatory care patient care environment, the group sought to reach momentum in indicator development by starting with the proposal of measures that would be less complex to develop, pilot, and adapt in organizations across the country.

nurse-sensitive indicator topics identified for meaningful measurement of the value of the nurse in these settings.

Health care delivery has been shifting from the inpatient to the ambulatory care setting, with significant growth in the primary care population (Start et al., 2016). According to the American Hospital Association (AHA, 2015), inpatient admissions have decreased from 11.93% in 1993 to 10.63% in 2013, and the average length of stay has reduced from 7 days in 1993 to 5.4 days in 2013. Meanwhile, outpatient visits averaged 14.22% in 1993 and increased to 21.45% in 2013 (AHA, 2015), while the registered nurse (RN) workforce in the outpatient setting, particularly in primary care, has declined (Institute of Medicine [IOM], 2010). The Patient Protection and Affordable Care Act of 2010 encourages growth of the primary care workforce by reimbursing for primary care, empowering community health centers, and establishing mechanisms to manage complex, high-risk patients, keeping them out of the hospital. Various elements of the current health care system need transformation and because of the close proximity and holistic perspective of nurses throughout the care continuum, the IOM in its landmark report, *The Future of Nursing: Leading Change, Advancing Health*, encouraged nurses in all roles and settings to take the lead in this transformation (IOM, 2010, 2015).

The AAACN Nurse-Sensitive Indicator (NSI) Task Force (TF) believes the empowerment of nurses in the ambulatory care environment is necessary to meet the coordination of complex care to the growing patient population. To date, measurement of the role of the ambulatory care nurse has been underdeveloped and not focused on the meaningful role nurses play in the primary care and specialty practice settings. The NSI TF sought to identify measureable topic areas that would quantify the RN as a leader and transformer in this setting (Start et al., 2016). Throughout the 3 years in which this work was addressed, one goal was to identify measureable topic areas that would be “low-hanging fruit,” or easy to develop and adapt in all



Many settings. Multiple roles. One unifying specialty.

IN APRIL 2016, the American Academy of Ambulatory Care Nursing (AAACN) published an important report entitled, *Ambulatory Care Nurse-Sensitive Indicator Industry Report: Meaningful Measurement of Nursing in the Ambulatory Patient Care Environment* (Start, Matlock, & Mastal, 2016). Within this report is a review of the current and future landscape of health care, particularly as it impacts the nurse in ambulatory care and community settings, a review of existent nurse-sensitive indicators in the ambulatory care setting, and 13 proposed

ROSEMARIE BATTAGLIA, MSN, RN, is Nurse Manager, Children's Hospital, Medical University of South Carolina, Charleston, SC.

RACHEL START, MSN, RN, NE-BC, is Director, Ambulatory Nursing, Nursing Practice, and Magnet® Performance, Rush Oak Park Hospital, Oak Park, IL.

MARY MORIN, RN, NEA-BC, RN-BC, is Vice President and Nurse Executive, Sentara Medical Group, Norfolk, VA.

NOTE: This column is written by members of the American Academy of Ambulatory Care Nursing (AAACN) and edited by Kitty Shulman, MSN, RN-BC. For more information about the organization, contact: AAACN, East Holly Avenue/Box 56, Pitman, NJ 08071-0056; (856) 256-2300; (800) AMB-NURS; FAX (856) 589-7463; Email: aaacn@ajj.com; Website: <http://AAACN.org>

organizations as well as be meaningful across a variety of settings in ambulatory care. Additionally, the NSI TF remained committed to the proposal of measures that would be applicable across the patient's lifespan. This column and those that follow will describe measures proposed, either adapted from already existing health care measures or novel, by the NSI TF to meet this need. A total of 13 measures have been proposed and are now being prioritized for development and benchmarking. This process will occur over the next several years through the partnership AAACN has with the Collaborative Alliance for Nursing Outcomes (CALNOC). CALNOC's scientific history with measure development, validation, and benchmarking will provide the expertise needed to get these measures into the ambulatory care environment.

