The HANDS Project: Improving Nursing Communication and Documentation
HANDS Core Project Team

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Goals of the Hands-on Automated Systems (HANDS) Project

To create a standardized methodology for collecting key nursing care information in the electronic health record that

1. is **useful** to clinicians in everyday practice
2. supports creation of a **national database** of comparable, valid, and rich nursing data
3. supports **research** to continuously improve nursing care and practice
History of HANDS Project

- The nursing terminologies of NANDA, NOC, and NIC were not being implemented in Clinical Information Systems in a standardized way.
- Vendors lacked the “know-how” and “financial incentives” for integrating nursing terminologies into CIS in a standardized way.
To facilitate goal achievement

STANDARDIZE!

- Gather SAME Data ELEMENTS
- Same TIME Intervals
- Same TERMINOLOGIES
- Same DATABASE Structure
- Apply SAME Rules for Selecting, Recording, and Rating NANDA, NOC, and NIC Terms and Measures
HANDS Project Accomplishments

- Developed technology supported Care Planning Tool & Method
  - Supports continuous CP updating
  - Integrates NANDA, NOC, and NIC terminologies
  - Provides immediate access to all N3 term meaning
- Used by UMICH students and faculty
- Pilot Tested “real time” on UMICH unit
- Converted HANDS Tool to web version
- Multi-site Study underway in Michigan
**Pilot Unit Characteristics**

- **Type of Unit = ICU**
- **# of RNs = 36+**
- **Shifts = 12 hours (norm) a few RNs work 8 hours**
- **Stable Staffing**
- **Supportive Culture**
- **Balance of Experts**
- **Supportive Managers & Administrators**
Evaluation Measures

“real time” Pilot

- Baseline documentation practices
  - Direct observations and interviews

- Satisfaction with HANDS Method and NANDA, NOC, and NIC
  - Repeated Survey, Focus Groups, Interviews
  - Regularly scheduled dialogue/meetings with coaches, administrators, and staff
  - Ad hoc visits to unit by team members (1x /wk)

- Usability of HANDS software
  - “think-alouds” (audio)
  - “key-stroking” (video)

- Patterns of selection of N3 across time
  - “think-alouds”
Lessons Learned

- Competency in use of NNN builds over time
  - Need to use in meaningful way in day to day practice
    (Example: USE to FRAME HAND-OVER/Report)

- Care Plan application must be easy and accessible
  - Convert to WEB-BASED Version

- IT is a MAJOR CHANGE
  - Unit needs to OWN every aspect of this change
  - Include RNs in ALL ROLES as CHAMPIONS
  - Create STRATEGY to continuously nurture until SUSTAINED

- Users must LOVE it
  - Focus on making it VALUABLE TO RN USERS
HIT Support for Safe Nursing Care
2004-2007

R01 HS015054-01
NIH- Agency for Health Research and Quality (AHRQ)
Gail Keenan, PhD, RN Principal Investigator
Beth Yakel, PhD, Co-Principal Investigator
Study Aims

- To demonstrate that Health Information Technology (HIT) (Hands-on Automated Nursing Data System (HANDS) Method) can be successfully implemented to support nurses in a dynamic Care Planning Process (CPP) encompassing both the planning and provision of care.

- To demonstrate that implementation of the HANDS Method increases the safety culture of diverse nursing units.
Aim 1 Hypotheses

Our HANDS Care Planning Process (CPP)

Method

H1.1 satisfactorily represents the collective mind of nurses across time and settings

H1.2 sustains mindfulness in the CPP across time and settings

H1.3 supports heedful interrelating about the CPP across time and settings
Core Framework: HANDS Care Planning Method

(Needan & Yakel, 2005)
HANDS Care Planning Method and Positive Outcomes

(Needless to relate about Care Plan during report)

(Mindfulness while documenting Care Plan)

Collective Mind
HANDS database of accurate Care Plan history

Strong Safety Culture Norms

Effective Communication
Standardized terminology and format

Positive Patient Outcomes
- Continuity of care
- Quality care
- Reduction in errors
- Data for continuous improvement

(Keenan & Yakel, 2005)
HANDS Method

Mindful Care Planning
+ Heedful Interrelating in Report
= Collective Mind of RNs in HANDS
Subjects & Requirements

- 8 nursing units (4 in Y1, 4 in Y2) located in 4-5 health care systems in Michigan
- All RNs employed on the units (n=400+)
  - Participate in orientation to HANDS Tool and NANDA, NOC, and NIC terminologies (8 hours)
  - At “go live” create admission or update HANDS CPs on all patients for each shift
  - RNs MUST use HANDS Care Plan in Report
Strategy with Test Sites

- Train Champions (Across Sites)
  - Nurse Managers
  - Clinical Specialists
  - Nurse Educators
  - Nurse Clinicians

- Champions Train Remaining RN Colleagues
- Units Collaborate with Other Test Units
- Test Units Own Care Planning Method
Competency: HANDS Care Planning

Methodology

**Definition:**

- integration of *mindful* care planning using NANDA, NOC, and NIC (N3) knowledge
- technical skills in use of HANDS application (*collective mind*), and
- heedful interrelating during report and other handovers
Competency: HANDS Care Planning

