Reducing 30-Day Readmissions Through Nursing Science
An Application of Transitions Theory With Best Practice Guidelines

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Bridget Stixrood, MSN, RN, CNL

The Transition Management Model was developed by and for nurse care coordinators at an Independent Health Network to reduce Medicare and Medicaid 30-day readmission rates. Preimplementation assessment revealed the need for a nursing science framework to effectively reduce 30-day readmissions. The model was developed through thoughtful integration of transitions theory with best practice guidelines set forth by Project BOOST. Initial results of the Transition Management Model produced a decline in readmission rates by 11%. The Transition Management Model initiative can serve as an exemplar for the integration of transitions theory to best practice guidelines to effectively reduce 30-day readmissions. **Key words:** *nurse care coordination*, *nursing theory*, *30-day readmission*, *transition management*, *transitions theory*

REDUCING 30-day readmissions is one effective strategy to decrease health care costs, improve client health outcomes, and reduce harm.[1-3] The Transition Management Model (Figure 1) was developed by and for nurse care coordinators to effectively and efficiently reduce 30-day readmission rates among Medicare and Medicaid clients at an Independent Health Network (IHN). The Transition Management Model was implemented beginning in April 2018. IHN set a corporate goal to reduce its 30-day readmission rates by 5%, improve patient health outcomes, and poten-

Author Affiliation: *Pacific Lutheran University, School of Nursing, Tacoma, Washington. Ms Stixrood is currently working as a Labor and Delivery Nurse at St Joseph Medical Center and a nurse at the Pierce County Jail. She is also a member of Sigma Theta.*

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Correspondence: *Bridget Stixrood, MSN, RN, CNL, 220 Tacoma Ave S, Apt 402, Tacoma, WA 98402 (bridgetstixrood@gmail.com).*

tially save close to $1 million. Implementation data (May-August 2018) show that the nurse care coordination team at IHN, consisting of registered nurses with a BSN degree or higher, following the Transition Management Model, effectively reduced 30-day readmission rates for Medicare and Medicaid clients by 11%.

The Transition Management Model uses transitions theory as the nursing science framework to deliver best practice guidelines set forth by Project BOOST. Project BOOST (better outcomes for older adults through safe transitions)[3,6] is a strategy to reduce 30-day readmission rates based on current research on transition management and is recognized by many quality organizations including Centers for Medicare and Medicaid Innovation.[5,7] The Transition Management Model uses nursing science to meet best practice guidelines for care transitions. This article is intended to present a successful integration of nursing theory to practice, in hopes of inspiring nurses to participate in the reciprocal integration of practice, profession, and nursing science that we need to further our discipline forward.[8(p436)]

Statement of Significance

What is known or assumed to be true about this topic:

Thirty-day hospital readmissions cost a significant amount of Medicare and Medicaid dollars and result in adverse patient health outcomes. Strategies to reduce readmissions to date are hospital-focused and lack community-based longer-term care support services.

What this article adds:

What this article adds is an exemplar of transitions theory applied to nursing practice for transition management to reduce 30-day readmissions. This article documents a strategy that successfully reduced 30-day readmissions and associated costs among Medicare and Medicaid clients. The Transition Management Model could serve as a catalyst for further research in transitions theory, how transitions theory can be applied to practice, and further develop client–nurse-centered quality metrics.

BACKGROUND

Nationally, hospital 30-day readmissions are costly and common, particularly among the Medicare[1,9] and Medicaid populations.[6] Thirty-day readmissions have been estimated to cost close to Medicare $17 billion alone.[9]

The Centers for Medicare & Medicaid Services (CMS) fees and hospital quality measures for avoidable 30-day readmission apply to the Medicaid population. Fees do not apply to Medicare beneficiaries, but they continue to have high and costly readmission rates. As a result, the Medicare population has received much research attention focused on 30-day readmission cause.[6] In a landmark study by Jencks et al,[9] it was found that 19.6% of Medicare beneficiaries were readmitted to the hospital within 30 days of discharge and 34% were readmitted within 90 days.[9] Medicaid readmissions are also prevalent, resulting in 9.4% of all admissions nationally, most commonly due to mental health and behavioral disorders.[6]

One result of the Affordable Care Act is to shift our health care spending to value-based purchasing, with an emphasis on quality health care versus fee for service.[9] Value-based care is already taking place at hospitals across the nation in response to 30-day readmission rate reduction incentives under the CMS for Medicare.[1] State officials and hospitals are anticipating readmission rate fees and incentives to extend to the Medicaid population in the near future.[6] The Transition Management Model project can be considered an exemplar for achieving anticipated Medicare and Medicaid health care quality goals of the value-based purchasing direction.