Comprehensive Review of Measurement in the Ambulatory Setting: Finding the Low-Hanging Fruit

The purpose of the NSI TF's *Industry Report* (Start et al., 2016) was to describe the current health care environment, the role nurses are required to play, and whether any measures existed for current use in a benchmarking format for ambulatory care nurses. Throughout the process there were continual attempts to find measures that were low-hanging fruit. Because of the complexity of staffing, diversity of RN roles, and variation of electronic medical and/or paper records, the quest to identify meaningful measures was difficult. Several of the measures described in this article represent measures that will be easier to develop and eventually benchmark than others that are more complex.

A comprehensive review of measures within common databases such as The Centers for Medicare & Medicaid Services (CMS), Accountable Care Organization, National Quality Forum (NQF), and Physician Quality Reporting System (PQRS) was completed. When this analysis was then paired with the evidence-based literature, best practice, and expert reviews the task force conducted, several non-nursing-specific health care measures surfaced as potentially meaningful measures of nurse quality in the ambulatory care environment. Nine measures were further evaluated by subgroups within the NSI TF who split them up, performing additional literature reviews to support them and providing the ambulatory care nurse-sensitive indicator proposal language for future development and benchmarking. The proposed nine measures that were adapted from existing health care measures are reviewed in this column. The NSI TF proposes they all should be analyzed for development and eventual benchmarking.

Measures Adapted and Recommended as Ambulatory Care Nurse-Sensitive

The nine adapted measures proposed in section three of the AAACN *Industry Report* (Start et al.,

2016) are described in each subsection below. The title of each subsection is the name, as listed in the report, of each proposed measure. As these measures move through the development phase of the AAACN and CALNOC workgroup they will likely be shifted, further defined, and/or split into multiple separate measures for feasibility, validity, and greater reliability. Table 1 lists the key measurement descriptors along with the measures from which they were adapted.

Ambulatory Care Nurse Readmission Across the Lifespan. Acute care hospital readmissions are costly and often preventable (Horwitz et al., 2011). The Commonwealth Fund estimates if national readmission rates were lowered to the levels achieved by top-performing regions, Medicare would save \$1.9 billion annually (CMS, 2015a). In both the pediatric and adult populations, evidence suggests readmissions are linked to decreased quality of care, lack of care coordination, or other factors within the control of health care clinicians (Horwitz et al., 2011). An initial readmission measure was created by Yale for CMS and endorsed by NQF. This measure is entitled #1789 "Hospital-Wide, All-Cause, Unplanned Readmission Measure." It is specific to patients aged 18 years and older, estimating the hospital-level, risk-standardized incidence of unplanned, all-cause readmissions for any eligible condition within 30 days of hospital discharge for these patients (NQF, 2015a). NQF has also endorsed a pediatric all-condition readmission measure, NQF #2393, developed from the Center of Excellence for Pediatric Quality Measurement. This measure was commissioned and developed as part of the Agency for Healthcare Research and Quality (AHRQ) and CMS Pediatric Quality Measures Program (NQF 2015b; Start et al., 2016).

The NSI TF believes RN care coordination includes sociocultural as well as disease-specific knowledge and competencies and medication management principles, all of which have the strong potential to decrease emergency department and hospital readmissions (Start et al., 2016). The AAACN NSI TF further believes improved inpatient to outpatient handoffs and care coordination would improve readmission rates. Adaptation of these functions into a proposed measure that includes several high-risk, chronic patient populations will reflect the role the RN plays in the community and ambulatory care settings in reducing readmissions.

Ambulatory Care Nurse Pain Assessment and Follow Up. Approximately 76.5 million Americans suffer from pain, the number one reason Americans pursue health care (Start et al., 2016). Uncontrolled or undertreated pain diminishes quality of life while increasing health care costs and disability claims (CMS, 2015b). There are significant disparities related to pain perception, assessment, and treatment among racial and ethnic minorities (CMS, 2015b).

