

# VALUE OF THE CLINICAL CARE CLASSIFICATION (CCC) SYSTEM STANDARD

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## NURSING

Source: Ohio University Interprofessional Healthcare [http://www.ipfacts.com/gallery/wid\\_index.html](http://www.ipfacts.com/gallery/wid_index.html)

### Presentation Objectives

- Describe the relationship between nursing knowledge and the use of the CCC Standard
- Describe the steps in developing the CCC System Value in electronic health records
- Provide examples of the CCC integration with EHR systems

### Fundamental Needs

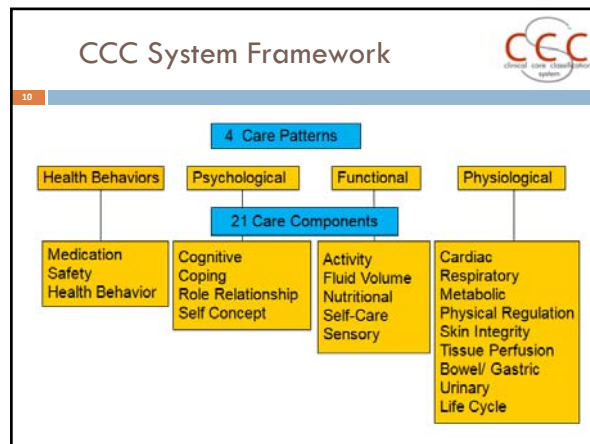
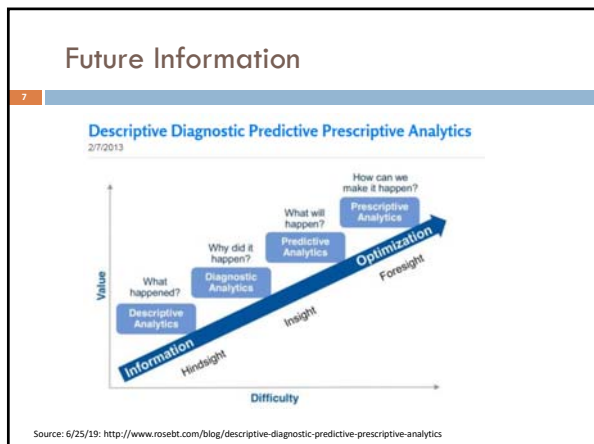
- Individualized Nursing Care Plan
- Integration between the Nursing Assessment and the Nursing Care Plan
- Coherence between the Nursing Care Plan and the Progress Note
- Nursing Diagnoses always have Interventions

### Questions:

- How does an individualized Nursing Care Plan support quality care?
- Does ANA's ontology (the Nursing Process) an appropriate interface for the integration of Nursing Assessments and Care Plan?
- What is the Nursing Diagnosis relationship to the Nursing Process?
- Can standard terminology increase the coherence between a Nursing Care Plan and Progress Notes?

### Data → Wisdom

*The Relationship of Data, Information, Knowledge, and Wisdom*  
Engelhardt, S. & Nelson, R. (2002) Health care informatics: An interdisciplinary approach. St. Louis: Mosby-Year Book, Inc.



### Clinical Care Classification (CCC) System

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Developed by Dr. Virginia K. Saba, EdD, RN from a national U.S. government funded research study including District of Columbia and Puerto Rico at Georgetown University, Washington, DC

2007/2008: Secretary of Health and Human Services (HHS) recognized nursing care services should be reportable based on multi-faceted, comprehensive selection criteria identified the Clinical Care Classification (CCC) System as the first nation-wide Interoperable Nursing Terminology (Federal Register) for EHR systems: FREE, no consulting or licensing fees, solely designed for computer processing, compatible with Health Level Seven (HL7) interoperability format.  
2008/2009, HITSP added the Omaha System of public health nursing concepts