IHN serves a large number of Medicare and Medicaid clients, making this population
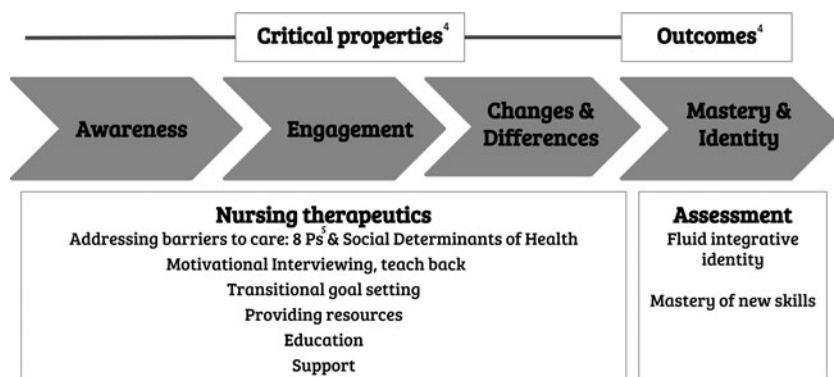

Figure 1. Transition Management Model.

of particular interest on which to focus a new transition management program. IHN supports independent providers who provide care to 19 556 Medicare and Medicaid clients. IHN works with Medicare and Medicaid insurance providers, such as United Healthcare and Humana, to manage complex health care needs and difficult care coordination. IHN's potentially avoidable 30-day readmissions cost IHN approximately $3.8 million in 2016 according to 2016 baseline data.

APPROACH

IHN's goal to reduce 30-day readmissions was approached through a microsystem assessment, literature review, data collection, and root cause analysis (RCA) meetings. IHN nurse care coordination team assessed department performance and workflow using the 5Ps (patients, professionals, pattern, process, and purpose) method for assessing microsystems shown in Table 1. The 5Ps method for assessing microsystems[10,11] allowed the nurse care coordinators to discover opportunities for growth and increased efficiency within their department. Literature review of best practice research and relevant nursing theory for nurse transition management was conducted at the onset of the project in March 2018. Results of the literature review helped shape metrics for data collection.

Data for the Transition Management Model was gathered during 2 periods. Baseline 30-day readmission data prior to project implementation were collected from January 2016 to April 2017. Data used for program implementation and evaluation were collected from March to August 2018. Metrics and data collection came from IHN's electronic medical record (EMR) program used by the nurse care management team to document patient care. Metrics were based on March 2018 literature review findings of best practice guidelines for reducing readmission rates. Metrics included 30-day readmission rates, face-to-face visits, discharge follow-up calls, hospital diagnosis, hospital readmission diagnosis, mental health diagnosis, substance abuse, days to provider follow-up appointment, and successful 72-hour postdischarge follow-up phone calls.

RCA meetings conducted from March to August 2018 provided valuable insight into 30-day readmission causes that could not be tracked through claims data or IHN's EMR. RCA meetings were conducted every week and attended by the nurse care coordination team, nursing department director, behavioral health coordinator, and medical director. Over a 5-month period preceding the adoption of the Transition Management Model, meeting notes and discussions were recorded. The results of the aforementioned

Table 1. 5Ps Microsystems Assessment Key Questions

5Ps Microsystem Assessment[10,11]			
P	**Key Questions**		
Purpose	Why does the microsystem exist?	What is your mission?	
Patients	Who are you serving?	What resources do they use/request?	How do they access resources?
Professionals	Who is part of the microsystem?	Who does what? When?	Are all roles being optimized?
Processes	How do things get done?	Is there a workflow step-by-step process?	What microsystems do you collaborate with?
Patterns	How often does the microsystem meet to discuss processes?	Are patients involved?	What are your outcomes?

program development process led to the Transition Management Model that was implemented in May 2018.

INITIAL ASSESSMENT

Baseline data

Internal data from IHN (2016-2017 and 2018) show that before the Transition Management Model pilot, the 30-day readmission rates were 15% for Medicare clients and 7% for Medicaid clients. Face-to-face visits occurred for 30% of the clients on their first admission and for 43% at readmission; primary care provider (PCP) follow-up appointments were scheduled 22% of the time within 7 days of discharge; discharge telephone assessments were made 57% of the time within 72 hours of discharge and 53% were successful (defined as talking to the person); 74.3% of 2016-2017 readmits received a risk score of more than 9; and 56% of readmissions had a mental health or substance abuse diagnosis in 2018.