Chronic pain assessment should include deter-

Table 1.
AAACN NSI Task Force Proposed Indicators for Development of Ambulatory Care Nurse-Sensitive Indicator Measures

Measure Name	Measure Description	Adapted From
Ambulatory Care Nurse Readmission Across the Lifespan	<p>Risk-adjusted percentage of Accountable Care Organization (ACO)-assigned beneficiaries who were hospitalized who were readmitted to a hospital within 30 days following discharge from the hospital for the index admission.</p> <ul style="list-style-type: none"> Percentage of patients in one of below identified populations that receive a post-discharge call within 48 hours of emergency department visit or after an inpatient stay from an ambulatory care nurse responsible for care coordination of that patient. Percentage of patients in one of below identified populations that are readmitted within 30 days of discharge from inpatient setting. <p><i>Pediatrics:</i> Respiratory: Asthma/Respiratory syncytial virus/Pneumonia Cardiac: Congenital cardiac/Heart failure Endocrinology: Diabetes Blood disorders: Sickle cell Neurology: Seizures Primary Care: Hypertension, pain, depression, falls, obesity</p> <p><i>Adults:</i> Respiratory: Chronic obstructive pulmonary disease Cardiac: Heart failure Endocrinology: Diabetes Blood disorders: Sickle cell Neurology: Stroke Primary care: Hypertension, pain, depression screening, falls, obesity</p>	CMS ACO 8 NQF 1789 NQF 2393
Ambulatory Care Nurse Pain Assessment and Follow Up	Percentage of patients of all ages with documentation of a pain assessment through discussion with the patient including the use of a standardized tool(s) on each visit <i>and</i> documentation of a follow-up plan when pain is present.	NQF 0420 PQRS 131
Ambulatory Care Nurse Screening for High Blood Pressure and Follow-up Care	<p>Percentage of patients at all ages seen during the measurement period who were screened for high blood pressure and a recommended follow-up plan is documented based on the current blood pressure reading as indicated.</p> <ul style="list-style-type: none"> Percentage of patients in one of the identified populations that received a blood pressure screening during a visit encounter. Percentage of patients in one of the identified populations who have a follow-up plan of care for hypertension. 	ACO 21 NQF 0018 GPRO PREV 11
Ambulatory Care Nurse Screening and Follow-Up Documentation for Depression	<ul style="list-style-type: none"> Percentage of patients in one of the identified populations that received a depression screening during a visit encounter. Percentage of patients in one of the identified populations who screened positive and have a follow-up plan of care for depression. 	CMS 2v3 ACO 18 GPRO PREV 12 NQF 0418
Ambulatory Care Nurse Patient Falls in the Institution	All documented falls, with or without injury, experienced by patients on eligible unit types in a calendar quarter. Reported as total falls per 1,000 patient visits and unassisted falls per 1,000 patient visits.	CALNOC Falls Press Ganey/NDNQI NQF 0141
Ambulatory Care Nurse Screening for Future Falls Risk	Percentage of patients who were screened for future fall risk at least once within 12 months.	ACO 13 GPRO CARE 2 NQF 0101 PQRS 154

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Table 1. (continued)
AAACN NSI Task Force Proposed Indicators for Development of Ambulatory Care Nurse-Sensitive Indicator Measures

Measure Name	Measure Description	Adapted From
Ambulatory Care Nurse Screening for Body Mass Index (BMI)	Percentage of patients with a calculated BMI in the past 6 months or during the current visit documented in the medical record and if the most recent BMI is outside of normal parameters, a follow-up plan is documented within the past 6 months or during the current visit.	ACO 16 GPRO PREV 9 NQF 0421
Ambulatory Care Nurse RN Demographics	<ul style="list-style-type: none"> • % Diploma RN FTE • % Associate's degree RN FTE • % Bachelor's of science degree RN FTE • % Master's of science degree RN FTE • % Doctorate in nursing degree RN FTE • % Certified RN FTE • % Certified RN in specialty field FTE • % Turnover RN by FTE • % Vacancy RN by FTE 	CALNOC
Ambulatory Care Nurse Patient Satisfaction	The percentage of surveys that were returned within a defined period and of questions that are nursing specific and answered by the patient as "always."	Press Ganey CMS CG-CAHPS PSQ-18 Risser Patient Satisfaction Survey PPE 15

