

# Testing theory using audit with feedback interventions



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# Approach to theory testing

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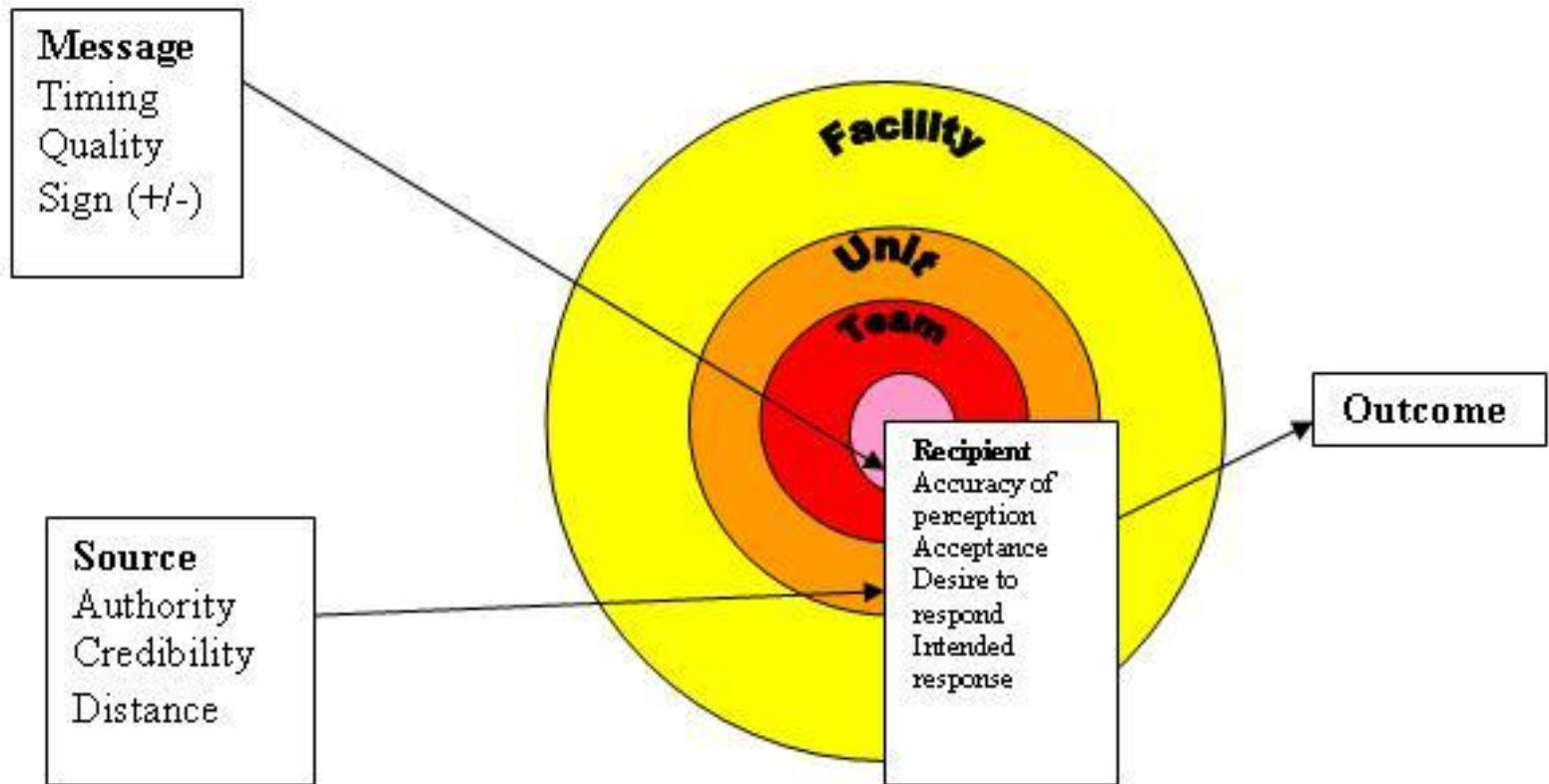
- Articulate theor(ies)
- Define relevant constructs
- Develop operationalization
  - Measurement
- Derive hypotheses
- Formulate the null
- Develop the intervention or test
- Conduct the intervention
- Collect data
- Test hypothesis