The 2016-2017 data show diagnosis correlations with 30-day readmissions similar to national statistics where 30-day readmission risk is associated with chronic obstructive pulmonary disease (COPD), congestive heart failure, coronary artery bypass graft, acute myocardial infarction, and pneumonia.[9] In addition, sepsis was found to be a 30-day readmission risk for IHN clients. According to data pulled from the EMR pre–model implementation, 56% of IHN readmissions struggled with mental health or substance use disorders. This significant finding led to discussions among the nurse care coordination team about how to address mental health needs within the transition program. Under best practice guidelines set for the by the Agency for Healthcare Research and Quality[12] and Project BOOST,[7] there are no clearly defined interventions for these issues.

Workflow and process

IHN Medicare and Medicaid clients who are hospitalized receive a risk for readmission assessment and score to determine the likeli-hood of readmission and need for intervention. The risk for readmission assessment tool in use at the start of the project was based on the CMS guidelines, national readmission risk diagnoses noted earlier, and adjusted for internal IHN metrics to include sepsis, behavioral health, and polypharmacy. This tool consists of 8 questions scoring the client's 30-day readmission risk from 0 to 38. A risk score of more than 9 flags the individual as having a high risk for 30-day readmission. High-risk clients are assigned a nurse care coordinator to conduct a face-to-face visit at the hospital for further assessment.

Root cause analysis

Through collaborative discussion among interdisciplinary team members at RCA meetings, end-of-life complications, difficulty addressing palliative care needs, and the prevalence of substance abuse were the identified root causes of readmission for an overwhelming majority of internal RCA case studies. Many of the clients enrolled in nurse care coordination at IHN are homeless or low socioeconomic status and are trying to manage multiple complex conditions. Despite efforts to implement best practice and CMS guidelines, readmissions still occurred at a higher than desired rate according to 2016-2017 and 2018 data. RCA discussions also found a correlation between mental health and substance abuse readmission and homelessness. This ignited discussions among the interdisciplinary staff about the importance of community partnerships to increase client resources; best practice interventions risk becoming fruitless when a client is living without a home, mailbox, or cell phone or suffering from ongoing psychosis.

DEVELOPMENT

Pre–model analysis identified that analyzing 30-day readmission rates based on diagnosis alone does not account for other factors that could lead to readmissions such as degree of social support, transportation barriers, race, health literacy, socioeconomic status, or

end-of-life needs.[2] RCA meeting discussions revealed the prevalence of end-of-life issues and difficult end-of-life conversations as barriers to a safe transition to home and increased readmission risk. More than 70% of RCA meeting notes cited a client's need for palliative or hospice care as the consensus root cause for readmission. Specifically, barriers identified by the nurse care coordination team included unsuccessful attempts to explain the benefits of palliative and hospice care to providers and families, and frustrations obtaining a referral from providers. To address this concern, palliative and hospice nurse program directors were invited to IHN to provide the nurse care coordinators with improved resources, partnerships, vocabulary for talking to providers and families, and support for difficult conversations. While palliative care and hospice care are within the BOOST 8Ps[5(p53)] guidelines, recommendations for approaching end-of-life decision-making are lacking in transition management programs as well as in our hospital-based health care system. IHN nurse care coordinators struggled with the difficulties bridging inpatient and outpatient palliative care services. They found that this often delayed the referral, resulting in missed opportunities to begin a consultation while the individual is conveniently in the hospital.

Some of the major problems identified as a result of preprogram assessment were lack of palliative and hospice care partnerships, mental health and substance abuse resources, client difficulty meeting discharge instructions due socioeconomic barriers, and need for a Medicare- and Medicaid-specific transition program. The Transition Management Model provides an avenue to address many of the aforementioned problems. Those that were outside of the scope of service of the nurse care coordination team at IHN are being addressed by adding a mental health provider to the team, increasing community partnerships with homeless shelters, collaboration with the local fire department, palliative care and hospice providers, and substance abuse resources.