Dr. Virginia K. Saba, EdD, RN, FAAN, FACMI, LL

- ### Level 2 – 21 Care Components
- 11
- |                       |                            |
|-----------------------|----------------------------|
| 1. A: Activity        | 11. K: Physical Regulation |
| 2. B: Bowel /Gastric  | 12. L: Respiratory         |
| 3. C: Cardiac         | 13. M: Role Relationship   |
| 4. D: Cognitive       | 14. N: Safety              |
| 5. E: Coping          | 15. O: Self-Care           |
| 6. F: Fluid Volume    | 16. P: Self-Concept        |
| 7. G: Health Behavior | 17. Q: Sensory             |
| 8. H: Medication      | 18. R: Skin Integrity      |
| 9. I: Metabolic       | 19. S: Tissue Perfusion    |
| 10. J: Nutritional    | 20. T: Urinary             |
|                       | 21. U: Life Cycle          |

- ### Structure of the CCC System
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- Level 1: 4 Healthcare Patterns
  - Level 2: 21 Care Components
  - Level 3: CCC of Nursing Diagnosis
  - Level 3: CCC of Nursing Interventions
  - Level 4: Outcomes/ Intervention Actions

### Level 3 – Nursing Diagnoses - and - Nursing Interventions


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The CCC System consists of two INTERRELATED terminologies:

1. CCC of Nursing Diagnoses / Outcomes
2. CCC of Nursing Interventions/Actions

Both classified by 21 Care Components

## Level 3 – Nursing Diagnoses - and - Nursing Interventions



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CCC Nursing Diagnoses: 176 Nursing Diagnoses

Basis for selection of nursing interventions to achieve outcomes for which the nurse is accountable.

CCC Nursing Interventions: 201 Nursing Interventions

Single nursing action designed to achieve an outcome for a nursing or medical diagnosis & for which the nurse is accountable.

## CCC Coding




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5 Characters (ICD-10 Structure)

- 1<sup>st</sup>: one alpha character
- 2<sup>nd</sup> & 3<sup>rd</sup>: two-digit Major category
- 4<sup>th</sup>: one-digit Subcategory
- 5<sup>th</sup>: Modifier / Qualifier:
  - 3 Outcomes or 4 Intervention Action Types

□ Example: A01.0.2  
Activity Alteration (A01.0) Stabilized


## CCC Nursing Diagnosis Modifiers




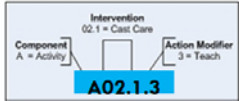
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- Coded to Measure: Nursing Diagnosis Outcomes
  - .1 Improve(d)
  - .2 Stabilize(d)
  - .3 Deteriorate(d)

## Example: CCC Coding Structure




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<p><b>Diagnosis: 5 digit code</b></p>  <p>The CCC of Nursing Diagnoses and Outcomes</p>	<p><b>Intervention: 5 digit code</b></p>  <p>The CCC of Nursing Interventions and Intervention Actions</p>
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**Linked using the 21 Care Components**


## CCC Intervention Qualifiers: Action Types



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- Coded to Measure: Nursing Interventions
  - .1 Assess / Monitor
  - .2 Perform / Provide (Hands-on, Do)
  - .3 Teach / Instruct
  - .4 Manage / Coordinate (indirect care)

## Examples of CCC Nursing Diagnoses with Outcome Modifiers

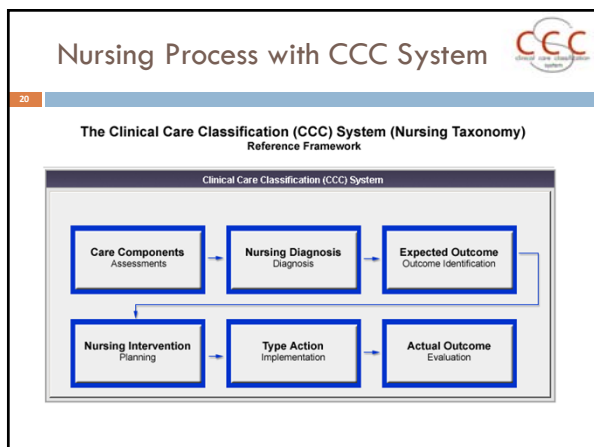
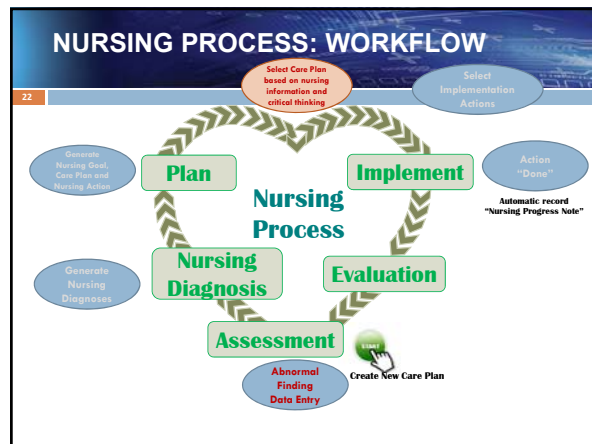


