

UTILIZATION OF THE NURSING ROLE EFFECTIVENESS MODEL WITHIN NURSING LITERATURE



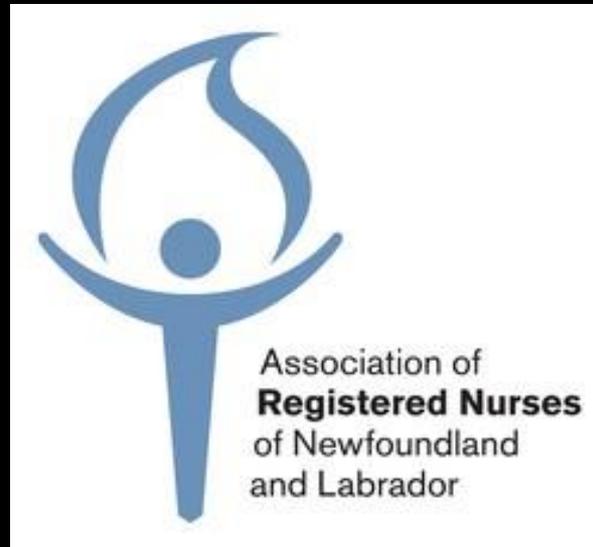
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OVERALL GOAL

To understand and evaluate nursing contributions in primary care across Canada and to identify opportunities to integrate nursing into team-based practices.

- Lukewich, J. (Received: December 2016). *Exploring the Utility of the Nursing Role Effectiveness Model in the Evaluation of Nursing Contributions within Primary Healthcare: A Scoping Review*.
Funding Source: ARNNL Nursing Research Award.



BACKGROUND

Evaluating Nursing Contributions

- Global emphasis on delivery of high-quality care
- Nurses play an important role in the delivery of health services across the continuum of care
- **Need to evaluate the contribution of nursing to the quality and cost of care**
 - Can provide accountability to nursing practice
 - Help integration and optimization of nursing role
 - Particularly important in **primary care**
 - **Inform discussions re: integration/optimization of nurses within team-based practices**

Evaluating Nursing Contributions

- **Challenging! Especially in primary care...**
 - **Literature is sparse**
 - Focused on NPs (or no clear distinction)
 - Data sources are limited
 - No billing codes
 - Lack of understanding of role of family practice nurse