# Potentially grounded in PARiHS

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- $RU = f(E, C, F)$
- C is composed of Cu, L, Ev
- Audit with feedback is one component of Ev

# Model of feedback elements within an organizational context



Based on Ilgen  
1979

# Theories underlying feedback interventions

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- Elements of **the message**
  - Timing
  - Quality
  - **Sign-- + or -**
- Elements of context or climate
- Elements of the individual

# Theory about the effect of the sign (positive vs. negative)

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- In general, negative messages are more likely to stimulate response than positive
  - Although repeated and very negative messages may induce learned helplessness -> no response or ineffectual response
- The sign of the message is dependent on the benchmark or goal
- This articulation of detailed theory (specific to the construct of the message, and its attributes) allows me to proceed to operationalization

# Operationalizing performance in managing daily pain among LTC residents

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- Need data source
- Existing data source
  - interRAI MDS 2.0
  - Assessments conducted quarterly for residents in LTC facilities
  - Includes three items about pain
    - Any pain
    - Pain frequency
    - Pain intensity
  - “Objective” assessment
  - Lots of measurement problems
  - Still widely accepted within LTC sector

# Generating a hypothesis

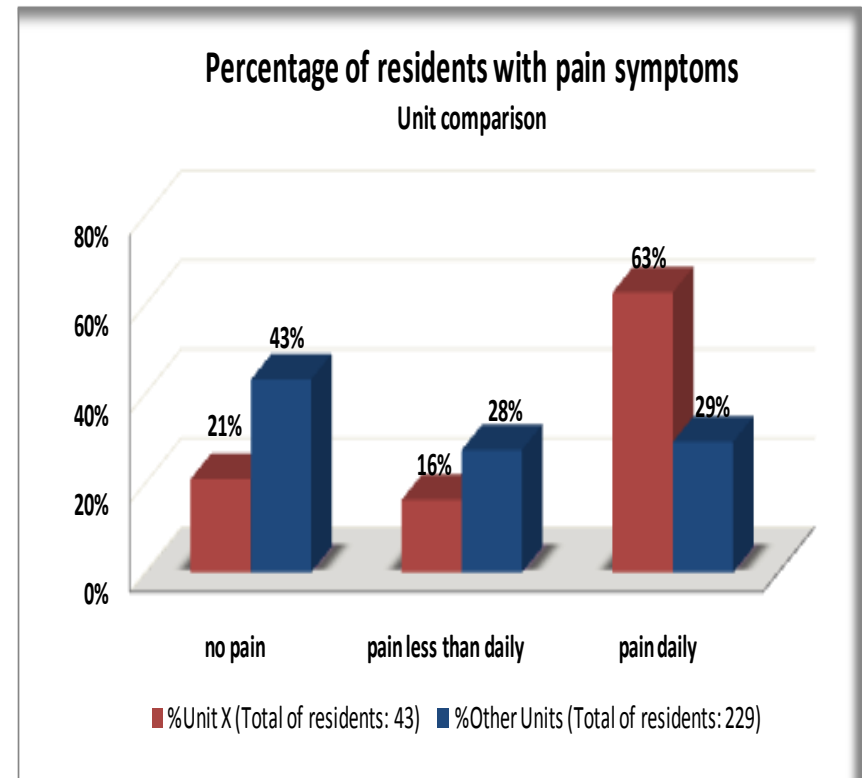
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- I would expect unit participants to want to change behavior to alter the report of their performance
- One formulation of the hypothesis
  - Given a negative message about current performance in managing daily pain among residents on their unit, unit staff will change behavior...
- Statement of the null
  - Given negative message... unit staff will not change behavior...



