Simplifying and Standardizing Clinical Documentation to Generate Big Data

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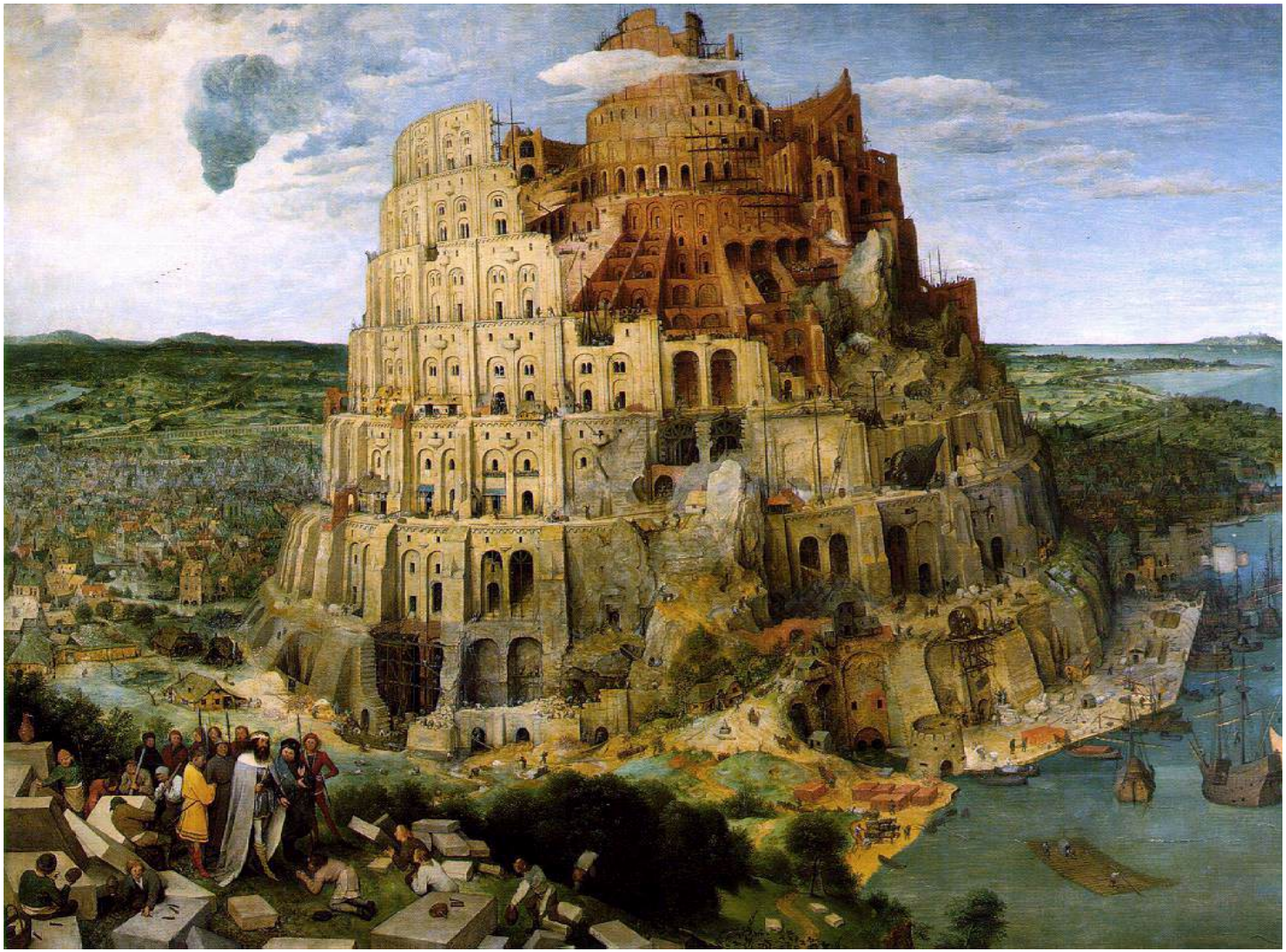
Overview

- EBCD Background
- Getting Organized
- Key Decisions
- Implementation Strategy
- Impact on Big Data Tools

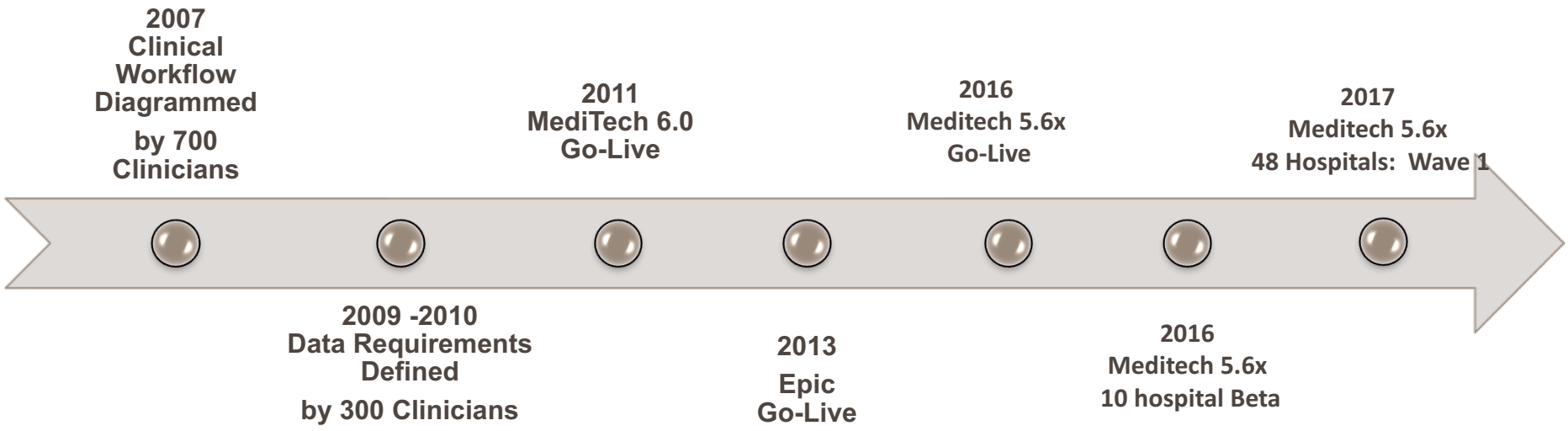
Background



The Tower of Babel, 1563
Pieter Bruegel, 1525 -1569

Vision

Create a patient centric record that guides and informs the provision of safe, effective and efficient care by the interdisciplinary team and produces data to evaluate care of individual and populations of patients.



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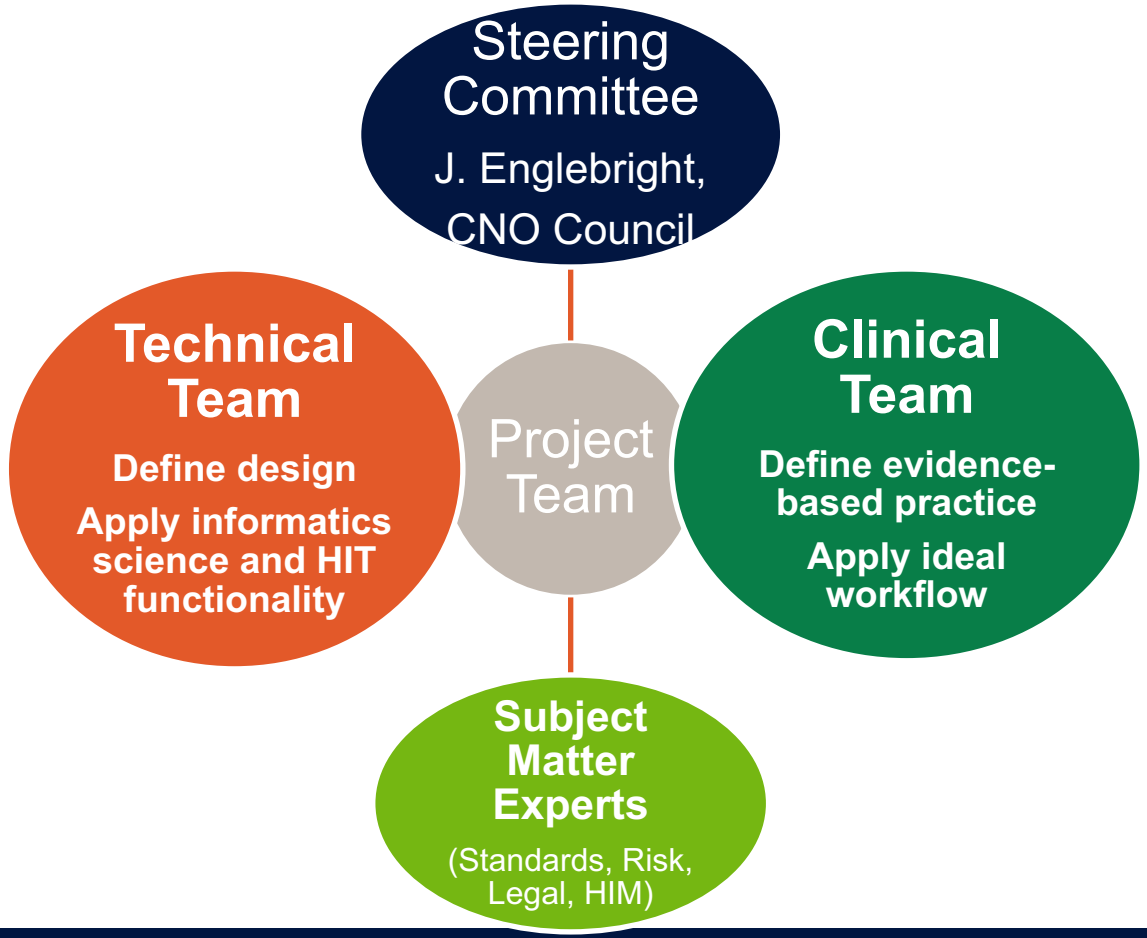
Getting Organized