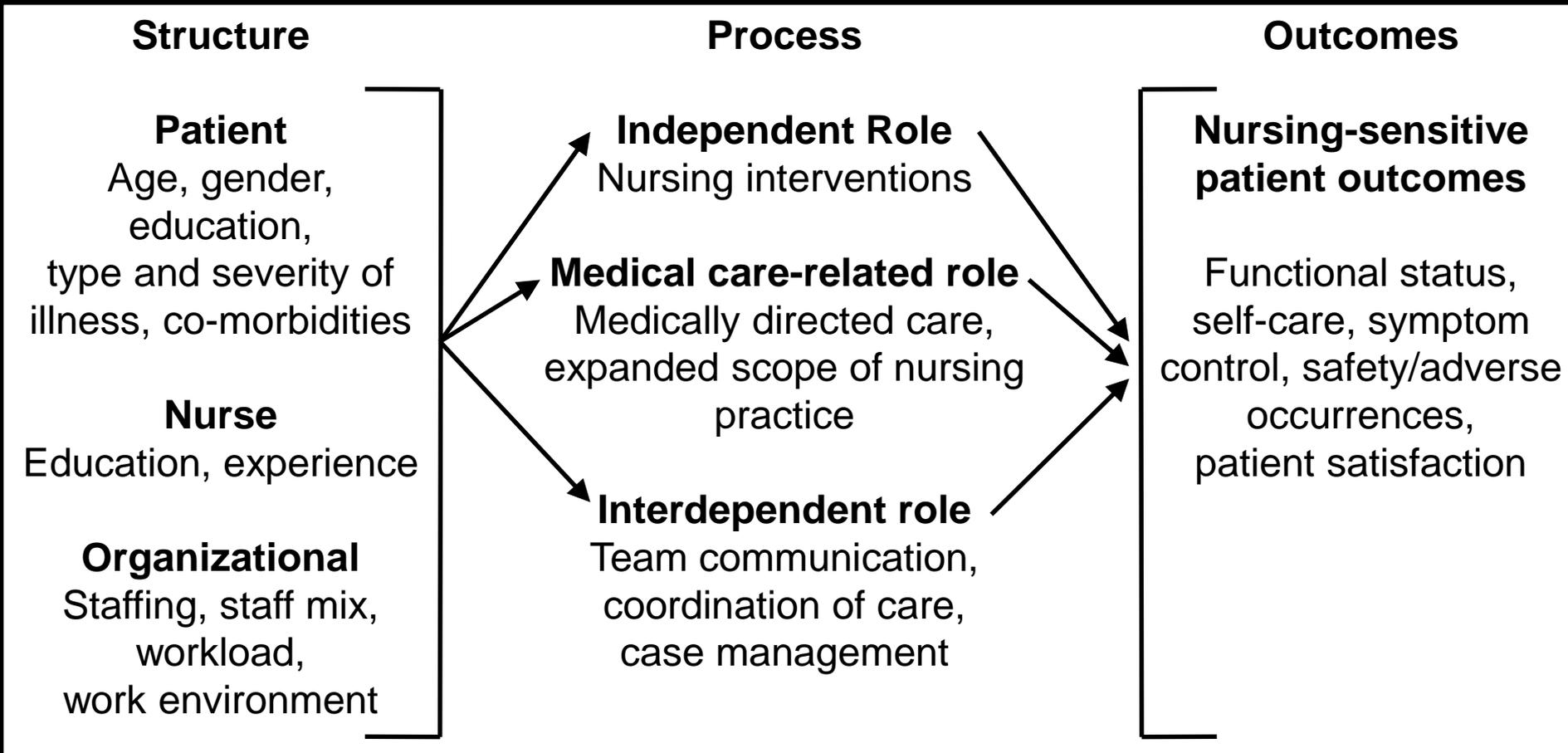
Evaluation of Nursing Contributions

- Nursing-sensitive outcomes have been developed to be used as performance indicators
 - Outcomes in which nurses are held accountable for and represent the effect of interventions delivered, and can be used as indicators of nursing performance
(Doran, 2003; Doran, 2011; National Quality Forum, 2012)

- Use of nursing-sensitive outcomes can be facilitated by using a guiding framework:
 - **Nursing Role Effectiveness Model**
(Irvine, Sidani, & McGillis Hall, 1998)

Nursing Role Effectiveness Model

(Irvine, Sidani, & McGillis Hall, 1998)



Nursing Role Effectiveness Model

- Based on the Donabedian (1966) structure-process-outcome model of quality care
- Identifies important variables that can influence outcome achievement
- Derived deductively from a comprehensive literature review of nursing-sensitive patient outcomes and the effectiveness of nursing interventions, as well as expert consultation
- Incorporates a broad set of variables that are reflective of the multidimensional nature of nursing care

Nursing Role Effectiveness Model

- Used within various settings
 - *Extent of use unknown*
 - *Validation of relationships proposed within model required across healthcare settings*
- There is a need to examine outcomes related to nursing within primary care setting
 - *Can the model be used to guide this research?*
 - *Does it need to be modified?*