Literature review

According to the literature, it has been shown that *the number* of interventions an individual receives is the variable most strongly correlated with reduced readmissions. If an individual receives 7 or more interventions, 30-day readmission rates tend to decline.[13,14] Interventions are defined by common measures taken within transition management programs to reduce readmissions. For example, follow-up calls from care providers should be made no later than 72 hours after discharge and provider follow-up visits should be made within 7 days of discharge.[3,7,12] Successful transition management programs reduce readmission rates by promoting client self-management through motivational interviewing, using a teach-back approach to patient education, and providing discharge care plans that are written in plain language and outline each diagnosis with information on what to do when problems arise.[3,5,7,12,13]

Project BOOST 8Ps*

Project BOOST was identified during literature review as a potential approach to problems and barriers to safe transitions identified by the team at RCA meetings. Project BOOST 8Ps[5(p53)] screening tool is a checklist developed by the Society of Hospital Medicine that contains the common reasons found in research for avoidable 30-day readmissions. These 8 reasons are as follows: Problems with medications, Psychological, Principal diagnosis, Poor health literacy, Physical limitations, Patient support, Prior hospitalization, and Palliative care/hospice.[5(p53)] The user-friendly format of Project BOOST 8Ps made training the nurse care coordination team manageable and less daunting. The 8Ps covers 30-day readmission risk factors including psychosocial factors on a 1-page form that is easy to bring to the hospital for face-to-face visits.

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The nurse care coordination team identified the need for a nursing science framework to address the 8Ps.[5] The 8Ps[5] provides a guide to common barriers clients face while transitioning from the hospital to home or a lower level of care. Transitions theory was chosen to address the complex, personal, emotional, and individualized nature of transitions.[15(p26)]

Transitions theory

Transition is a process that occurs over time between 2 fairly stable states,[15(p25)] while change is a single occurrence and the catalyst for transition. Transitions occur throughout life and often occur simultaneously with other transitional experiences.[4,16] Transitions theory has been applied to situation-specific theories, used as a perspective for practice and as a framework for research.[17] Transitions theory supports the development of nursing therapeutics for successful transitions that are client-centered.[17] Indicators of a successful transition that is leading the client toward health and well-being rather than vulnerability and risk are the client feeling connected, increasing confidence, coping with the transition, and feeling situated.[18] Transitions theory frames transitions in 3 subcategories: properties of the transition experience; conditions of the transition; and patterns of response.[4] Table 2 outlines the key concepts of transitions theory

While transitions are individual, intricate, and complex, most transitions share the critical properties of awareness, engagement, change and difference, time span, and critical points and events.[4] The conditions of a transition can be either facilitating or inhibiting to a healthy transition process.[4,18] These conditions may include cultural beliefs and attitudes, socioeconomic status, preparation and knowledge, and community and societal

Table 2. Transitions Theory Core Concepts

Properties of transitions	
Awareness	Perception and recognition of the transition.[4]
Engagement	Demonstrating involvement in the transition process; participation.[4]
Change and difference	Change is a single event that may be disequilibrating. Difference is the perception that one's experience is separate from another's. Feeling different in some way due to the transition.[4]
Transition time span	Transitions may be long or short and take place over time.[4]
Critical points and events	Associated with awareness and engagement. Critical events are milestones in the transition process leading to stability or instability.[4]
Transition conditions: Facilitators and inhibitors	
Personal	Personal concepts that facilitate or inhibit the transition process: *meanings* individuals attribute to transition events, *cultural beliefs and attitudes* connected to the individual's perception of the transition process, and the level of *preparation and knowledge* the individual has about the transition.[4]
Community	Facilitators and inhibitors within the community are (but not limited to): resources, social support, access to health care and relevant information from trusted health care resources.[4]
Society	Society can facilitate or inhibit transitions through (not limited to): social stigma, racism, gender inequality, marginalization, privilege, socioeconomic status, and class.[4]
Patterns of response (of a healthy transition)	
Progress indicators	Feeling connected, interacting, location and being situated, developing confidence, and coping.[4]
Outcome indicators	Mastery and fluid integrative identities.[4]

context. Patterns of response to a transition reflect the client's experience, coping, and emotional response to transitions.[4] The nurse can help move the client toward positive patterns of response to the transition, such as feeling connected, interacting, developing confidence and coping, and away from anxiety, irritability, distress, or disorientation.[15(pp26-27)] Outcome indicators of a successful transition are mastery of new skills and fluid integrative identity.[4] The critical properties and outcomes of a healthy transition from transitions theory were adopted for the Transition Management Model.