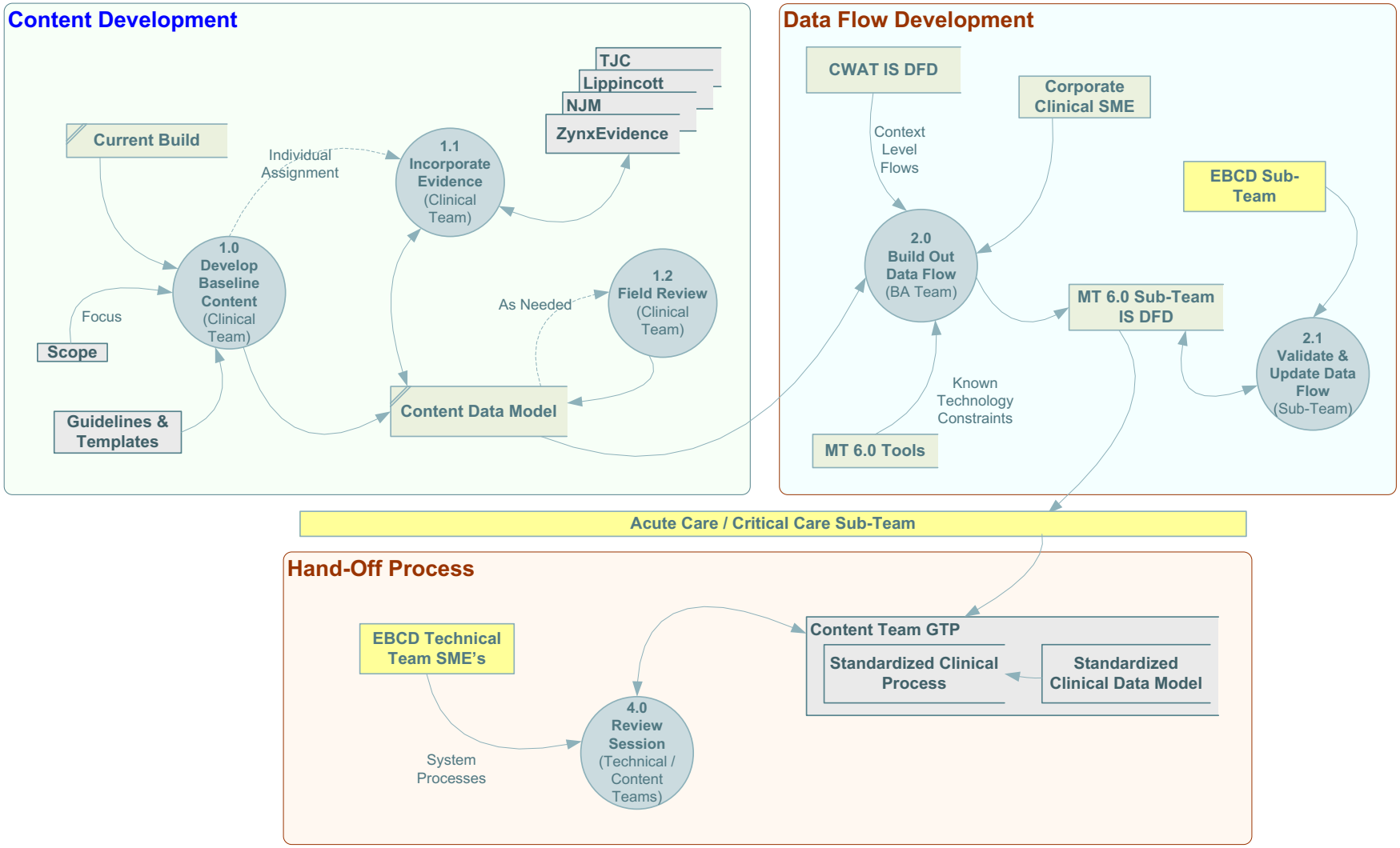
Project Structure

Roles & Responsibilities:
Clearly Defined, Non-overlapping, Mutually Respected



- Steering Committee
  - Vision, Guiding Principles
  - Priorities, Disagreements
- Clinical Team
  - Content and thought flow
- Technical Team
  - Navigation and data flow
- Subject Matter Experts
  - Regulatory expertise

Evidence Based Clinical Documentation Content Development Process



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Guiding Principles:
EBCD Development Process

Principle	Benefit
Evidence-based vs. consensus-based decision-making	Supports evidenced based practice
Small design team, large review group	More efficient, preserves focus on evidenced based practice
Practicing clinicians define content	Maintain patient centered focus, avoid overbuilding content
Regulatory experts evaluate content for compliance	Assure compliance and leadership buy-in
Focus on the ethical and competent clinician	Maintain patient centered focus, avoid overbuilding

Guiding Principles:
EBCD Design

Principle	Benefit
Support ideal workflow	Support clinical process
Automate data entry whenever possible	Minimize error and improve efficiency
Incorporate decision-support	Minimize error and improve efficiency
Use software as designed	Minimize maintenance and enable more timely upgrades
Strict adherence to Style Guide	Maximize efficiency in building, use and training

Screens Consistent & Easy-to-Use

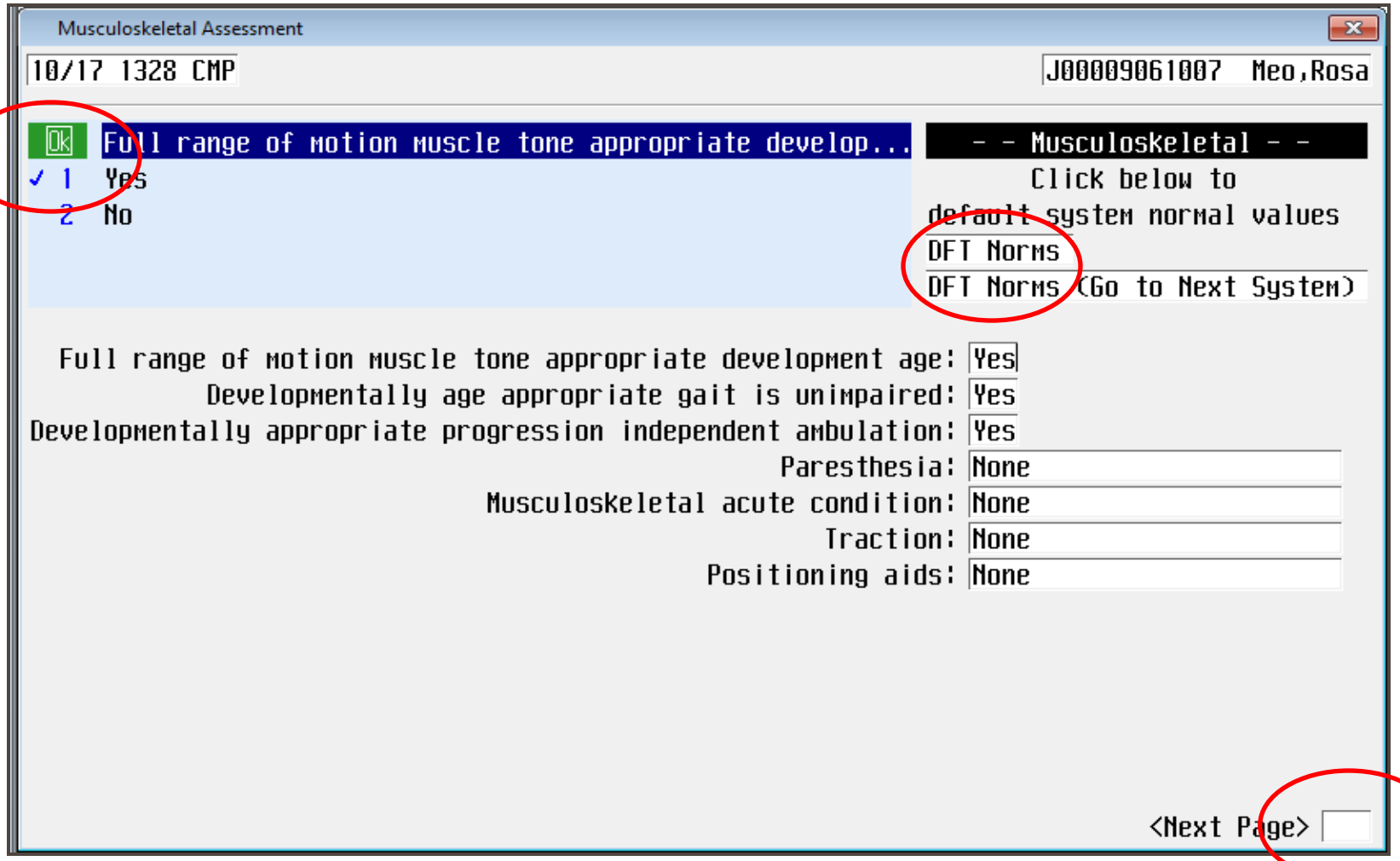
Style Guide Standards

- Designed around usability heuristics
- Designed around user workflow
- Standard presentation
- Standard visual cues

Design Decisions

- Case sensitivity
- Symbols
- Abbreviations
- Color usage
- Positioning/justification/spacing
- On screen documentation (info boxes)
- Navigation