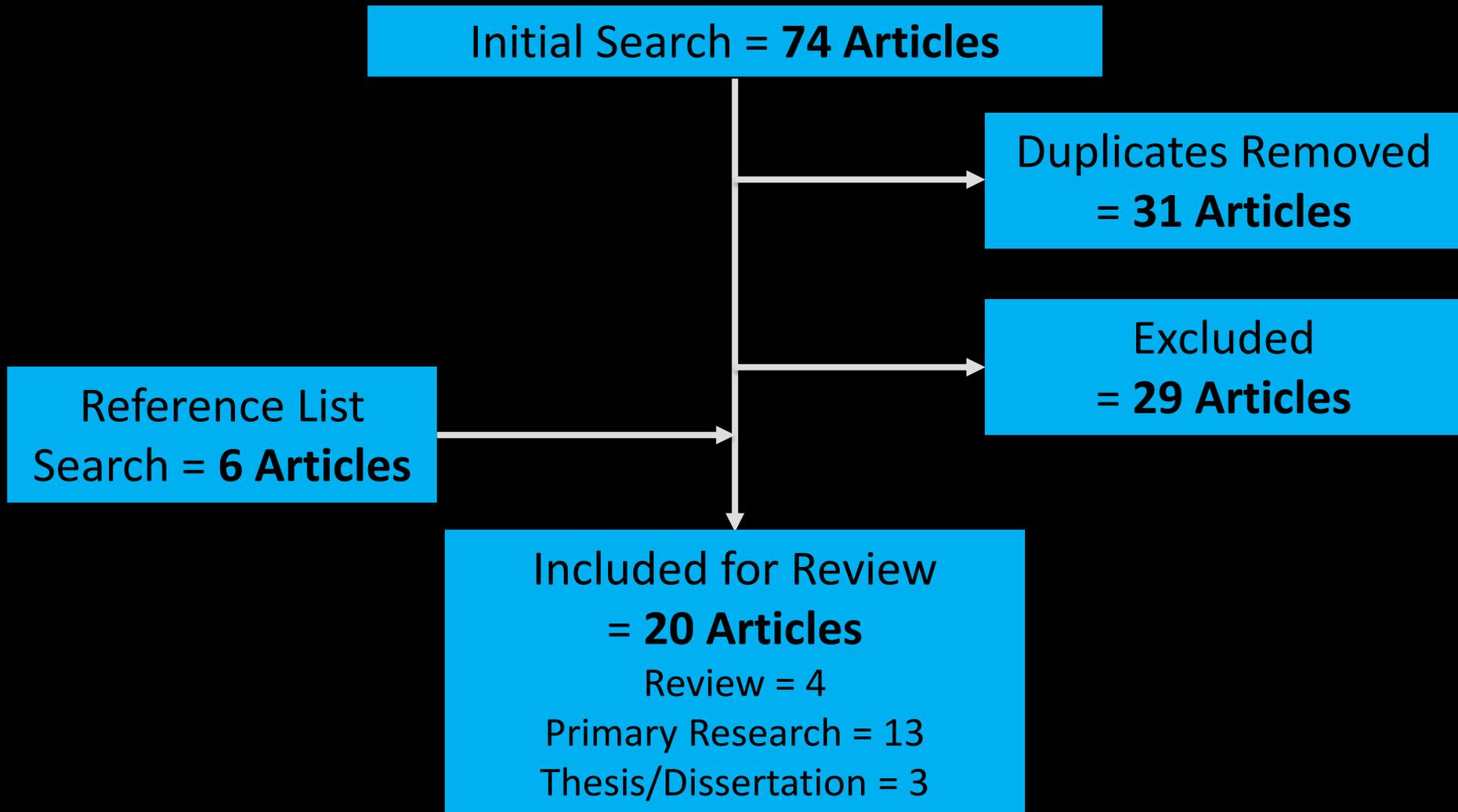
Purpose

To examine the use of the **Nursing Role Effectiveness Model** within nursing literature and validate the strength of relationships proposed within the model.

Methods

- Scoping Review (JBI methodology)
- Search Strategy:
 - Cochrane, Medline, EMBASE, AMED, PubMed, CINAHL, PsycInfo, ProQuest Dissertations & Theses
 - Keywords: ‘Nursing Role Effectiveness Model’
 - Not limited by date, location, study design, or setting
 - Reference lists of all relevant articles and Google Scholar searched
 - Michelle Swab, Megan Kirkland
- Data Analysis:
 - Summarized in tables and narrative format
 - Consolidation of relationships examined within each setting