TRANSITION MANAGEMENT MODEL

The Transition Management Model implemented at IHN in May 2018 addresses logistical barriers to care such as transportation, finances, and polypharmacy and nonlogistical barriers such as health beliefs, emotional and spiritual health, and self-concept in a consistent and client-centered manner. The nurse care coordinator assesses the critical properties[4] of the client's transition experience to then address barriers outlined by the 8Ps[5] and choose nursing therapeutics to move the client toward a safe and healthy transition. Motivational interviewing and teach-back approaches are essential nursing therapeutics in the Transition Management Model for safe and effective transitions.[3,5,7,12,13] The goal of the model is to move the client toward the outcome of mastery of new skills and fluid integrative identity. The Transition Management Model requires ongoing assessment of the client's transition process through the critical properties of awareness, engagement, and changes.[4,17] The specific assessments used for each critical property within the Transition Management Model are listed in the Transition Assessment Tool given in Figure 2 and further defined in the following text.

Critical properties and outcomes

Awareness is the essential first step to a transition; awareness is the client's perception, recognition, and acknowledgment of his

or her own transition experience.[4] Awareness may be expressed through a client's perception of the transition and the congruence with what would be an expected perception of this type of transition.[4] For example, a client may begin to recognize that hospitalization resulted in a new diagnosis and express how this may affect daily life. The nurse care coordinator may evoke awareness by inquiring about how the client's situation or health has changed.[16] The nurse care coordinator assesses awareness as follows: the client is able to state why he or she went to the hospital, is able to describe the changes to his or her care, and recognizes importance of PCP follow-up (Figure 2).

The Transition Management Model is focused on hospital admission as the critical event that triggers contact between the nurse and the client. With that in mind, it is important to recognize that the true beginning of the client's transition process may have begun long before the nurse care coordinator's involvement. The critical property of *engagement* is the process evidenced by involvement, participation, actively preparing, and increasing self-management.[4,16] The nurse care coordinator assesses engagement as follows: the client is participating in self-care, asking questions of the nurse care coordinator, beginning to perform tasks related to his or her health, keeping PCP follow-up appointment, and discussing concerns with one's PCP (Figure 2).

Change is an essential event for transitions to occur, but not all change involves a transition.[4,16] Critical conversations should occur between the nurse care coordinator and the client, addressing change and further exploring the personal conditions of the client's transition, such as meaning, perception, identity, cultural beliefs, preparation, and knowledge and patterns of response.[4] A change in health can be disequilibrating[4] and through the support and guidance of the nurse care coordinator using motivational interviewing and teach-back skills, a client can identify health goals as a result of change. Identifying change in response to transition

Transition Assessment: readiness to "graduate"
Automatic referral to care coordination (CC) long term

At the end of 4-week period evaluate the following areas with the patient/caregiver(s).

| **Transition Process**[4] | **Complete** |

Which stage in the transition process is the patient in?

☐**Awareness** ☐Incomplete
    ☐Patient is able to state why they went to the hospital.
    ☐Patient is able to describe changes to care that were made at discharge.
    ☐Patient recognizes the importance of PCP follow up
    ☐Other:

☐**Engagement** ☐Incomplete
    ☐Patient is participating in self-care (asking questions, performing tasks related to health)
    ☐Patient kept follow up appointment and discussed recent hospitalization with provider
    ☐Other:

☐**Changes** ☐Incomplete
    ☐Patient is demonstrating "change talk" (I want to...I wish...)
    ☐Patient has set personal health goals for themselves.
    ☐Other: free text

☐**Mastery of new skills**
    ☐Patient has mastered a new skill for self care (cooking, dressing wound, vital signs, etc)
    ☐Other:

☐**Identity**
    ☐Patient is verbalizing increased confidence with managing their condition.
    ☐Patient feels in control of their health and wellbeing and expresses stability.
    ☐Other:

| **8 Ps**[5] | **Addressed** |

Have problems in the following areas been addressed?

☐**PROBLEMS WITH MEDICATIONS** ☐Addressed ☐Incomplete
> 7 medications, high risk medication (changes, new or noncompliance): insulin, anticoagulants, oral hypoglycemic medications, dual antiplatelet therapy, digoxin, lithium, or narcotics.
    ☐*Medication reconciliation complete*

☐**PSYCHOLOGICAL** ☐Addressed ☐Incomplete
Behavioral health needs or substance use disorder.
    ☐*Connected with SUD resources*
    ☐*Connected with BH provider/counselor*

☐**PRINCIPLE DIAGNOSIS** ☐Addressed ☐Incomplete
COPD, HF, pneumonia, cancer, stroke, acute MI, COPD, infection.
    ☐*Self management, symptom management addressed*
    ☐*New diagnosis education*