SOURCE: Start et al., 2016

NOTES: ACO = Accountable Care Organization, BMI = body mass index, CALNOC = Collaborative Alliance for Nursing Outcomes, CG-CAHPS = Clinician and Group Consumer Assessment of Healthcare Providers and Systems, CMS = Centers for Medicare & Medicaid Services, FTE = full-time equivalent, GRPO = group practice reporting option, NDNQI = National Database of Nursing Quality Indicators, NQF = National Quality Forum, PSQ = Patient Satisfaction Questionnaire, PQRS = Physician Quality Reporting System, PPE = Picker Patient Experience Questionnaire, RN = registered nurse

mining the mechanisms of pain through documentation of pain location, intensity, quality, onset, and duration, as well as functional ability and goals, and psychological and social factors such as depression or substance abuse (Hooten et al., 2013). PQRS Measure #131, "Pain Assessment and Follow Up," from which this ambulatory care nurse-sensitive measure was adapted, states performance of these activities may be reported by eligible professionals who participated in the quality actions described in the measure (CMS, 2015b).

The NSI TF believes pain assessment and follow up to be central to the role of the RN and as such, this measure, if adapted to the ambulatory care RN, may be a meaningful reflector of the role of the RN to patient care in the ambulatory care setting (Start et al., 2016). This measure applies to patients throughout the lifespan, is critical to care coordination, and can have an impact on the promotion of health.

Ambulatory Care Nurse Screening for High Blood Pressure and Follow-Up Care. Hypertension is a chronic condition that puts patients at high risk for development of heart disease, stroke, and other dis-

eases that can result in premature death (Kung & Xu, 2015). Reducing the number of persons in the population with hypertension is one of the objectives of *Healthy People 2020* (Office of Disease Prevention and Health Promotion, 2015). Approximately 1 in 3 U.S. adults – about 70 million people – have hypertension; of those, only 52% have their blood pressure (BP) under control (Farley, Dalal, Mostashari, & Frieden, 2010; Kung & Xu, 2015). Approximately 1 to 5 out of every 100 children and adolescents also have hypertension. In adults, BP above 130/80 suggests further monitoring; however, in children normal values are determined by age, sex, and height. The skill of the person obtaining the blood pressure measurement affects accuracy (Battaglia, 2006). The National High Blood Pressure Education Program (NHBPEP) recommends children age 3 years and older should have a BP evaluated in a medical setting at least once a year (NHBPEP, 2004). Additionally, the NHBPEP states children younger than 3 years should have a BP measurement under the following special circumstances: history of prematurity, neonatal complications requiring intensive care, congenital heart disease, and treat-

ment with drugs known to raise BP (NHBPEP, 2004). The strongest risk factor for hypertension in children and adolescents is being overweight. Finding and treating hypertension early in young people could lower their risk for complications during adulthood. To help clinicians decide whether to screen, it is necessary to know whether early detection actually improves health outcomes. It is also important to consider the potential harms of starting BP medications and other treatments in young people (Moyer & U.S. Preventive Services Task Force, 2013).

The role of the ambulatory care nurse is present throughout a patient's lifespan; therefore, an important disease correlate, such as hypertension, is vital to nursing assessment and follow-up care (Start et al., 2016). Blood pressure is already a topic associated with nurse-only visits in primary care and specialty practice settings for adults and children; therefore, it is an excellent example of a nurse-sensitive measure of quality.