Overview of Search Results



Setting of Studies

20 articles met inclusion criteria

Publication dates: 1998-2015

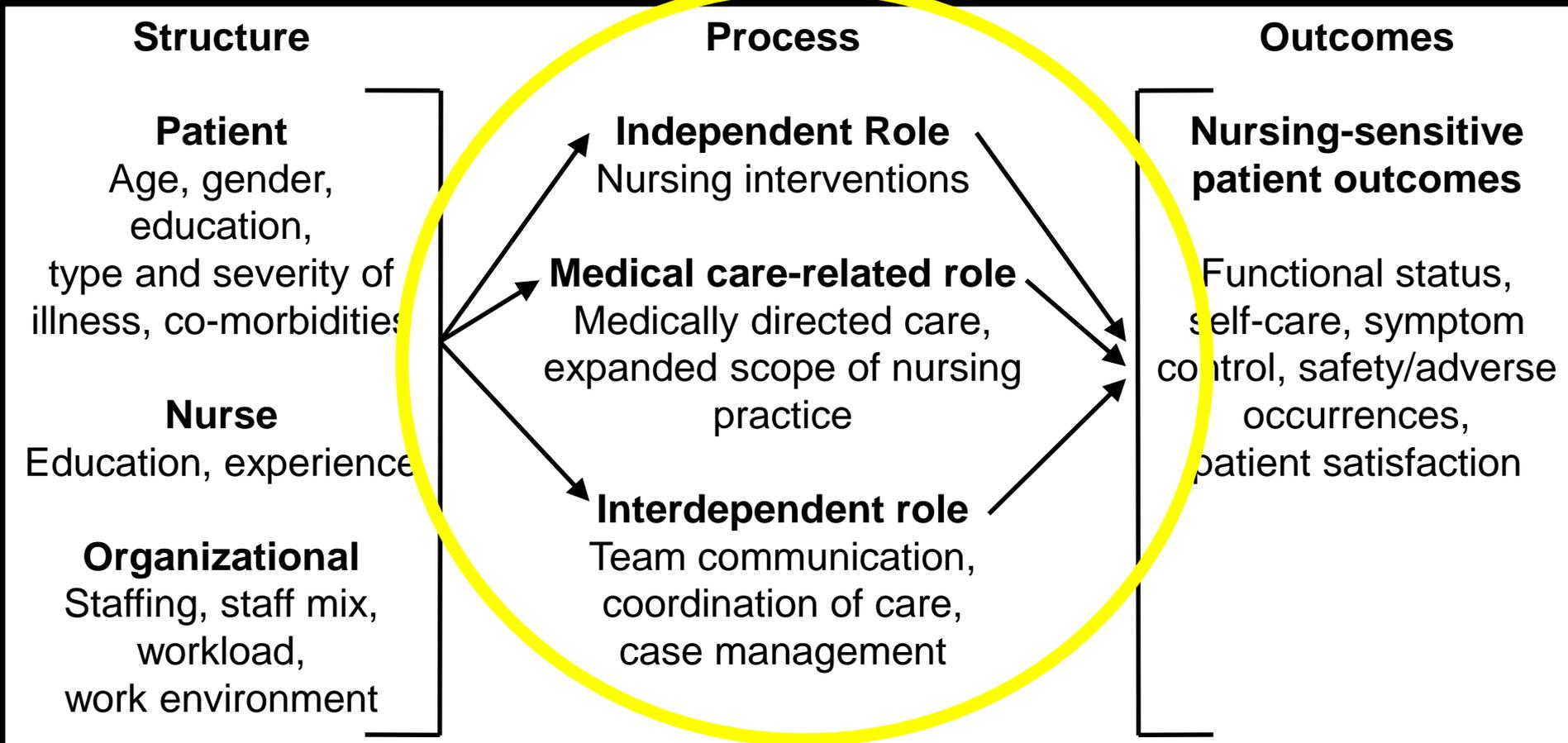
SETTING	Number of Articles
Acute Care	12
Long Term Care	1
Home Care	1
Ambulatory Care	1
Primary Care	1
Multiple Settings	4

How is the model used?

- Variety of variables and relationships within the model explored depending on the purpose of the study
- Several studies used model as an organizing framework (variable selection) to explore nursing contributions
- A few studies specifically sought to validate relationships proposed within model
- Model sometimes only mentioned (not integrated)

Unique Feature of Model

- Separation of process variables into independent, dependent, and interdependent categories to address the unique contribution of the nurse



In-progress:

- Compiling a list of specific relationships outlined within model explored in each study
- Synthesizing data to examine strength of relationships explored within the literature
- Developing figures to display associations/no associations for each healthcare setting
- Manuscript

Patient Characteristics

- Age^{1,3,4,5,16,17}
- Depression¹
- Cognitive Status¹
- Baseline Functional Ability¹
- Sex^{4,5,17}
- Medical Diagnosis^{4,6,16,17}
- Education⁴
- Ethnicity^{4,17}
- Marital Status⁴
- Patient History⁶
- Severity of Illness^{5,6,12,14,16}
- Vital Signs¹²
- Length of Stay^{16,17}
- Location of Dialysis¹⁷
- # of Dialysis Days¹⁷
- Comorbidities¹⁷