☐**POOR HEALTH LITERACY** ☐Addressed ☐Incomplete
Inability to do teach back, poor understanding of diagnosis
    ☐*Education and teach back (to patient or caregiver)*
    ☐*Provided discharge care plan at patient's literacy level and in preferred language*

Figure 2. Transition Assessment Tool. PCP indicates primary care provider; SUD, substance use disorder; BH, behavioral health; MI, myocardial infarction; COPD, chronic obstructive pulmonary disease; ADL, activities of daily living; HF, heart failure; PT, physical therapy; OT, occupational therapy; RCA, root cause analysis; D/C, discharge.

☐**PHYSICAL LIMITATIONS**   ☐Addressed   ☐Incomplete
Physical limitations that inhibit ability to provide self-care (ADLs), frailty, decomposition, need
for assistive devices.
         ☐*Addressed limitations via HH referral, PT, OT, equipment*

☐**PATIENT SUPPORT**   ☐Addressed   ☐Incomplete
Social isolation, absence of support person/community, insufficient connection to PCP.
         ☐*Follow up PCP appointment & other health care providers (specialists, psych)*

☐**PRIOR HOSPITALIZATION**   ☐Addressed   ☐Incomplete
Non-elective in the last 6 months
         ☐*RCA meeting*

☐**PALLIATIVE CARE/HOSPICE**   ☐Addressed   ☐Incomplete
Terminal illness, uncontrolled cancer pain/symptoms, would you be surprised if this patient
passed away within the next year?
         ☐*Advanced directives*
         ☐*Engage in palliative or hospice conversation*

Transition Bundle   **Complete**
Has each task been completed?
Discharge Follow up call   ☐Yes ☐No ☐Unable to Reach
D/C Assessment (ADLs, Mobility, cognitive status) ☐Yes ☐No ☐Unable to Reach
Home/environment safe   ☐Yes ☐No ☐Unable to Reach
Medical equipment   ☐Yes ☐No ☐NA
Care plan to PCP   ☐Yes ☐No ☐NA
Care plan to Patient   ☐Yes ☐No ☐No address
Financial barriers   ☐Yes ☐No ☐NA
Transportation barriers   ☐Yes ☐No ☐NA
Called 3-2-1-1   ☐Yes ☐No ☐NA
Social Determinants of health assessment   ☐Yes ☐No ☐NA

         Transition Nurse D/C decision: ☐Continue with CC   ☐"graduate"
Reason: State why patient is still in Awareness or Engagement→ highlighted automatic referral
to long-term care coordination (CC).

Figure 2. (*Continued*).

is a skill the nurse care coordinator builds to foster the outcomes of mastery of new skills and fluid integrative identity. The nurse care coordinator assesses change as follows: the client is demonstrating "change talk" (I want to … I wish … I should), and the client has set personal health goals (Figure 2).

Mastery of new skills is an identifying outcome of a healthy transition.[4,18] Mastery of new skills is defined within the Transition Management Model as the client acquiring and practicing with confidence the skills that promote health in this new phase of his or her life.[4,18] An individual may express mastery through teach-back methods as he or she begins to understand and asks for appropriate information and tests regarding his or her condition. Mastery may be demonstrating the use of an insulin needle to self-administer insulin or accurately calculating the carbohydrates in a meal. The nurse care coordinator assesses mastery of new skills as follows: the client has mastered a new skill for self-care (Figure 2).

Fluid integrative identity is another character outcome of transitions that may change a person's perception of his or her own identity.[4,17,18] A fluid identity is dynamic

rather than static. The client has not developed a whole new identity, unrecognizable from the last but rather integrated the transition experience into new ways of being and coping.[4] Identifying assessment strategies for fluid integrative identity was a challenge. The nurse care coordination team decided on incorporating the process indicators of confidence and coping.[4] On the basis of the assumption that transitions occur between 2 fairly stable states,[4] the nurse care coordination team decided to include "expressing stability" as an assessment factor for fluid integrative identity. The nurse care coordinator assesses fluid integrative identity as follows: the client is verbalizing increased confidence with managing his or her condition, feels in control of his or her health, and expresses a feeling of stability (Figure 2).