Consistent User Interface



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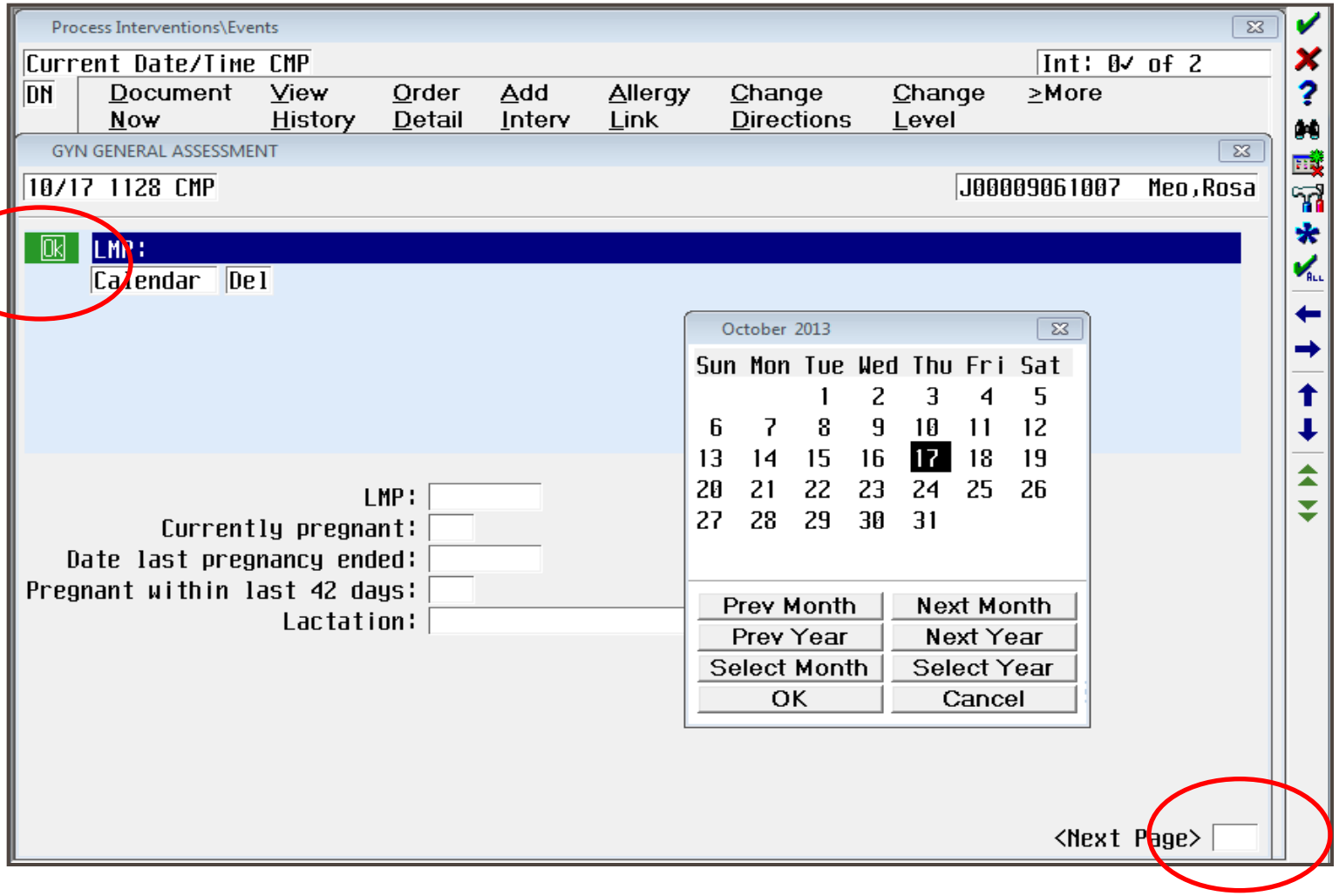
Consistent User Interface



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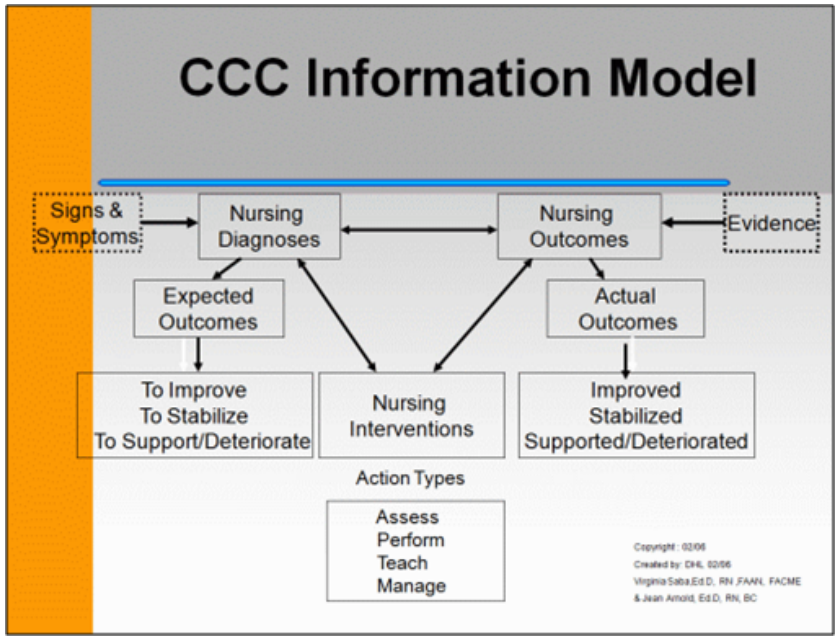
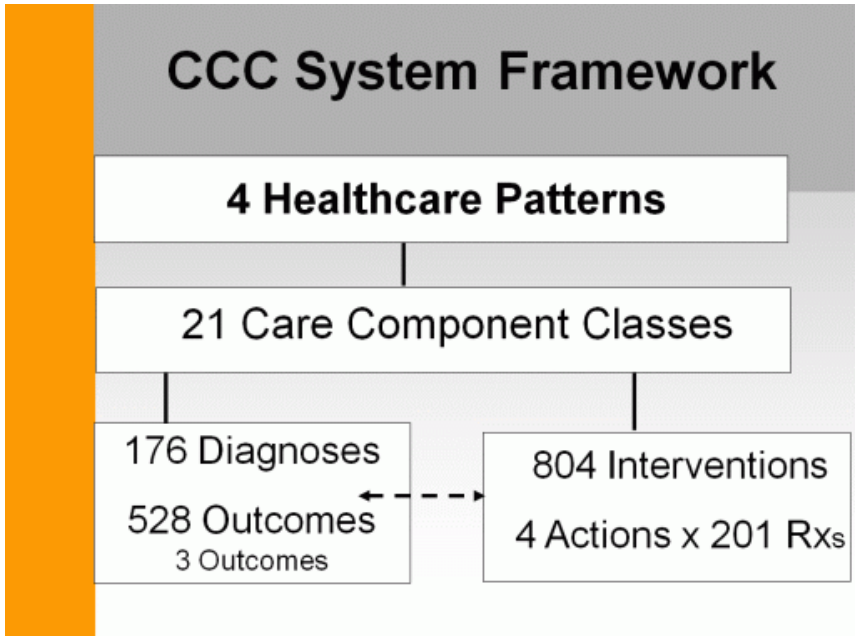
Key Decisions

Key Decision:
Standard Nursing Terminology

- We identified a need for a Standard Nursing Terminology to guide our build
  - Provide an organizing framework
  - Define domain completeness
  - Enable internal and external data exchange and research

A standardized terminology for electronic health record (EHR) systems that supports capturing discrete patient care data for documenting the “essence of care” and measuring the relationship of clinical care to patient outcomes





http://www.sabacare.com

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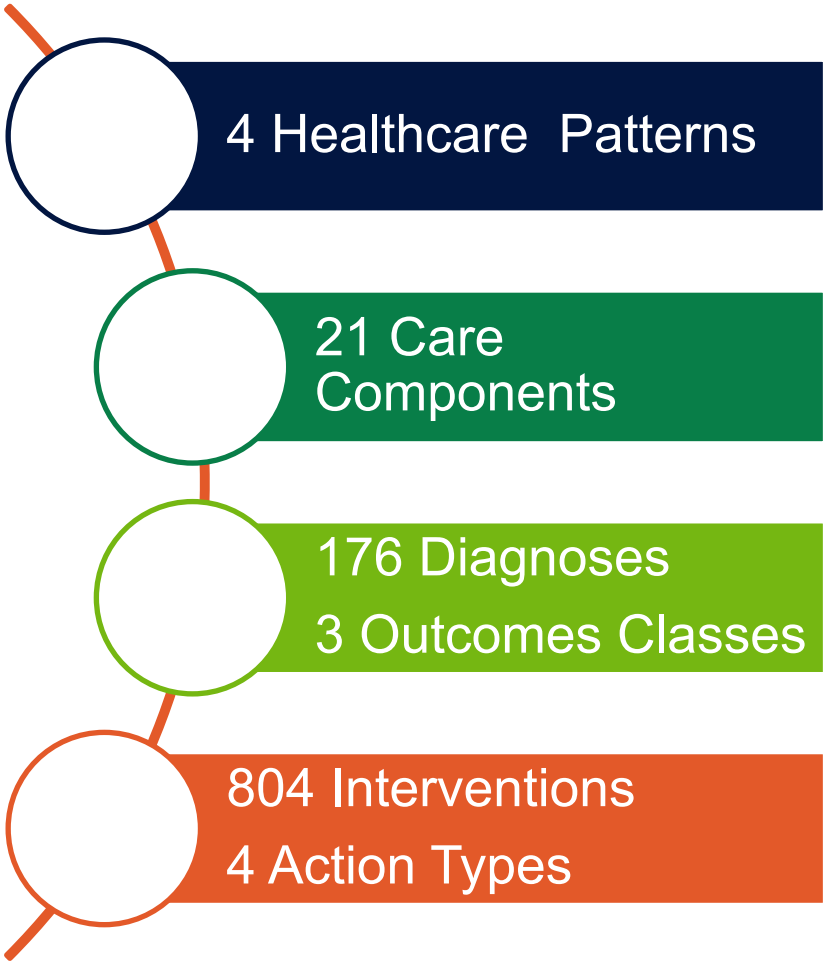

