

# Public Health Nurses' Awareness of Cognitive Processes While Using Evidence-based Care Plans in Family Home Visiting Practice



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## Background

Public health nurses (PHNs) in local and state public health agencies provide care to high risk families. To ensure high quality in family home visiting (FHV) and achieve desired outcomes, it is critical that PHNs use evidence-based FHV interventions.

Documentation is a time consuming and necessary task. It is essential to support PHN documentation to improve workflow and quality. An evidence-based FHV care plan was developed using the Omaha System, introduced to PHNs, and implemented in the electronic health record to provide clinical decision support. However, little is known about the impact of evidence-based guidelines on PHN cognitive processes and decisions.



## Purpose

The purpose of this study was to evaluate Public Health Nurses' awareness of cognitive processes while using evidence-based care plans in family home visiting practice.

## Methods

This study was conducted with five PHNs providing family home visiting services in the Midwest.

Semi-structured interviews examined their cognitive experience transitioning from usual practice care plans to new care plans.

Interviews were transcribed and analyzed using a thematic analysis approach (Boyatzis, 1998). Themes were developed and revised following several reviews of the transcripts.

Boyatzis, R.E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, CA: SAGE Publications, Inc.

## Omaha System

The Omaha System is a standardized terminology that is used to document nursing assessments, interventions and patient outcomes; providing defined terms and relationships that structure health information.



Martin, K.S. (2005). *The Omaha System: A key to practice, documentation, and information management* (Reprinted 2nd ed.). Omaha, NE: Health Connections Press.

## Results

**Three themes described PHN cognitive processes relative to the evidence-based FHV care plan:**

### 1. PHN thinking is separate from the care plan

\*PHNs stated that they rely on their knowledge, skills, and expertise as they provide care. They describe using their knowledge as they customize the care plan as needed for their clients. They also suggest improvements to the evidence-based care plan based on their expertise.

"I go in with a blank slate and gather the information; it's a lot of conversation."

### 2. PHN thinking is supported by the care plan

\*PHNs found that the new care plan fits with their expertise and provides a way to structure information. It helps organize all of the different tools and models that they use in their practice. They related that the structure of the Omaha System provides a useful way to conceptually organize complex, multidimensional nursing knowledge and client information.

"...it seems to fit more with the components of what I'm thinking"

### 3. PHN thinking is stimulated by the care plan

\*PHNs expressed understanding of the importance of data quality and interoperability and population health improvement because they learned and understood the importance of standardization. Some described knowledge seeking to understand the meaning of the intervention.

"...what it will be is for me an analytical process...What is it based on? Where is the best practice?"

## Discussion

PHN cognitive processes while using the evidence-based FHV care plan relate to their own knowledge and expertise, their individual clients, and the whole client population or program.

For individual clients, PHNs describe a cognitive process that differs depending on their perception of care plan content. If care plan content matches the nurses thoughts the nurse experiences the care plan as a convenience. The PHN can document readily and move on with little stress. If the care plan content doesn't match the nurse's thoughts, the nurse experiences distress in interpreting the care plan and documenting. This may lead to the need to customize the care plan for this one client.

For the client population/program, PHNs describe awareness of the system level and need for consistency and structure that serves both PHN needs and the program as a whole, leading to the need to revise the care plan for all clients,

**Implications for Practice:** A structured care plan provides a structure for thought surrounding PHN practice. Agreement or disagreement with the care plan language is a constant iterative process of evaluation. A care plan that accurately represents evidence-based PHN practice may decrease the cognitive load.

**Implications for Research:** Further research is needed to examine the impact of care plan improvement on the PHN experience, workflow, and documentation quality, and to evaluate the impact of using evidence-based care plans in other disciplines and settings.

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