Methodology

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- integration of **mindful** care planning using NANDA, NOC, and NIC (N3) knowledge
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- heedful interrelating during report and other handovers
Competency: HANDS Care Planning Methodology (Pre-GO LIVE)

RN Objectives:

- Successfully creates admission and update care plans with HANDS application
- Demonstrates appropriate use of N3 search modes to locate terms
- Uses a broad range of NANDA Diagnoses, NOC Outcomes and ratings, and NIC Interventions and tallies appropriately in Care Planning
- Demonstrates knowledge and behaviors supportive of a strong safety culture
- Routinely engages in heedful interrelating with colleagues during patient report and handovers
HANDS Care Planning Method
Post – GO LIVE

- Create admission or update Care Plan on every patient q shift
  - Add, subtract, retain, change status of N3 as needed q shift
  - Rate NOC outcomes q shift
  - Ensure NIC tallies are correct q shift
  - Complete anonymous error reporting
  - Enter 1) nurse shift info, 2) patient care time

- Use your submitted Care Plans in report to structure information shared (STICC)

- Complete short DC form when patient leaves unit
Evaluation Measures

“real time” Multi-Site Study

- Baseline documentation practices
  - Direct observations and interviews
- Satisfaction with HANDS Method and NANDA, NOC, and NIC
  - Repeated Survey, Focus Groups, Interviews
  - Regularly scheduled dialogue/meetings with coaches, administrators, and staff
  - Ad hoc visits to unit by team members (1x /wk)
- Usability of HANDS software
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- Patterns of selection of N3 across time
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Heedful Interrelating
Nurse to Nurse Communication in Report

S-itation  What is the patient’s situation?
Use current care plan and care plan history

T-rajectory  What needs to be done?
NANDAs, NOCs, and NICs, and other important details

I-ntent  Why?
Refer to historical care plans and patient progress noted
across time, explain rationale

C-oncern  What are the priority/ies?
Refer to most important priority/ies to be attended to in
next shift

C-allibrate  Invite questions to clarify and enhance plan!
What’s not clear? What do you disagree with?
Aim 2
HANDS CPP Method Enhances Safety Culture

- Criterion Measures – Safety Culture
  - Trust survey,
    - Pre-HANDS, 12 mo post, 24 mo post
  - Culture survey,
    - Pre-HANDS, 12 mo post, 24 mo post
  - Nursing errors and near errors;
    - Pre-HANDS, and 3, 6, 12, 18, 24 months post
HANDS Method Framework
(Keenan & Yakel, 2005)

HANDS CPP Method

Tool (HANDS)
Computerized Standard Format N3 Terms Focus on Outcomes

Training
Tool CPP Rules Expected Outcomes Safety Emphasis

Implementation

EFFECTIVE CPP

RNs’ Collective Mind
Representation Accurate Useful
RNs Heedfully Interrelating To achieve desired outcomes
RN’ Mindfulness In identifying & documenting patient problems, interventions and outcomes

SAFETY CULTURE

• Improved communication
• Reduced errors
• Continuity of care
• Positive patient outcomes
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Building on the HANDS Technology Innovation in Nursing: Development of a Complexity of Nursing Care Scoring System
Nursing Complexity Score Addresses the Nursing Staffing Shortage

Staffing Shortage:
Insufficient number, mix, and/or experience level of RNs and ancillary staff to safely care for the individual and aggregate needs of a specific patient population over a specified period of time.

(American Nurses Association, 2001)
What is Complexity of Nursing Care?

- Term used interchangeably – doing concept clarification.
- Synergy Model Definition: “the intricate entanglement of two or more systems (e.g., body, family, therapies)” (Hardin & Kaplow, 2005, p. 28).
- Involves a nurse’s clinical decision making in predicting a patient’s care needs and risk for adverse outcomes.
Figure 1. Tentative Conceptualization of Complexity of Nursing Care

Adapted from the AACN Synergy Model, 2004
Need for an Alternative to Patient Classification Systems (PCS):

PCS: a method for establishing nursing personnel requirements by unit based on a patient’s acuity (JCAHO, 2004).

Acuity: a patient’s need for hospital services based on the patient’s medical condition (JCAHO, 2004).
Problems with Patient Classification Systems:

- Lack of reliability, validity, & sensitivity
- Involve nursing time away from the patient to complete
- Too cumbersome for predicting shift to shift staffing needs.
- Lack of credibility due to susceptibility to “gaming” by users (acuity creep
- Expensive, time-consuming requirements to maintain reliability and validity
- Inaccurate & unreliable workload estimates
- Lack of use of information for managerial decision making in budgeting FTEs.
HANDS makes it possible!!

- Clear and rich data about the patient.
- Patient data automatically generated in real time from the nurse’s documentation in the electronic care plan.
- Reliability and validity of Nursing Complexity Score is assured by accountability of the RN signing the charting.
- Nurse Competency is embedded in HANDS.
Advantages of Complexity of Nursing Score

- Quickly and reliably predicts a patient’s needs for nursing care (not medical care).
- Optimizes use of scarce staff by best assignment match.
- Provides a valid method to accurately describe nurses’ work across settings.
Questions???