- Healthcare Patterns: Organizing framework for plan of care and teaching documentation screens
- Care Components & Diagnoses: content for nursing diagnoses/problems dictionaries, elements of plan of care and teaching documentation screens
- Outcomes: Content for goals and outcomes dictionaries, elements of plan of care
- Interventions & Action Types: Content for intervention dictionary, queries for screens

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Key Decision:
Clinical Care Classification System (CCC)

Matched our approach:

- Derived from empirical research of nursing documentation
- Based on nursing process
- Focus on “essence of care”

Met our technical requirements:

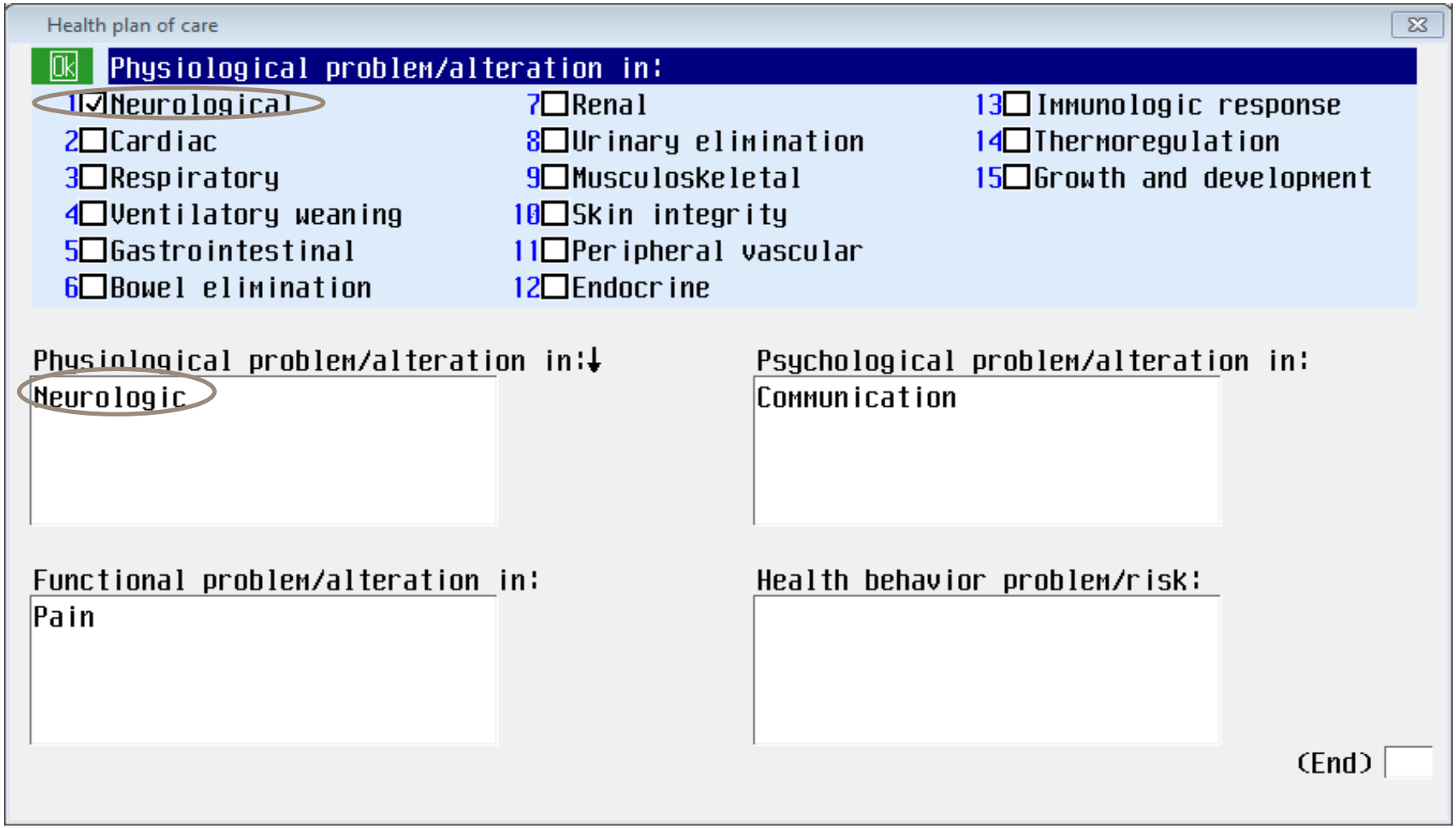
- Recognized by ANA and HITSP
- Mapped to SNOMED and LOINC
- Fit easily in the MediTech dictionary framework

Key Decision:
Plan of Care

- ✓ POC is patient centric and goal directed.
- ✓ Each patient has a unique POC consisting of 3 – 4 priority problems that are the focus for this episode of care.
- ✓ Problems are identified from a nationally recognized nursing taxonomy (Clinical Care Classification System or CCC).
- ✓ POC is reviewed regularly and updated as needed based on changes in the patient's condition, response to treatment, and progress toward goals.
- ✓ Routine care, individualized considerations for care and physician ordered nursing interventions are not components of the Plan of Care.

Plan of Care Approach

The RN selects 3-4 priority problems for this episode of care



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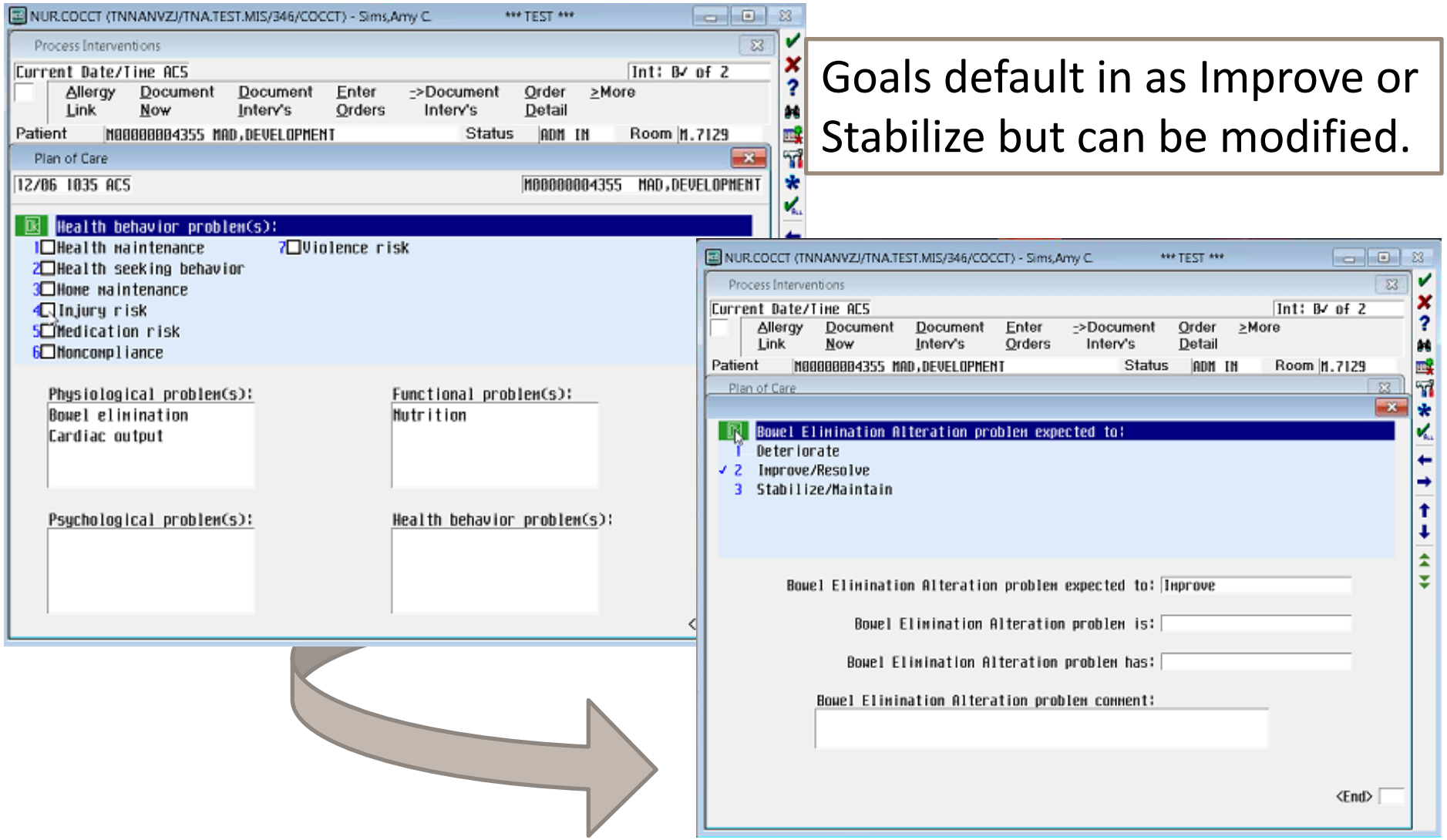
Plan of Care Goals



Goals default in as Improve or Stabilize but can be modified.

