

VA



U.S. Department of Veterans Affairs
Veterans Health Administration
Office of Health Informatics



Business Process Workflow Modeling Training

Tutorial 6, Eliciting Knowledge for the Creation of Workflow Models

Spring 2020

Version: 001

Instructor: Claire Hayes Watson, PhD, MPH

*Human Factors Engineering (HFE)
Office of Health Informatics (10A7A)
Veterans Health Administration*

About the Authors & Acknowledgements

- This training was developed under VA Human Factors Services (HFS) Contract (36C77619D0018), Task Order 3, by Visionary Consulting Partners, LLC, contractors to Human Factors Engineering.
 - The HFS Contracting Project Team includes authors and instructors:
 - Anthony Masalonis, PhD
 - Claire Hayes Watson, PhD, MPH
 - Aneesa Motiwala, MS
 - Marsha McClure, MHA
- We would also like to acknowledge Visionary team members who served as reviewers and contributors to this content:
 - Eleanor Thornton, MS, MCHES, AE-C
 - Michael D. Thornton Sr., MS, PMP, CPHIMS, FHIMSS
 - Nakina Eugene, MPH, CHES
- Video production and editing provided by:
 - Jamiel Chapple
 - Michael D. Thornton Jr.





Objective

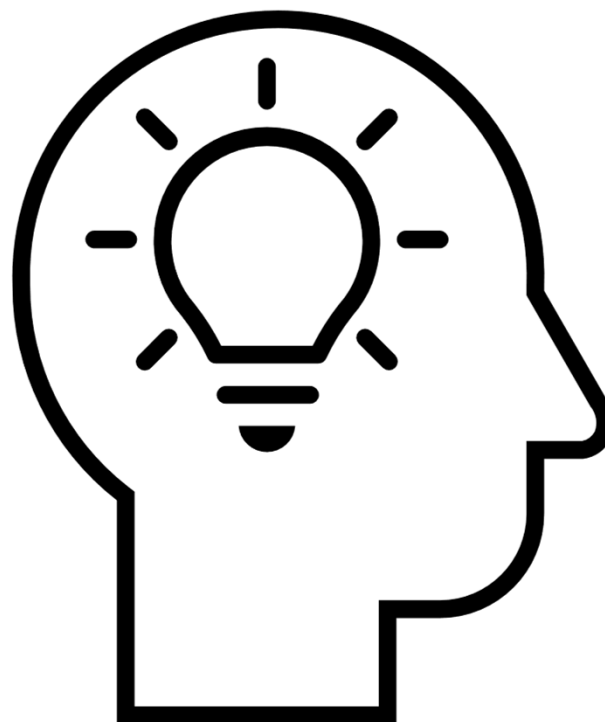
- Learn the definitions and foundational concepts of methods for eliciting knowledge for clinical workflows, such as observations, interviews, focus groups, walkthroughs, tabletops, and simulations.
 - Guidelines for selecting methodologies
 - How to start
 - Best practices

What is Knowledge Elicitation

- Definition:
 - Knowledge elicitation consists of a set of techniques and methods that attempt to elicit the knowledge of a domain expert, typically through some form of direct interaction with the expert (Shadbolt and Smart, 2015)

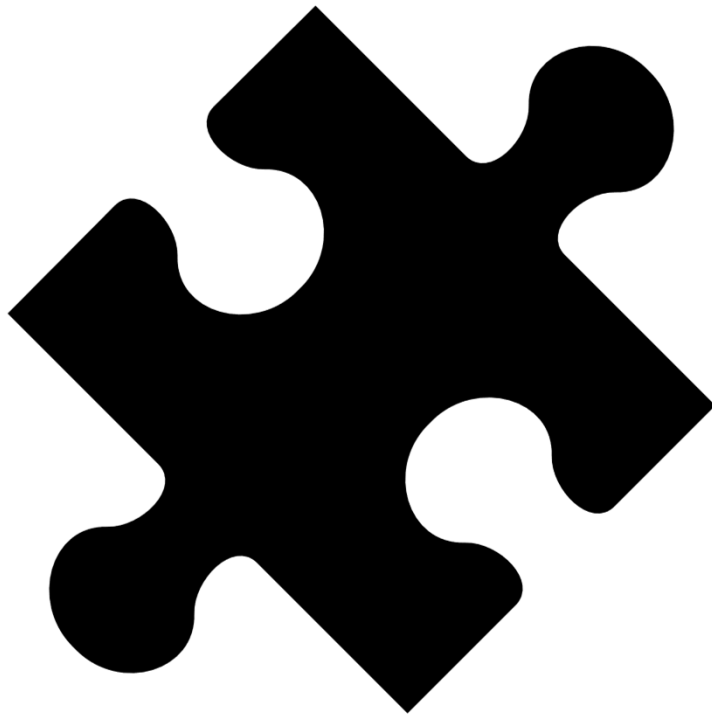
Purpose of Knowledge Elicitation

- To understand the roles, activities and interactions in a clinical workflow.
- Systematically collect information in a form that can be used to build a model.