Nurse Characteristics

- Length of Employment with Hospital^{4,11}
- Educational Preparation^{4,9,11}
- Experience^{5,6,11}
- Flexibility⁶
- Teamwork⁶
- Age^{9,11}
- Technology Comfort⁹
- % Time Using EHR⁹
- Sex¹¹
- Ethnicity¹¹
- Status (full-time, part-time, etc.)¹¹
- Type of Position¹¹
- Clinical Knowledge^{14,16}
- Reporting of Deteriorating Vital Signs¹⁴
- Ratio of Specialist Nurses¹⁶

Organizational Characteristics

- Adequacy of Time for Direct Care Activities⁴
- Job Autonomy⁴
- Role Tension⁴
- Rationale for role development⁵
- Hospital Characteristics^{5,11,12}
- Areas of responsibility⁵
- Equipment⁶
- Temporal Concerns⁶
- Knowledge Resources⁶
- Patient Acuity⁹
- Workload^{9,14}
- Pace of Work⁹
- Structural Empowerment^{11,12}
- Nurses' Perception of Work Environment^{11,16}
- Technology^{9,14}
- Observational Chart Design¹⁴
- Nursing Hours per Patient Day¹⁶

Independent Role

- Self-Care Assistance^{1,2,19}
- Activity & Exercise Enhancement^{1,2}
- Physical Comfort Promotion^{1,2}
- Elimination Management^{1,2}
- Immobility Management^{1,2,19}
- Patient Education^{1,2}
- Health System Mediation^{1,2}
- Drug Management²
- Respiratory Management²
- Quality of nursing care from perspective of patient⁴
- Support for patient/families^{5,19}
- Formal/informal skills training and education for ward staff⁵
- Decision Making⁶
- Nurses' use of EHR⁹
- Vital Signs Monitoring¹⁴
- Individualized Care¹⁶
- Nurse-Driven Renal Anemia Management Program¹⁷
- Documentation and Information Review¹⁹
- Administration¹⁹
- Wash Hands¹⁹
- Travel¹⁹
- Patient Engagement¹⁹
- Organization¹⁹

Medical-Care Related Role

- Initiating pathology tests⁵
- Initiating radiology tests⁵
- Prescribing medication^{5,19}
- Dependent Role in Physician-Driven Program for Anemia Management¹⁷
- Bio-Medical Assessment and Surveillance¹⁹

Interdependent Role

- Coordination of Care^{4,19}
- Quality of Communication^{4,11,12,16,17}
- Facilitate/expedite ICU transfers and discharge process⁵
- Refer patients to MDT⁵
- Develop guidelines for follow-up and referral⁵
- Physician-Nurse Relationship¹⁶