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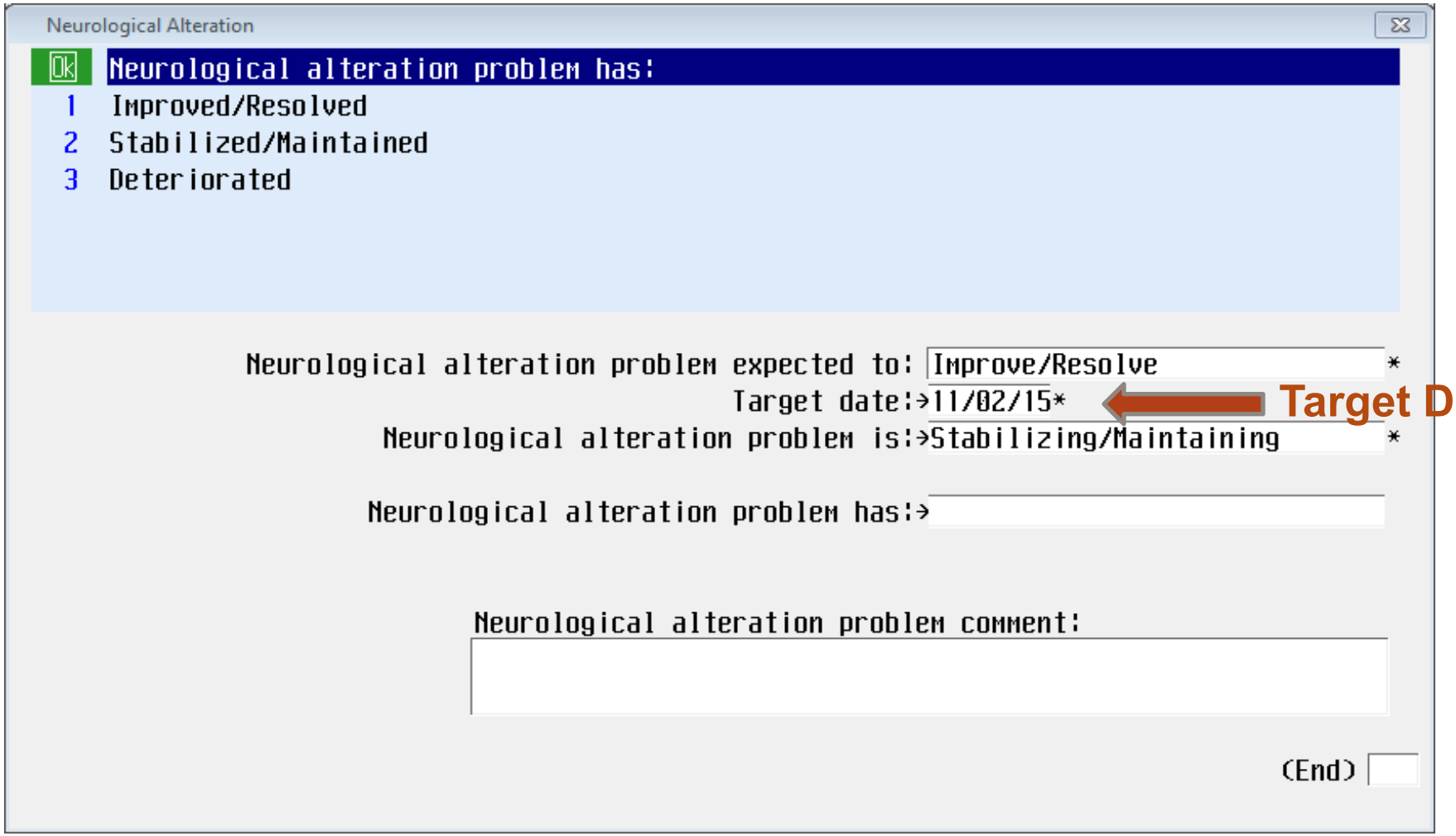
Target Date for Goal Attainment

The RN establishes the Target Date for each goal



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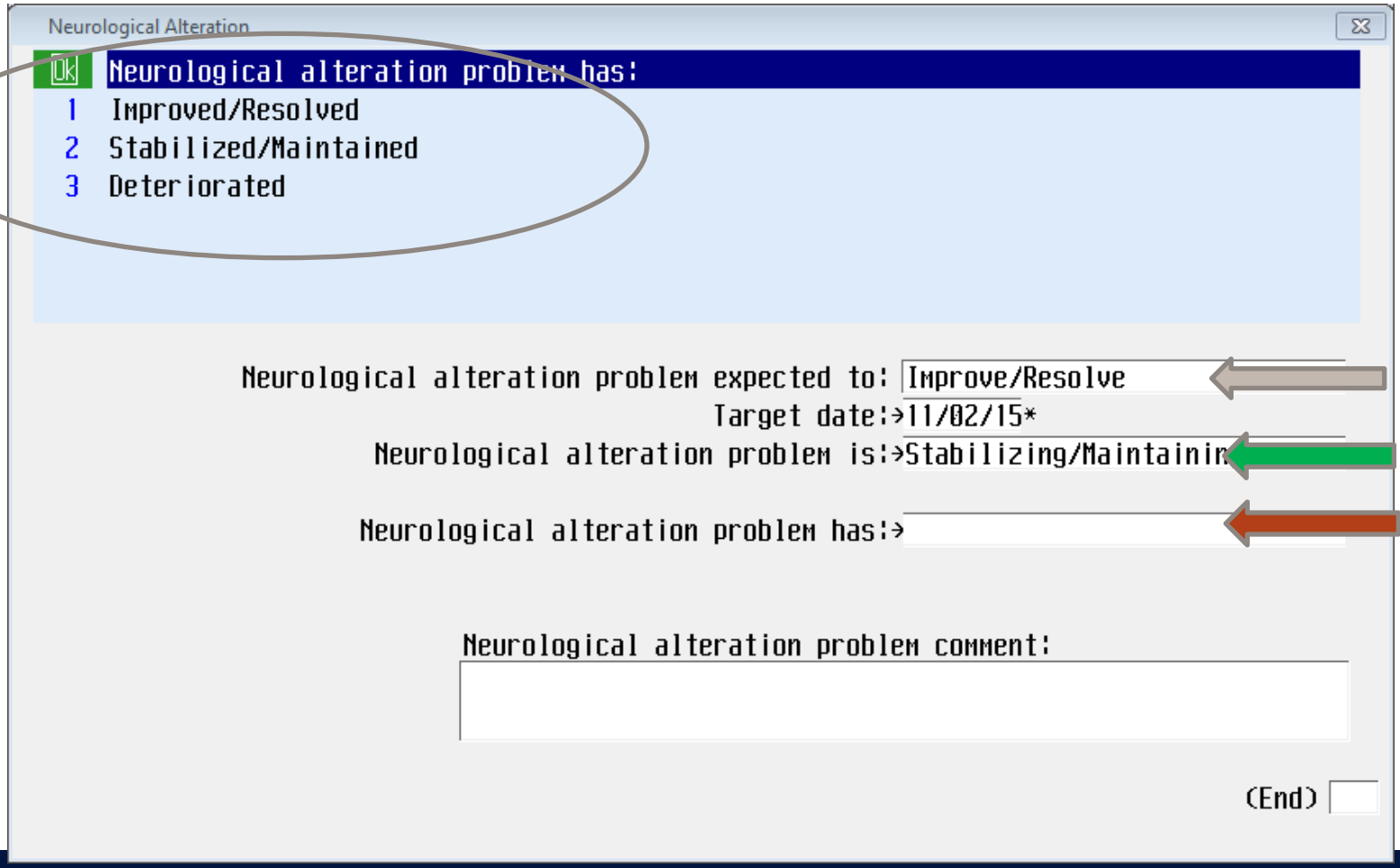
Plan of Care Outcomes

- The RN will status the goal to show progress or deterioration
- The RN will document the final outcome of the problem



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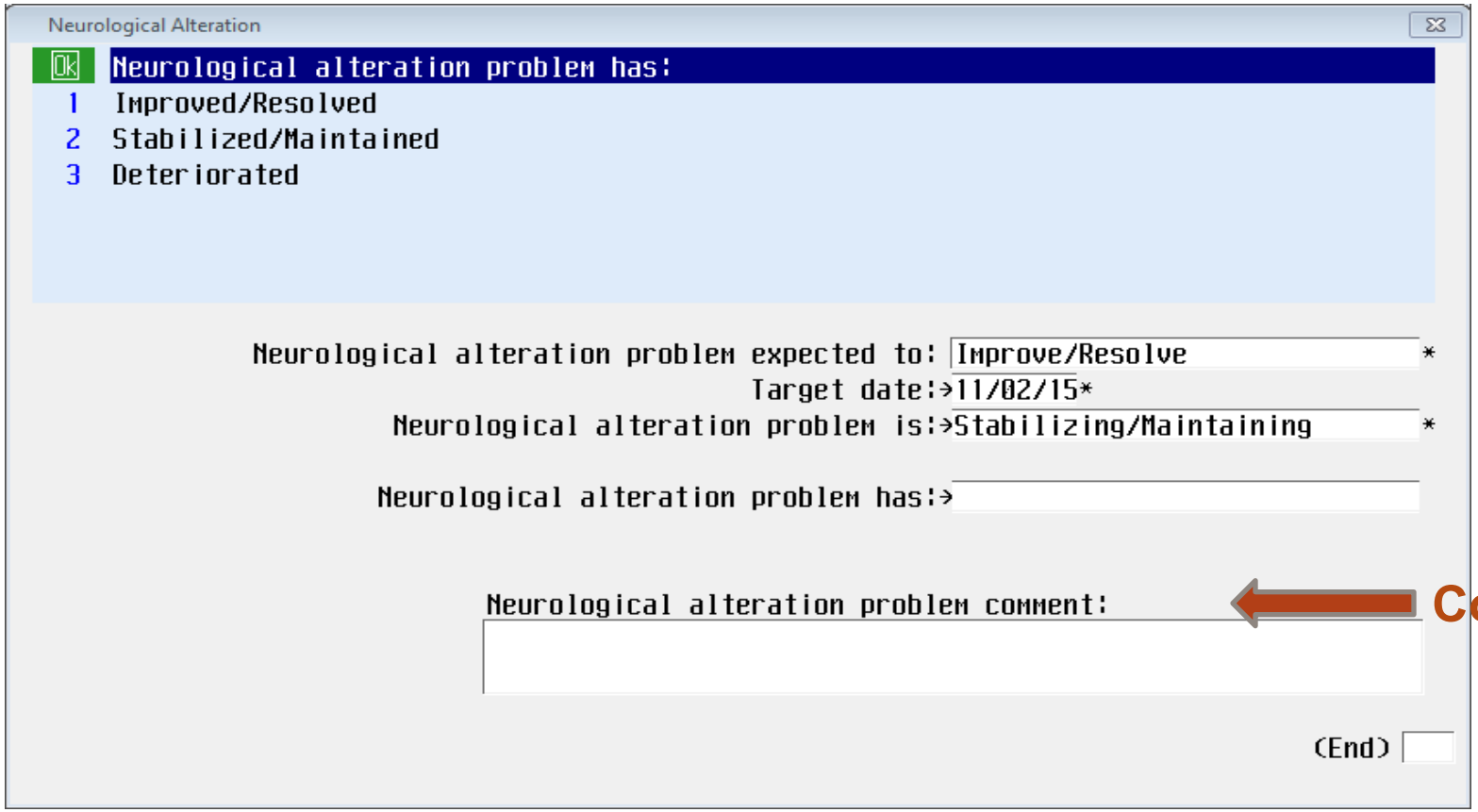
Individualizing the Plan of Care

- Comments can be used to provide individualized detail
- Additional fields appear on Behavioral Health and Rehabilitation POC for measurable short and long term goals.