Delivery

The Transition Management Model is delivered over a 4-week period. Figure 3 illustrates the workflow algorithm used at IHN to deliver the Transition Management Model. While time is an essential property of transitions,[9] it is difficult to constrain all transitions to a specified time frame. Therefore, the Transition Assessment Tool (Figure 2) is used at the end of the 4-week period to determine whether the client is still in transition and in need of continued management. If necessary, the client may be followed for a longer term, with the nurse care coordinator continuing to use the Transition Management Model.

IHN nurse care coordinators agreed upon the criteria shown in Figure 2 for continued transition management or "graduation" from the transition program. It was decided that if
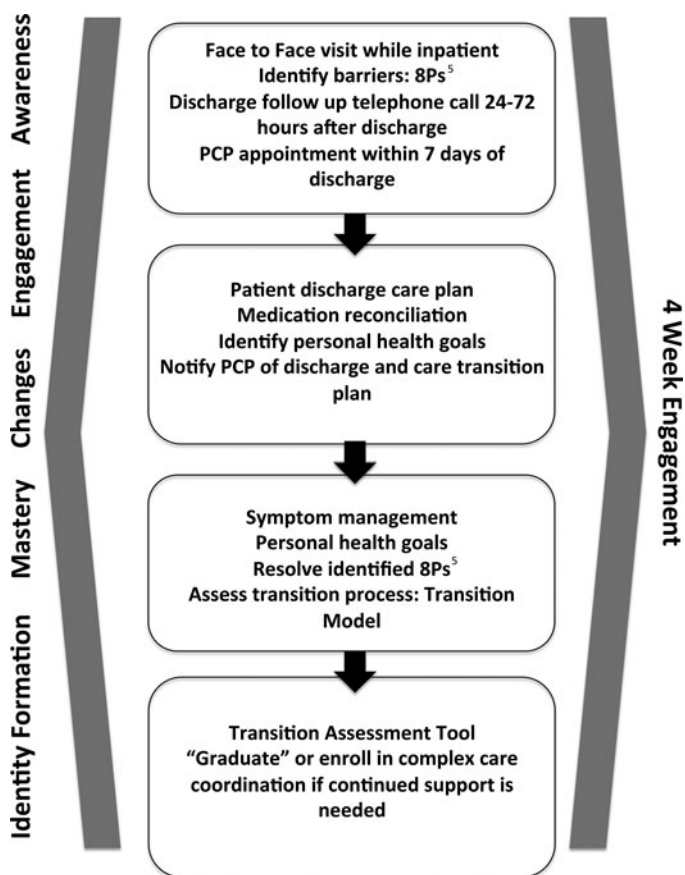

Figure 3. Algorithm for model delivery. PCP indicates primary care provider.

a client has not progressed toward changes and differences, he or she will continue with nurse care coordination. The ultimate goal of the transition assessment was to begin to identify measurable outcomes for successful or unsuccessful transitions based on nursing science. As an easy-to-use checklist, successful transitions are to be measured on the basis of critical properties of transitions (outlined earlier) rather than on "nursing judgment" alone. The following case study illustrates the essential properties of transitions and utilization of the Transition Management Model by the nurse care coordinator.

Case study

Rebecca Montgomery was outside gardening when she became increasingly short of breath. Rebecca went inside her house and found she had a temperature of 103°F and felt dizzy. Rebecca drove herself to the emergency department and was admitted for COPD exacerbation. Rebecca was covered under Medicare and managed by IHN through a partnership with her PCP. Upon admission, the IHN nurse care coordinator was notified of her inpatient status and visited her at the hospital the next day. At their face-to-face visit, Rebecca said that no one has ever told her that she has COPD despite using an inhaler and continuous positive airway pressure at night for the past year. Rebecca expressed concern about her hospitalization and wanted to know what COPD is, the progression of her COPD, and what she could do to improve her health. The nurse care coordinator explained that she would be following up with her for 4 weeks, making sure she had everything she needed to stay healthy and out of the hospital. The nurse care coordinator scheduled an appointment with Rebecca's PCP 2 days after discharge.

When the nurse care coordinator called to follow up on Rebecca's discharge home, Rebecca stated she was feeling okay but her blood pressure readings were high. The nurse care coordinator had Rebecca log her blood pressures 3 times a day for 2 days. Rebecca's blood pressure was over 160 systolic and 110 diastolic consistently over the 2

days. The nurse care coordinator arranged for Rebecca to see her PCP that day. Rebecca now had a list of new medications and new diagnoses of COPD and uncontrolled hypertension. Throughout the month, the nurse care coordinator worked with Rebecca to establish personal health goals of gardening 3 times a week, increasing physical activity, and managing her health independently. At the end of the 4 weeks, the nurse care coordinator used the Transition Assessment Tool to assess whether Rebecca was ready to "graduate." Rebecca's blood pressure was still high. She was scheduled to see a cardiologist and a pulmonologist in the next week. Because of Rebecca's multiple new diagnoses and uncertain medication regimen, the nurse care coordinator established that Rebecca was still in transition and would benefit from longer-term care management to prevent readmission and meet her personal health goals.