Overview of Knowledge Elicitation Methods



- Vary in complexity
- Model construction (from “scratch”) vs. model validation
 - Many workflow modeling efforts contain both
 - Elicit, Build, Validate

Observations

1. What are they
 - The modeler observes the workflow in a live setting
 - There multiple forms of observations
 - i.e. Gemba Walks
2. Where to start
 - Define goals
 - Decide who will be observed
 - Determine whether you will perform an “passive” or “active” observation



Observations

Best Practices

- ✓ Template/form for data collection
- ✓ Capture variability: multiple events/care teams/facilities
- ✓ Immediate (initial) validation: ask a cognizant person how typical was the event(s) you observed
- ✓ As the observation progresses, you may have additional questions. Make sure that you document as you go.
- ✓ Assure those being observed that observations are not to judge them but instead to help improve their work environment.

Interviews

1. What they are

- The modeler/facilitator interviews those with knowledge of the process
- Can be performed one-on-one
- Can be moderated using multiple interviewers

2. Where to start

- Identify Goals
- Select Participants
- Determine Logistics
- Select Format
- Conduct the Interview



Interviews

➤ Best Practices

- ✓ Plan ahead
- ✓ Go in with a basic description of the process
- ✓ Keep it confidential, when appropriate
- ✓ Capture variability: multiple events/care teams/facilities
- ✓ Use open-ended & probing questions
- ✓ Present output as text narrative, a transcript, or detailed notes

Focus Groups

1. What they are
 - One or more modelers/facilitators discuss the workflow with a group
 - Interactive session including a carefully selected group of participants who can offer knowledge on a given process
2. Where to Start
 - Identify Goals
 - Select Participants
 - Determine Logistics
 - Conduct the Focus Group



Focus Groups

➤ Best Practices

- ✓ Plan ahead
- ✓ Go in with a basic description of the process
- ✓ Get basic questions answered first
- ✓ Keep it confidential, when appropriate
- ✓ Capture variability: multiple events/care teams/facilities
- ✓ Use open-ended & probing questions
- ✓ Present output as text narrative, a transcript, or detailed notes, rough workflow drawings, whiteboards/sticky notes.

(Cognitive) Walkthroughs

1. What they are

- Shares characteristics focus groups, but is driven by one or more scenarios
- The facilitators step participants through the scenario and systematically capture what they would be doing and thinking

2. Best Practices

- Follows many best practices of focus groups
- Common method of choice for a process that does not exist yet
- Input is a narrative, represented in text or slide deck with graphics/mockups/videos



Tabletop Exercises

1. What they are

- A more interactive form of a cognitive walkthrough, where participants make decisions that affect the next step in the scenario
- Begin with structure but can go in unplanned directions (which is often when the best data are gathered).

2. Best Practices

- Flexibility required, including facilitators and participants working together to explore what would happen when scenario goes in a direction not anticipated by the prepared materials



Simulations

1. What it is

- Scenario-based evaluation assisted by technology that emulates aspects of the working environment.
- Can be experimental, with controlled scripted scenarios, free-running, or a combination of both.

2. Best Practices

- Collaboration of clinicians and simulation experts is essential to design and validate useful scenarios and scripts.



Considerations for Selecting Methods

- Overarching goals of your project
- Complexity of the process/practice
- Complexity/level of effort of methods
- Resources (modelers, participants, facilities, time constraints, etc.)

END OF TUTORIAL

References

Global Knowledge. (2020) . Requirements Development, Documentation, and Management Course. Retrieved April 24, 2020 from <https://www.globalknowledge.com/us-en/course/84336/requirements-development-documentation-and-management/>.

Business Analyst Times. (2020). Methods for Eliciting - Not Gathering - Requirements. Retrieved April 24, 2020 from <https://www.batimes.com/articles/methods-for-eliciting-not-gathering-requirements.html>.