Patient Outcomes

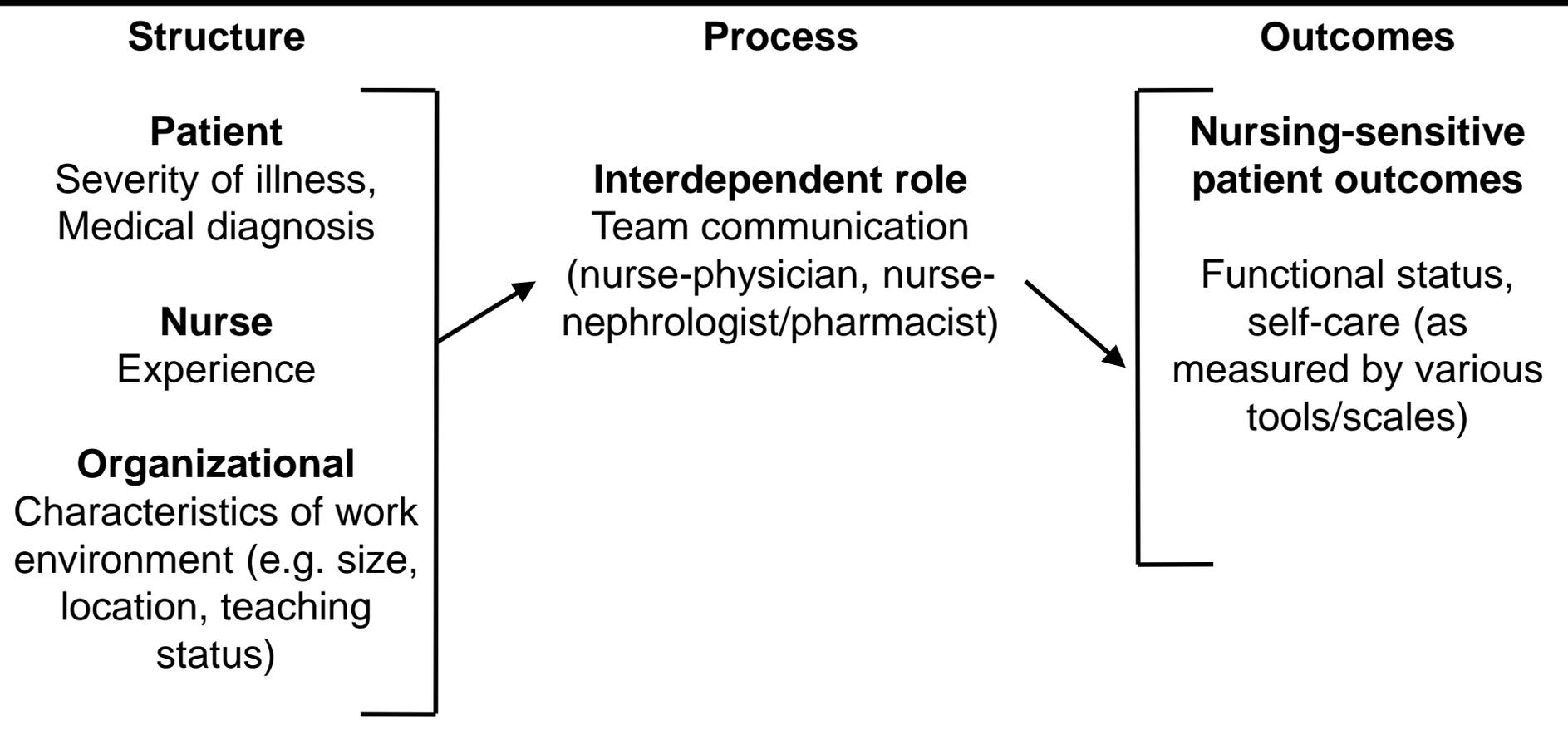
- Functional Status^{1,2,16}
- Therapeutic Self-Care^{1,2,4,16}
- Symptom Frequency and Severity²
- Role/Social Functioning⁴
- Mood⁴
- Adverse Events^{5,6}
- ICU discharge delay⁵
- ICU/hospital mortality⁵
- Service use (ICU admission, re-admission, length of stay)⁵
- Case management⁵
- Quality of Care⁹
- Patient Safety⁹
- Pneumonia¹²
- Bloodstream Infection¹²
- Pressure Ulcer¹²
- Individualized Care Perception¹⁶
- Hemoglobin Levels¹⁷
- Dose of ESA and Intravenous Iron¹⁷
- Cost of ESA and Iron Use¹⁷

Nursing Outcomes

- Enhanced critical care skills⁵
- Improved critical care knowledge⁵
- ICU discharge planning⁵
- Access to clinical resource⁵
- Improved multidisciplinary collaboration⁵
- Increased confidence⁵
- Job Satisfaction¹¹

Acute Care

Variables Most Studied (Acute Care):



Example Primary Care:

(Lukewich et al., 2016)

Structure

Patient

Age, sex, comorbidity

Nurse

Organizational

Staffing (i.e. presence of RNs in practice)

Process

Outcomes

Nursing-sensitive patient outcomes

Diabetes management
(as measured by clinical outcomes)



Next Steps

- Utilize framework to guide research evaluating nursing contributions to patient care
 - **All settings**
 - **Make clear distinction between regulatory designations**
 - **Create opportunities for meta-analysis**
- Validate relationships proposed within model across the continuum of healthcare services
- Identify outcomes related to nursing care for each regulatory designation within the primary care setting and strategy/tools for their measurement
- Propose modification of model to support its use within primary care research

Summary

- Nurses contribution to patient outcomes within primary care is not well understood
- Lack of a comprehensive model that can be used as a framework to guide studies in the evaluation of the nursing role within this setting
- Given the unique ability of the NREM to specifically address the nursing contribution to care, it is important that this model be modified for use within the primary care setting

Performance measurement is **essential** in nursing to provide accountability to nursing practice and help integrate and optimize the nursing role