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Key Decision:
Routine Care for All Inpatient Populations

- Required care and documentation elements for all inpatients
- Appear on the task list
- Not tied to specific problems or goals
- All nursing assistant actions are "perform"

Assess
- Admission assessment
- Pain management
- PRN Medication Effectiveness

Perform
- Vital Signs, MEWS/PEWS
- I&O
- Height & Weight
- Lines, tubes & drains
- ADLs: Hygiene Care / Meals / Ambulation

Teach
- First dose medication education
- Patient/Family Education

Manage:
- Care management

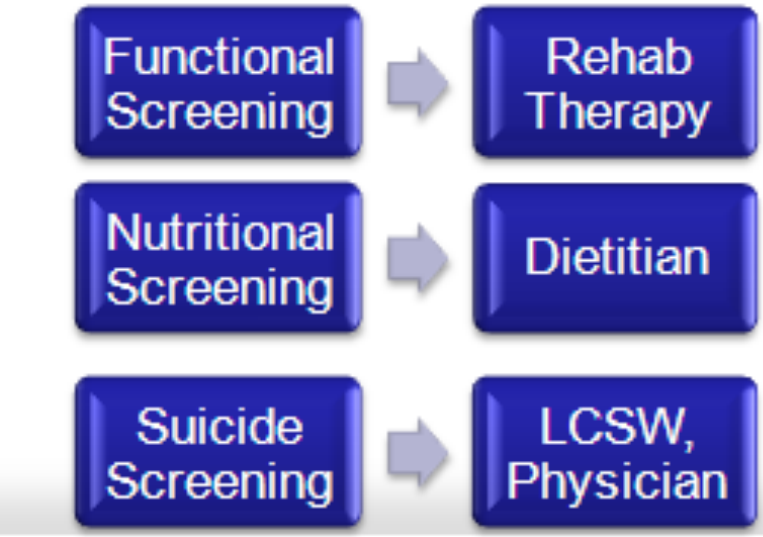
Key Decision:
Individualized Care Considerations

- ✓ Required history elements
- ✓ Communicated to all caregivers to be used in planning and providing care
- ✓ Not associated with goals
- ✓ Not part of Plan of Care

- Culture / Spiritual considerations
- Hearing / Sight Impairments
- Developmental level
- Other respectful considerations (PTSD)
- Legal considerations (organ donor, advanced directives, POA)
- Assistive devices
- Substance use
- Living situation
- Educational needs and preferences

Key Decision:
Patient History

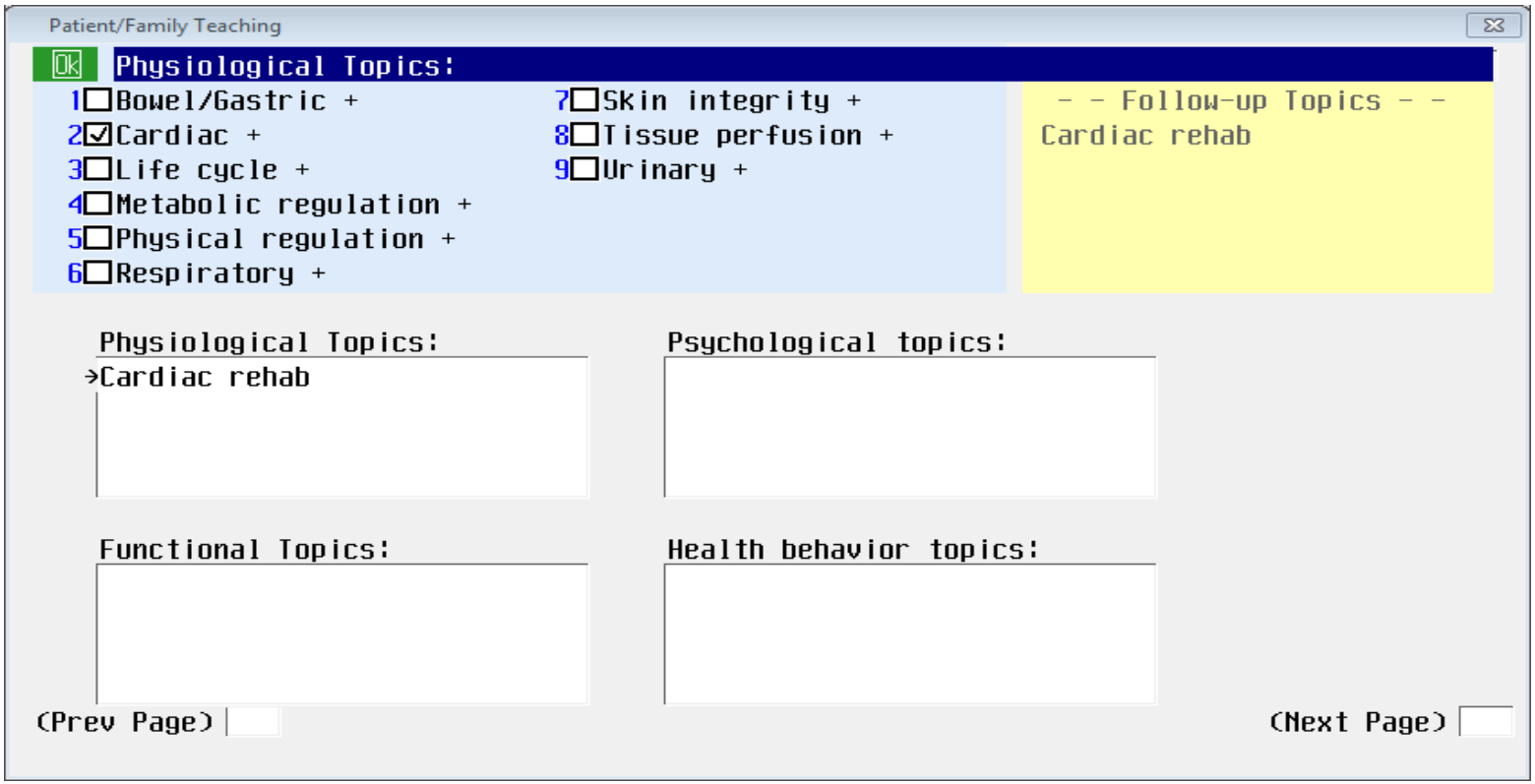
- Demo Recall used extensively
- Family history has been assigned to the admitting provider
- Patient screenings limited to 3-5 queries
  - Enable specialists to identify patients in need of full assessment and/or intervention



Key Decision

Teach/Educate

- Individual Learning assessment is completed once
- Teach/Educate Process follows similar as POC design
- Nurse may trigger follow-up topics as necessary



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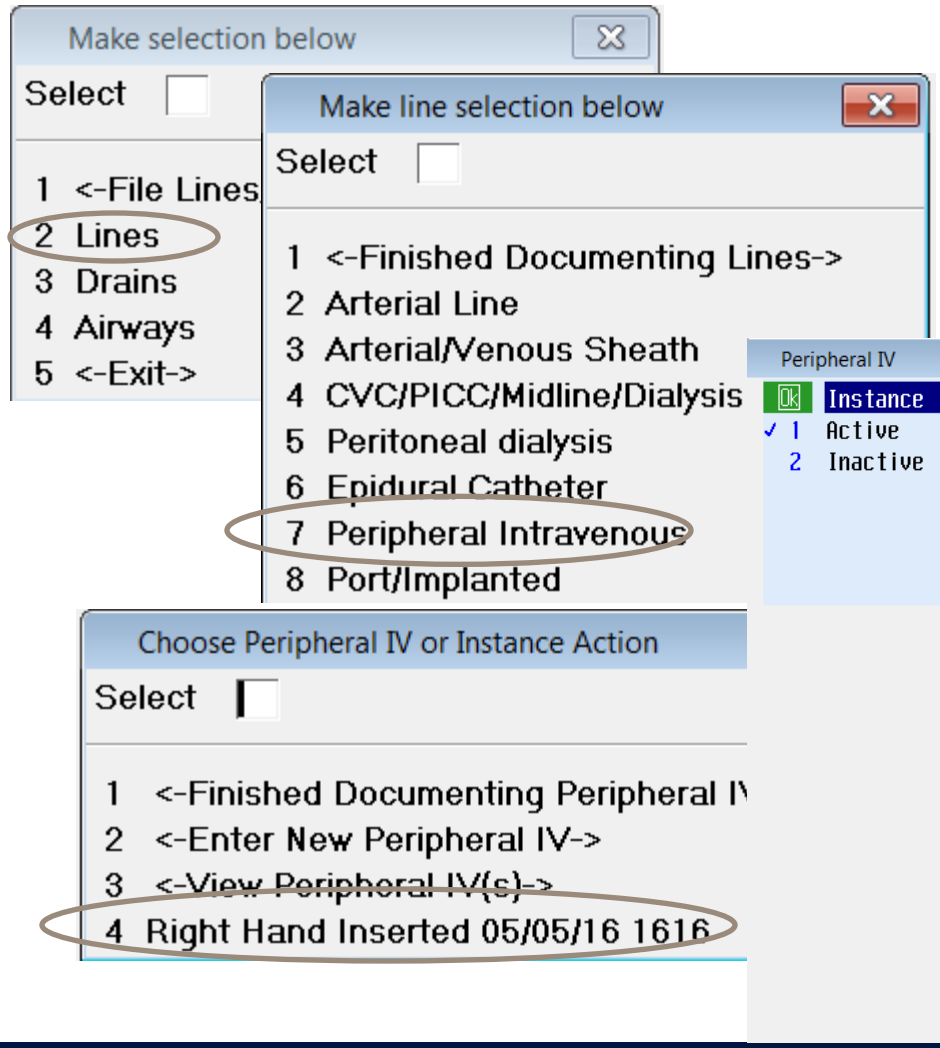
Key Decision:
Lines, Drains, & Airway (LDA)



