Integration of Evidence-Based Nursing Content: A Collaborative Study

Patricia S. Button, EdD, RN (a)

Rosemary Kennedy, MBA, RN (b)

Ida Androwich, PhD, RN, FAAN (c)

Rebecca R. DaDamio, MBA, RN (b)

a *Zynx Health Incorporated, Los Angeles, California, U.S.A.*

b *Siemens Medical Solutions Health Services Corporation, Malvern, Pennsylvania, U.S.A.*

c *Loyola University, Chicago, Illinois, U.S.A.*

A Collaborative Study

Mutual interest in better understanding methods of making evidence based content available to clinicians at the point of care.

- **Pinnacle Health**
  - **Community based healthcare system**
- **Zynx Health Inc.**
  - **Evidence-based clinical content provider**
- **Siemens Medical Solutions**
  - **Broad portfolio in healthcare IT and modality systems**

Study Objectives: 2 Phase Study

- Gain an understanding of the **technical factors** related to providing access to Zynx Health knowledge and evidence from within Siemens applications;
- Gather data regarding various **nurse users' reactions** to the availability of Zynx Health knowledge and evidence in these applications;
- Identify the **specific locations** within the clinical system interface from which Zynx Health knowledge and evidence knowledge provides value for nurses; and
- Identify **requirements related to the integration of nursing knowledge** within the electronic health.

Phase I Methods

Phase I: Referential Access

Provided Links from Siemens clinical systems to Zynx Health referential knowledge and evidence regarding four key quality indicators.

- Patient Falls
- Acute Pain
- Pressure Ulcers
- Smoking Cessation

Phase II Methods

Phase 2: Evidence Based Content Integrated in Plan of Care and Documentation

Customization of Zynx Health evidence based plans of care for the Pinnacle organization and integration of the content of the plans in Siemens care planning and documentation applications, for:

- Pain Management
- Prevention of surgical site infection
- Prevention of ventilator-acquired pneumonia
- Tissue perfusion
- Fall prevention
- Impaired Mobility

Phase I Findings

Executive Champion | **Facilitating Practice Standards** | **Future Work**

- CNO as champion support was required throughout the project – not just at the ‘kick-off’.
- Nurse Educators provided additional ‘face-to-face’ education individually with staff nurses – after the initial educational session.

Phase I Findings

Executive Champion | **Facilitating Practice Standards** | Future Work

Staff Nurse Perceptions

- Provided information they didn't know or had forgotten
- Provided evidence for the "new" information reflected in the literature
- Provided valuable information that is not sought out due to lack of time during care delivery
- Information was useful during rounds and shift report
- Information was accessed most during care provision

Phase II Findings

Executive Champion | **Facilitating Practice Standards** | Future Work

Staff Nurse Perceptions

- Embedded content expanded knowledge
- Information more accessible – do not have to go to books
- Embedded content
  - Understandable
  - More detailed, expanded
  - Provides more options

Phase II Findings

Executive Champion | **Facilitating Practice Standards** | Future Work

- Improved documentation of pain reassessment by 76% to 94% compliance
- Reduced number of falls with serious injuries

Pilot Overall Findings

Success was contingent on several fundamental requirements.

- Strong partnership of three organizations
- Strong nursing leadership
- Evidence based content
- Tools to customize the content in accordance with institutional practices
- Flexible hospital information system
- An inter-disciplinary team of staff nurses, advance practice nurses, and nursing informatics specialists

Pilot Overall Findings

- This study demonstrated that positive value could be achieved by providing access to evidence based knowledge at the point of decision making.
- Study serves as a case example of a repeatable implementation model for integrated evidence based content within the electronic health record.
- Nurses in this study shifted from task based documentation to knowledge-based decision-making.

- **Acknowledgments**

We would like to thank Sheri Matter, MS, RN, BSN, Vice President of Nursing Operations and Cindy Brown, MS, RN, Director Clinical Informatics of Pinnacle Health, Harrisburg, Pennsylvania, U.S.A. for their leadership roles in this study effort.

- **References**

Gugerty B, Maranda M, Rook D. The Clinical Information System Implementation Evaluation Scale. Studies in Health Technology and Informatics, 2006. 122:621-5.

- **Address for correspondence**

Patricia S. Button, EdD, RN
Director, Nursing Content
Zynx Health Incorporated
85 Dartmouth College Highway, #902
Lyme, New Hampshire 03768