RESULTS

Initial results of the Transition Management Model are promising. RCA meeting results and quantitative data from the EMR show improved client engagement and reduced 30-day readmissions. RCA meetings have been reduced from weekly to bimonthly due to reduced 30-day readmission rates. Current (August 2018) readmission rates at IHN are 4% for Medicaid (a reduction of 3%) and 7% for Medicare (a reduction of 8%). The rates combined make a total 30-day readmission reduction rate for Medicare and Medicaid of 11%. This exceeds the 5% 30-day readmission reduction goal set in 2016 before the inception of the Transition Management Model. Initial financial impact statements of the impact of the Transitions Management Model have projected a $1.2 million savings in annual costs. With this savings realized, plans for program expansion include the addition of a transition nurse manager to oversee the program and expand network partnerships within the community to improve resources available to clients. The addition of behavioral health staff will include primary care behavioral health practitioners

and psychiatric/mental health nurses to address the high number of clients with mental health and substance use disorder.

In addition to the successful reduction of 30-day readmissions, client engagement with best practice guidelines has increased. Data collected from May 2018 to June 2018 show that 173 clients engaged with a nurse care coordinator in transition management. The rate of provider appointments made and kept within 7 days was 62% (compared with 22% from 2016 to 2017), the rate of successful discharge follow-up calls was 70% within 72 hours (compared with 53% in 2016-2017), and rates of behavioral health and substance use disorder clients remained the same at 56%.

DISCUSSION

Limitations

Data gathered for this initiative were based on metrics within the electronic health record at IHN used by nurse care coordinators for documentation of patient care. Engagement rates of home health, palliative care, or hospice care were not gathered because of the retroactive time frame of claims data. IHN does not directly link with these services and only receives claims data. Organizations implementing the Transition Management Model may want to further explore these services as an addition to the program. IHN is limited by the services available to the organization through Medicare and Medicaid. In addition, the shortage of mental health and substance use disorder treatment facilities in Washington State creates a significant barrier to providing appropriate care to clients in need. Washington State has a higher than average incidence of mental illness coupled with a lower than average access to mental health care, resulting in Washington State ranking 41st in the nation for mental health care access.[19]

Next steps

The Transition Management Model could serve as a framework for research into the critical properties of transitions (awareness, engagement, changes, and differences).[4] Development of assessment criteria for the outcome indicators of a successful transition (mastery of new skills and fluid integrative identity)[4] is needed for measuring client success. Future research for the Transition Management Model is an opportunity to quantify the often taken for granted effectiveness of nursing as a discipline.

The risk for readmission assessment tool was not evaluated during this phase of program implementation. Next steps at IHN are to assess the effectiveness of the risk for readmission assessment tool and identify opportunities for improvement. In addition, IHN is looking to incorporate a mental health practitioner, increase community partnerships for substance abuse and housing resources, as well as palliative and hospice care partnerships.

CONCLUSION

The intention of this article is to present a project that effectively reduced 30-day readmission rates through the use of transitions theory while addressing best practice guidelines to enhance nurse care coordination. Meleis[20] has been a strong voice in theoretical development, nursing science, and advancing the nursing profession. The approach to development of the Transition Management Model drew from Meleis'[20] perspective on the cyclical integration of theory, research, and practice, as well as on Fawcett's[8] similar perspective of reciprocal integration. Theory applied outside of academia as intentional and integral to nursing practice contributes to research, nursing science, and theory development.[20(p23)] Through the incorporation of the 8Ps,[5] current research on 30-day readmission and application of transitions theory into a clear and concise model effectively reduced readmission rates for IHN's Medicare and Medicaid client population. The Transition Management Model, as presented in this article, should not be viewed as a finalized project but rather as a catalyst for further research into measurable outcomes

and metrics that are relevant to nursing science. In the face of a rapidly changing and unpredictable health care system, nurses must continue to develop nursing science through reciprocal integration[8] of nursing theory with practice and research to develop outcome measures that continue to address the health and well-being of people.

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