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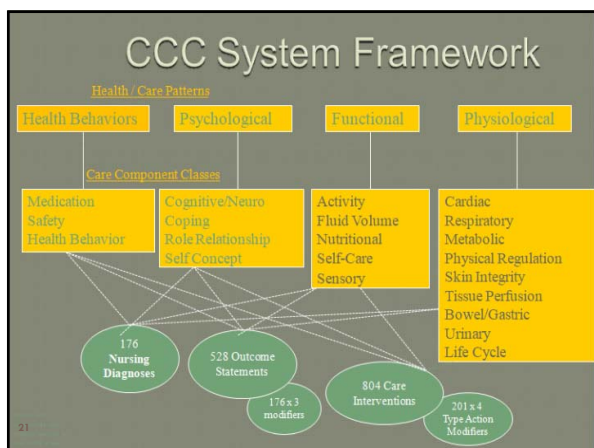
- Activity Alteration [A01.0.1]
- Diarrhea [B03.3.1]
- Cardiovascular Alteration [C06.0.2]
- Dying Process [E10.0.3]
- Nutrition Alteration [J24.0.1]

### Examples of CCC Nursing Interventions with Action Type

- Mobility Therapy [A03.0.1]
- Ostomy Care [B07.0.1]
- Cardiac Care [C08.0.1]
- Terminal Care [E14.0.3]
- Nutrition Care [J29.0.1]

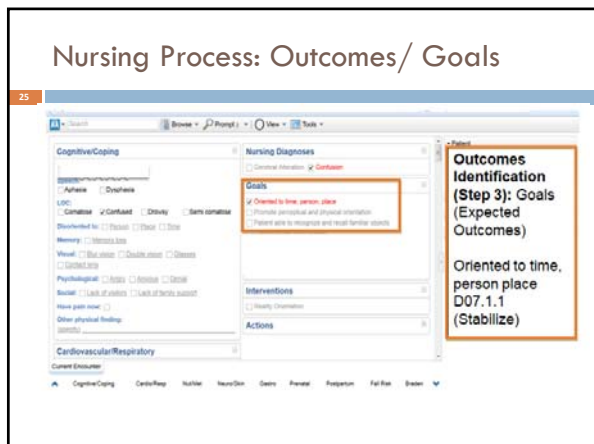


### Nursing Process: Assessment



### Nursing Process: Diagnosis

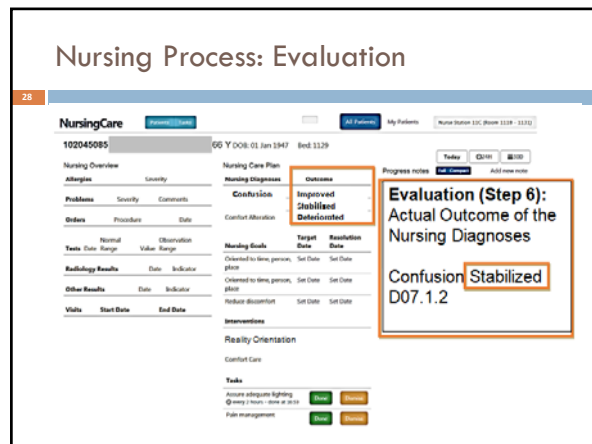
### Nursing Process: Outcomes/ Goals



**Outcomes Identification (Step 3): Goals (Expected Outcomes)**

Oriented to time, person, place (Stabilize)