One screen to capture LDAs for all units:

- Facilitates communication among care team
- Improves accuracy of documentation

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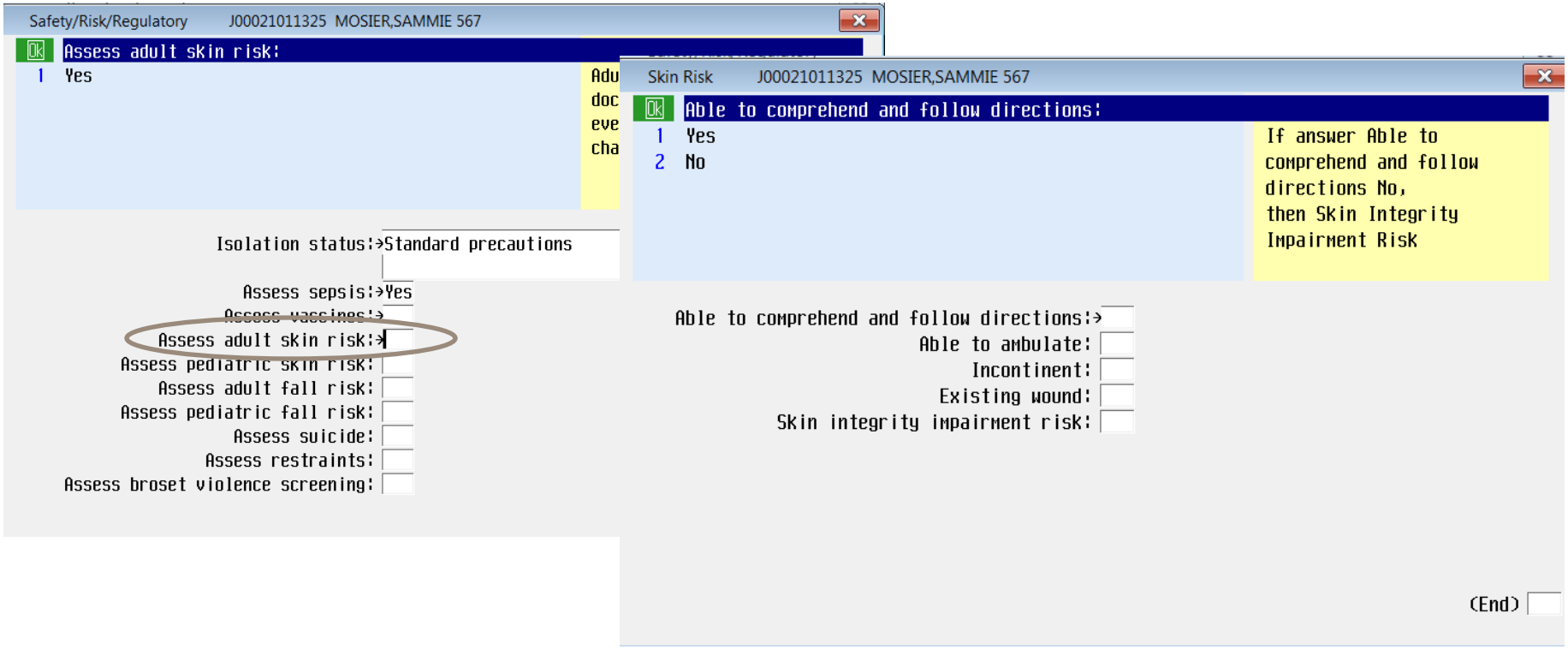
Key Decision:
Safety/Risk/Regulatory

Risk screenings pulled to a common screen for:

- Frequent Assessments
- Ease of access



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Documentation Not Needed in Medical Record

- ✓ Inventory of belongings
- ✓ Standard precautions
- ✓ Hand washing
- ✓ Safety measures defined by policy (i.e., trach tube at bedside)
- ✓ ‘Routine’ emotional support
- ✓ ‘Routine’ explanations of care processes
- ✓ *Handoff Communication* is defined by process not “form”

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EBCD Pilot Site:
Doctors Hospital of Augusta

Meditech 5.6x NUR, EDM, ORM modules

- Impacted end-users: Nursing and Respiratory Therapy staff; clinicians who interact with shared screens
- Physician awareness of change

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Measured benefits of EBCD

- ✓ EBCD demonstrated a clear advantage over the baseline documentation at the pilot site in all tasks
  - ❖ Shorter time to complete
  - ❖ Less effort
  - ❖ Better ability to better capture discrete data

- ✓ The most significant benefit is with the Shift Assessment. This is the most complex task tested and had the greatest efficiency gains

Pilot Success Metrics:
Objective Results

- ✓ **Doctors of Augusta Test Lab:** pre-go live study suggested 19 minutes saved in charting per nurse, per shift.
- ✓ **Doctors of Augusta:** 30 days post go live study (actual results) demonstrated 29 minutes saved in charting per nurse, per shift.
- ✓ Study was performed on those screens most impacted by EBCD.

  - Shift Assessment
  - Fall Risk Assessment
  - Hygiene Care
  - Skin Risk Assessment
  - Inventory of Belongings

Initial Site Summary-Doctors of Augusta

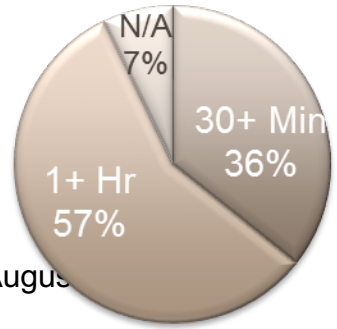
93% of Nurses Increased Time at Bedside

- "give pain RX (medicine) quicker"
- "talk one to one with the patient"
- "help other RN's with patient care"
- "more time to talk to patients"
- "wash their hair"
- "check on them (patients) more often"

14 adult inpatient nurses surveyed 3 weeks post go live by Clinical Lead at Doctors of Augus

Doctors of Augusta Hospital. February 16, 2016 Go Live.

Adult Inpatient Nursing
Time Saved Documenting



Functional Task	User Interface	Time Elapsed (seconds)	Left Clicks	Keystrokes	Sum of Effort (SOE)
Shift Assessment	Baseline	209	5	244	458
	EBCD Pre Education	109	39	1	149
	EBCD 30 Days	107	40	0	147
Fall Risk Assessment	Baseline	42	1	11	54
	EBCD Pre Education	37	11	0	48
	EBCD 30 Days	9	9	0	18

- Doctors of Augusta Test Lab: pre-go live study suggested 19 minutes saved in charting per nurse, per shift.
- Doctors of Augusta: 30 days post go live study (actual results) demonstrated 29 minutes saved in charting per nurse, per shift.

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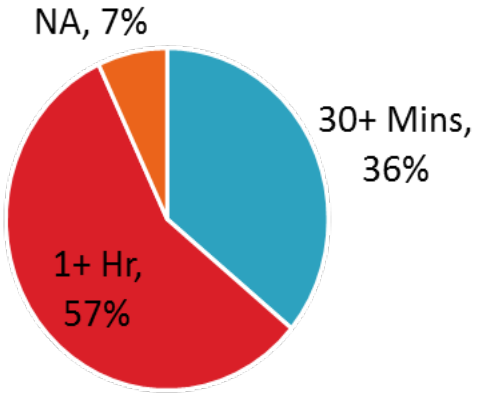
Pilot Success Metrics:
Subjective Results

Adult Inpatient Nursing

93% of Nurses Increased Time at Bedside



EBCD Impact on Nurses and Patients

RNs saving an average of 49 minutes per shift

- **What nurses do with an extra 49 minutes a day:**
  - "Give Pain medicine quicker"
  - "Talk one to one with the patient"
  - "Help other RNs with patient care"
  - "Wash their hair"
  - "Check on patients more often"

- **Missed Nursing Care when nurses run out of time:**
  - Timely medication administration
  - Patient education
  - Ambulation
  - Hygiene
  - Surveillance
  - Emotional & psychological support
  - Documentation
  - Discharge planning

Based on 70 Chart Audits	Number of Plan of Care Problems		Number of Nursing Notes	
	Pre-Go Live	Post Go Live	Pre-Go Live	Post Go Live
Sum	498	322	394	176
Average	7	5	6	3

Reference

Jones, T. L., Hamilton, P., Murry, N. (2015). Unfinished nursing care, missed care, and implicitly rationed care: State of the science review. Internal Journal of Nursing Studies, 52(6), 1121-1137. doi: 10.1016/j.ijnurstu.2015.02.012.

Kalisch, B., Tschannen, D., Lee, H., & Friese, C. (2011). Hospital variation in missed nursing care. American Journal of Medical Quality, 26, 291-299.