Ambulatory Care Nurse Screening and Follow-Up Documentation for Depression. Depression affects up to 9% of patients and has an associated health care cost of more than \$43 billion in medical care costs and \$17 billion in lost productivity annually. Depression is projected to become the second largest cause of disability by 2020 (Maurer, 2012). Depression is often not treated adequately. Even when treated appropriately, more than 75% of patients with depression have recurrent episodes and approximately 30% have residual symptoms (Maurer, 2012). Depression has been associated with poorer outcomes in patients with a variety of medical conditions, such as coronary artery disease, diabetes mellitus, and stroke (Ciechanowski, Katon, & Russo, 2000; Ford et al., 1998; Robinson, Bolduc, & Price, 1987). The Centers for Disease Control and Prevention (CDC, 2013) recognizes the mental health of workers is an area of increasing concern to organizations, as depression causes disability, absenteeism, and loss of productivity among working-age adults. The U.S. Preventive Services Task Force (2009) recommends screening adolescents and adults for depression in clinical practices that have systems in place to ensure accurate diagnosis, effective treatment, and follow-up care (Maurer, 2012).

The NSI TF believes this depression screening measure is more complex than others and nurse specificity is not certain. This measure will require more time and work to develop because of its complicated nature. The screening may be done by a RN, but the follow-up plan must be made by the patient's provider. The measure is a process, not an outcome measure, and would apply across the lifespan. The NSI TF advises the use of Patient Health Questionnaire (PHQ)-2 and PHQ-9, and PHQ-A (for adolescents).

Ambulatory Care Nurse Patient Falls in the Institution. Falls are defined as a sudden, uninten-

tional change in position causing an individual to land at a lower level, on an object, the floor, or the ground, other than as a consequence of a sudden onset of paralysis, epileptic seizure, or overwhelming external force. Unintentional falls are significant sources of morbidity and mortality, especially in people over 65 years of age for whom falls are the leading cause of accidental death (Rubenstein, 2006). Up to one-third of falls in the hospital are deemed preventable, and CMS does not routinely reimburse hospitals for fall-related injuries. Fall prevention and performance improvement toolkits are available from such organizations as AHRQ and the American Nurses Association (Start et al., 2016). Fall prevention requires targeted interprofessional collaboration that is individualized for the patient (The Joint Commission, 2015). Start and colleagues (2016) state, "The AAACN NSI TF and AAACN membership at large believe this measure is reflective of the institution as a whole and the related safety plan for entry from the outside environment to the point of care. When falls occur in the ambulatory care area (clinic, ED, surgery center, etc.) they should be considered a unit/clinic event, however, when falls occur outside of the clinic environment, they should be considered an environmental event" (p. 57). This measure is included because it already exists for both inpatient and outpatient.

The NSI TF took the existent falls measures and added components, detailed in the *Industry Report*, that would make it more meaningful in the ambulatory care setting. These components are part of the proposed measure and as such are yet to be developed and piloted for meaningful benchmarking.

Ambulatory Care Nurse Screening for Future Falls Risk. Patients, particularly in the geriatric population, who present for medical attention due to a fall, report recurrent falls in the past year, or demonstrate abnormalities of gait and/or balance or are on key medications that affect balance, should receive a fall evaluation performed by a clinician with appropriate skills and experience. This screening may necessitate referral to a specialist (e.g., geriatrician) (American Geriatrics Society, British Geriatrics Society, & American Academy of Orthopedic Surgeons Panel on Falls Prevention, 2001). Patients seen by health care professionals should be asked routinely whether they have fallen in the past year and about the frequency, context, and characteristics of the falls. Those patients reporting a fall or considered at risk of falling should be observed for balance and gait deficits and considered for their ability to benefit from interventions to improve strength and balance (RTI International & Telligen, 2011a).