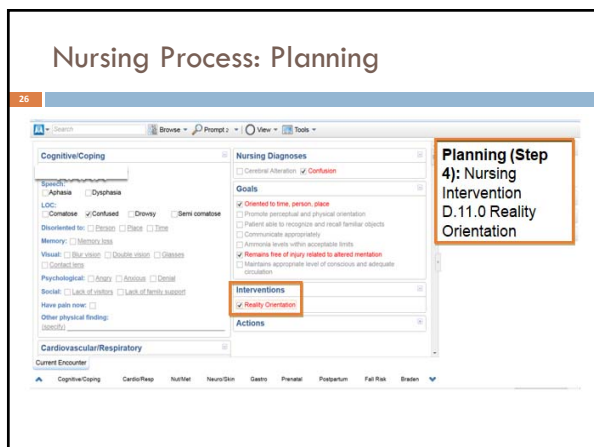
### Nursing Process: Evaluation



**Evaluation (Step 6): Actual Outcome of the Nursing Diagnoses**

Confusion Stabilized D07.1.2

### Nursing Process: Planning



**Planning (Step 4): Nursing Intervention D 11.0 Reality Orientation**

### Nursing Process: Summary

Steps 1 – 6: CCC / Nursing Process

Assessment / Assessment: LOC Confused

Nursing Diagnosis / Nursing Diagnosis: Confusion D07.1

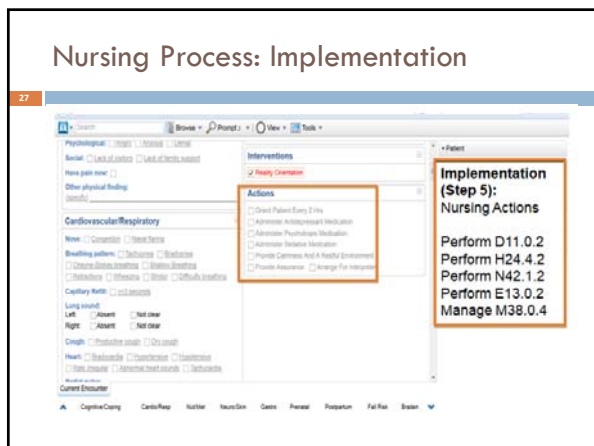
Expected Outcome / Outcomes ID: Improve Confusion D07.1.1

Nursing Intervention / Planning: Reality Orientation D11.0

Intervention Action Types / Implementation: D11.0.2, H24.4.2, E13.0.2, M38.0.4

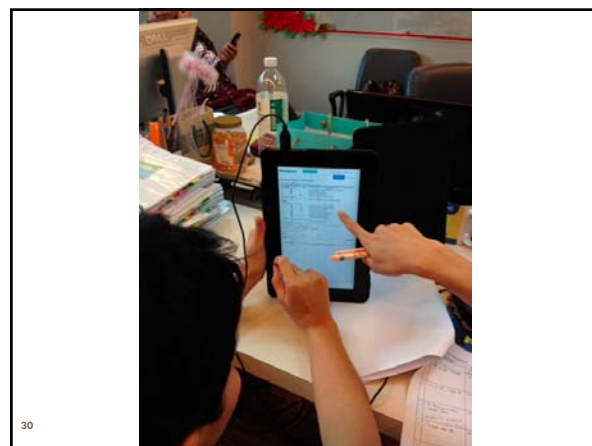
Actual Outcome / Evaluation: Confusion Stabilized D07.1.2