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EBCD Enterprise Pre Work Activities and Participants

Workstream	Participants
Vitals Signs Standardization	Clinical Analyst
MEDITECH: NUR Module Nursing Access	Clinical Analyst
NPR Analysis	Clinical Analyst, Facility Lead
EBCD Parameter Setup	Clinical Analyst
Analysis of Clinical Systems and Equipment	Clinical Analyst
EBCD Intervention Analysis	Clinical Analyst, Facility Lead
OA Messaging Removal	Clinical Analyst, Facility Lead, Dept Directors
Corporate Screen Use Analysis	Clinical Analyst
Inpatient Routine Nursing Care Orders	CNO, DAC, Nursing Directors, Policy Committee, Clinical Analyst
NE1 Wound Assessment Tool	EBCD Facility Lead, Lead Physical Therapist/Wound Champion, and all Nursing and Physical/Wound Therapy
Nursing Documentation Policy	Nursing Leadership, Policy Approval Committee
Patient Weight Documentation	Facility Lead
PDOC Localization	PDoc Specialist or DCS
Device Assessments	EBCD Facility Lead, IT Director
Healthstream Build Out	Facility Lead or Director of Education
Informatics/Professional Practice Council (Governance)	Facility Lead
Evidence Based Tools	Clinical Analyst, Facility Lead

Readiness Toolkit

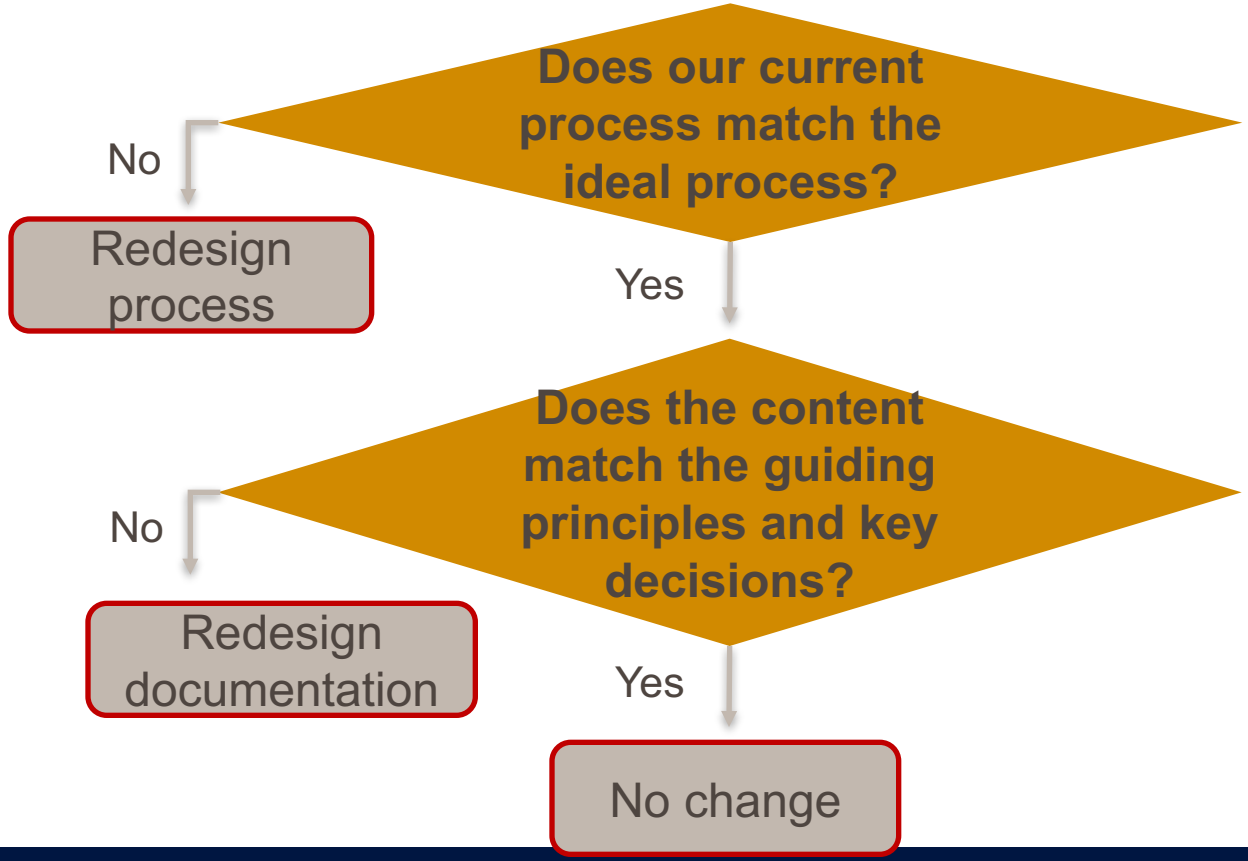
- NE1® Wound Assessment Tool
- Corporate Screen Use Analysis
- Evidence Based Tools
- Nursing Documentation Policy
- Routine Nursing Care
- Device Assessments
- NPR Analysis
- PDOC Localization
- Vital Signs Standardization
- OA Messaging Removal
- Crosswalk for Systems
- Governance Committee
- Healthstream Build Out
- Projects Impacting Nursing Implementation
- Meditech: NUR Module Process Interventions Routine
- EBCD Parameter Setup
- EBCD Intervention Requests

Impact:
Nursing Data Portal

Holding the Gains . . . .Assuring On-going Adherence to Guiding Principles

Structure

Process



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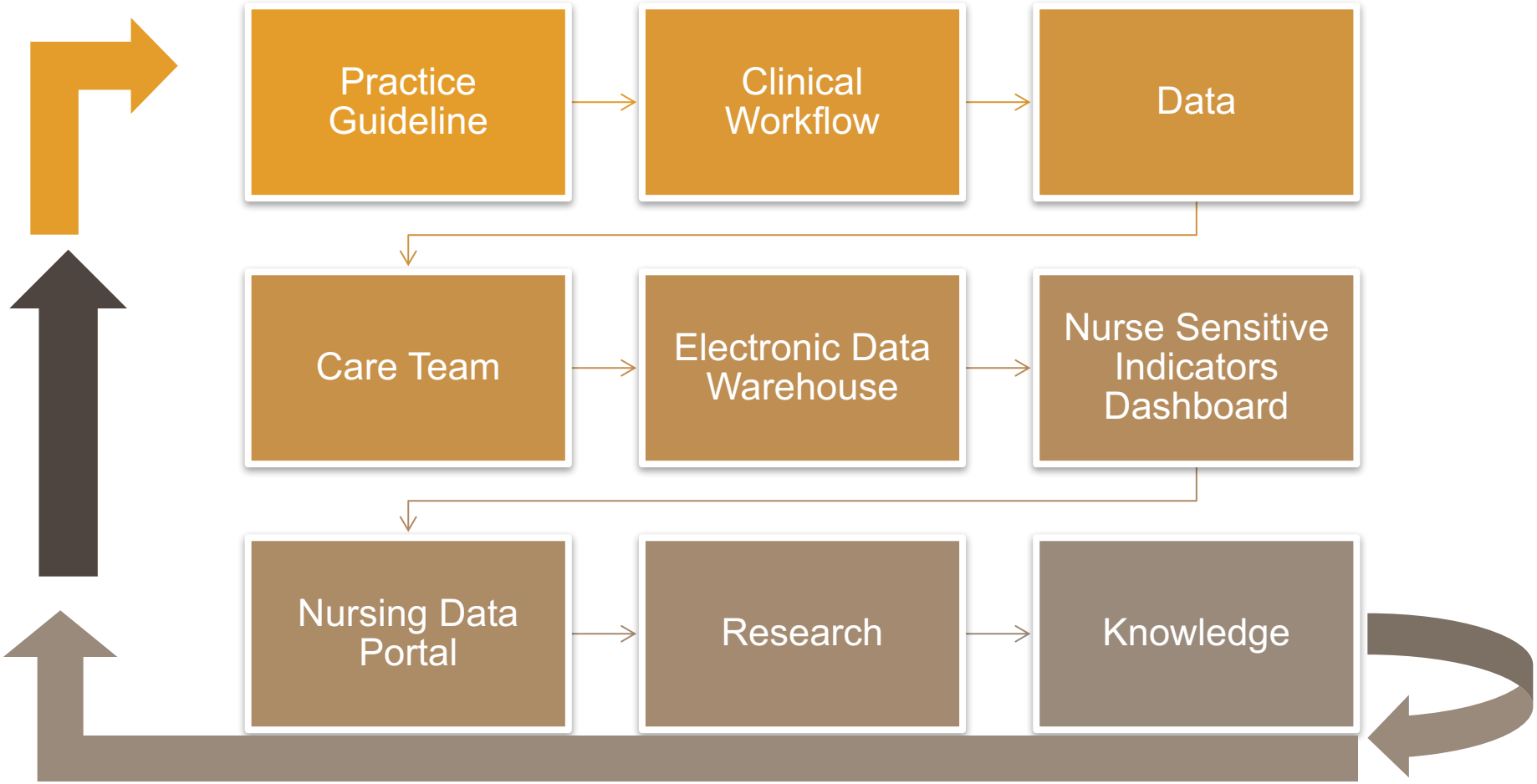
EBCD The BIG Picture



EBCD Governance:
Nursing Practice Change

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EBCD Summary

- EBCD is designed to:
  - **advance nursing practice** to a common evidence foundation,
  - improve patient and staff outcomes by **returning time to care** by reducing non-value-added documentation burden,
  - enhance **communication** and transition of care by sharing data among departments,
  - improve **efficiency** of staff learning, teaching and system maintenance through simplified design,
  - enhance **quality** improvement by capturing discrete data,
  - enable learning and research through discrete, **coded** data,
  - provide standardized data for **analyzing differences** in nursing practices and determining most **effective practices**


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- Saba, VK (2012). Clinical Care Classification (CCC) System, Version 2.5 User's Guide, 2nd edition. Springer Pub, New York, NY.
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