Ambulatory Care Nurse Screening for Body Mass Index (BMI). Obesity is a public health concern in the United States and throughout the world. Obesity is associated with an increased risk of a number of conditions, including diabetes mellitus, cardiovascular

disease, hypertension, and certain cancers, as well as increased risk of disability and a modestly elevated risk of all-cause mortality (Adams et al., 2006; RTI International & Telligen, 2011b). Thirty-one percent of children age 2 to 19 years of age are overweight, defined as above the 85th percentile for BMI, and 16.9% are obese, defined as BMI above the 95th percentile (Ogden et al., 2006). Diseases previously seen primarily in adults such as diabetes, hypertension, heart disease, hyperlipidemia, reproductive problems, asthma, and sleep disorders are now being observed in children who are obese (Lobstein, Baur, & Uauy, 2004). All of the above diseases are components of population health and chronic disease management that can be performed by RNs. The link between obesity and other chronic conditions support the NSI TF decision to include obesity screening as nurse sensitive.

Ambulatory Care Nurse RN Demographics. Inpatient nurse-sensitive databases have routinely collected demographics related to nurses' education, certification, turnover, and vacancy. "To encourage advancement of education, certification and improvement of nurse practice environment through initiatives that promote retention and reduced RN vacancy, close measurement of these metrics and associated implementation of performance improvement initiatives are required in the ambulatory care environment" (Start et al., 2016, p. 63).

Ambulatory Care Nurse Patient Satisfaction. A patient's satisfaction with his or her health care experience is linked to better outcomes for both patients and organizations and is a reportable metric required or recommended by such agencies as The Joint Commission, AHRQ, and Health Resources and Services Administration. In the patient-centered Medical Home model of care and other ambulatory care settings, the Clinician and Group-Consumer Assessment of Healthcare Providers and Systems tool is utilized to evaluate patient experience with accessible, coordinated, and patient-centered care (Burnet et al., 2014).

Very few patient satisfaction surveys for ambulatory care nursing were identified in the literature. The majority of current literature focuses on the advanced practice nursing role or targets a specific area such as oncology, long-term care, adult day care, palliative care, or surgical centers. Communication, medications, and technical skills of nurses were mentioned in some articles that included survey questions about nurses. However, the questions were not specific enough to evaluate the RN professional role in facilitating patient satisfaction/experience in ambulatory care (Start et al., 2016). "The AAACN NSI TF would like to pursue at least 1-2 questions that are applicable if an RN cared for the patient. We are aware that many settings do not have an RN and that if an RN is employed in that facility, patients often do not know

the difference between RNs, medical assistants (MAs), and other staff" (Start et al., 2016, p. 66).

Conclusion

The ambulatory care nurse-sensitive measurable topics described in this article as "low-hanging fruit," as well as in the published *Industry Report* (Start et al., 2016), were chosen because the NSI TF saw an opportunity to utilize an already developed measure within health care as a reflection of the activities of nurses in the ambulatory care setting. The TF chose these measures based on the fact many of these activities are already being performed according to a nurse's education and training. Adaptation of the non-nursing-specific measures to the ambulatory care nursing environment almost always included the revision of denominator statements to be reflective of a more meaningful population descriptor such as "visits," or "procedures." These are more applicable to the ambulatory care environment than items such as average daily census, which is utilized in the inpatient setting as a denominator for nurse-sensitive metrics. Additionally, when one existing measure was only for either adults or children, evidence and other current health care measures were sought to support ambulatory care nurse-sensitive indicators that are reflective of care provided to patients throughout the lifespan.

The next step to further develop and pilot these measureable topic areas will be undertaken through the AAACN and CALNOC collaborative partnership. Many of the measureable topic areas proposed in this article and in the *Industry Report* (Start et al., 2016) will eventually be broken into a minimum of two indicators (e.g., one for assessment of pain and one for a follow-up plan addressing pain). Because these proposed measures are well understood by both nurses and other disciplines within the health care team and because many of them are already captured in the electronic medical record, they may represent a good opportunity for meaningful benchmarking that is an easy first step, or low-hanging fruit, in the complex evolution of ambulatory care nurse-sensitive measurement. \$

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