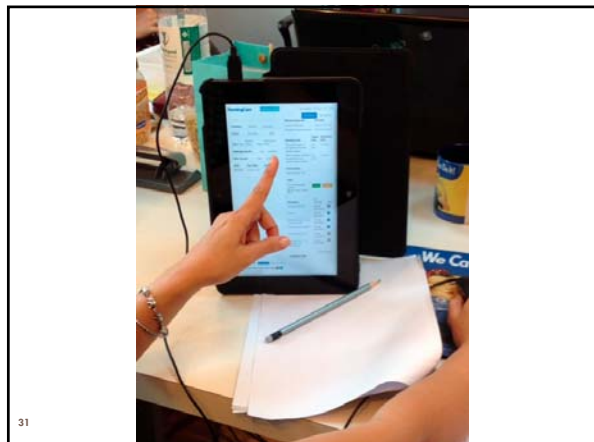
### Nursing Process: Implementation



**Implementation (Step 5): Nursing Actions**

- Perform D11.0.2
- Perform H24.4.2
- Perform N42.1.2
- Perform E13.0.2
- Manage M38.0.4





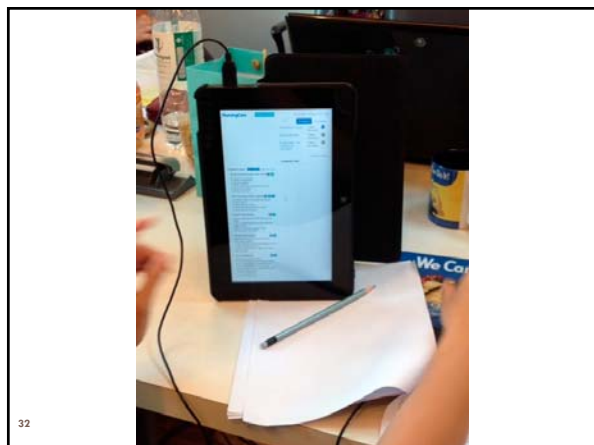
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## Interoperable Data for Nursing

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### Frequency of Intervention Actions

Intervention	Action	Day 1	Day 2	Day 3	Total
Reality Orientation (Orient Patient Every 2 Hrs)	Perform	8	8	4	20
Medication Treatment	Perform	2	1	0	3
Environmental Safety	Perform	3	3	2	8
Emotional Support	Perform	8	6	2	16
Communication Care	Manage	0	0	1	1
TOTAL		21	18	9	48

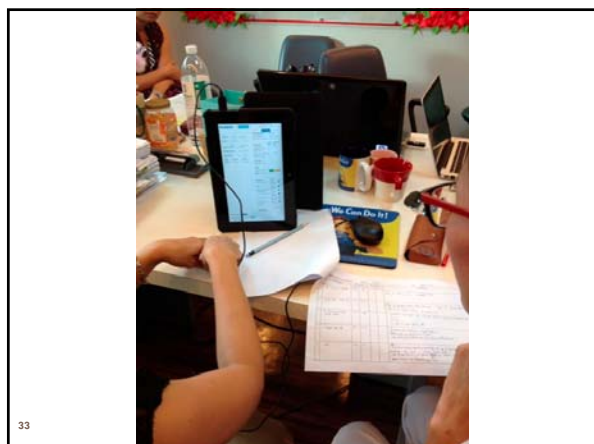


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## Evidence-Based Practice

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- Move toward “proven” interventions
- Driven by demands for greater quality and cost efficiency
- Provides greater consistency in care from institution-to-institution and provider to provider



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## Role of the Nurse

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- Must be involved in:
  - Identifying and defining data elements that an interface can supply
  - Determining measures to ensure the quality of data exchanged among individual systems
  - Formation and maintenance of the electronic health record

## Benefits to Nurses with CCC Implementation

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- Nurses can become a full partner in healthcare future restructuring and contribute to research effectiveness
- Understand nursing's contribution to patient outcomes through data

## CCC Web Sites and References

- [Wikipedia](#)  
[http://Clinical\\_Care\\_Classification\\_System](http://Clinical_Care_Classification_System)
- <http://www.sabacare.com> and  
[www.clinicalcareclassification.com](http://www.clinicalcareclassification.com)
- [Clinical Care Classification \(CCC\) Manual: A Guide to Clinical Documentation](#)  
Version 2.5, Springer Publications

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