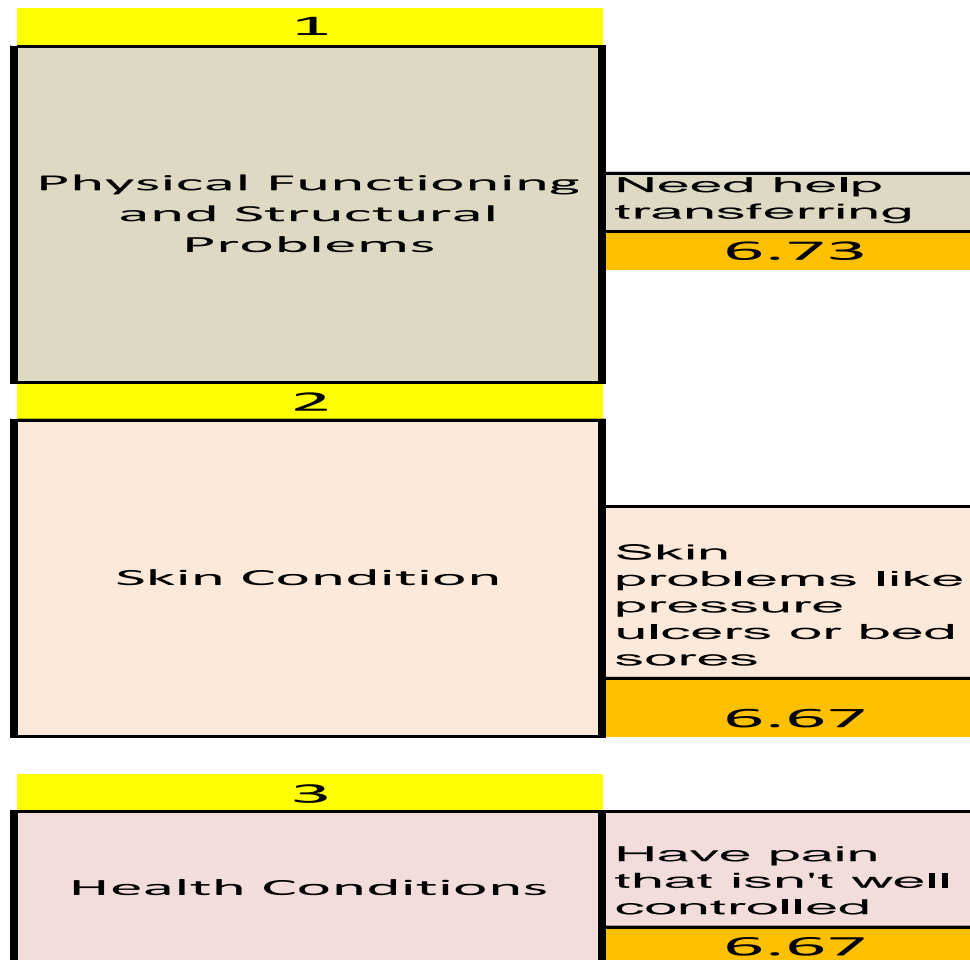
# Operationalizing a message about unit performance in pain management

- Unit X has a prevalence of 63% of residents with daily pain compared with all other units combined (29% of residents)
- Not clear if this is a goal or a standard but Unit X is “doing worse”



# Priorities elicited for RNs and Care Managers

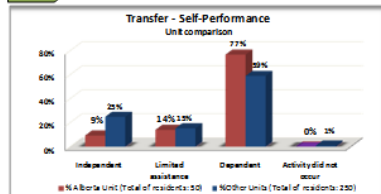
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## Feedback Report based on the RAI-MDS 2.0 Data RN/Care Manager

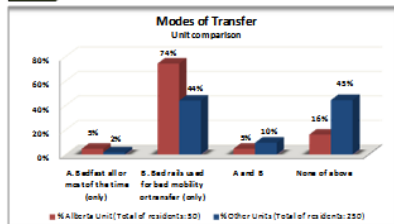
### 1e) Physical Functioning and Structural Problems: Transferring between bed and chair

Graph 1



- The information reported in this graph comes from Section "G" Item(s) "1ba" on the MDS;
- Out of 50 residents in Alberta Unit, 46 require minimum assistance in transferring, while the average for other units is 37 residents;
- Out of 50 residents in Alberta Unit, 39 are totally dependent or need extensive assistance compared to 30 residents in other units.

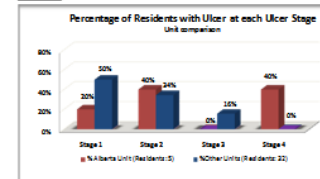
Graph 2



- The information reported in this graph comes from Section "G" Item(s) "6" on the MDS;
- Out of 50 residents in Alberta Unit, 42 required any kind of external help transferring (bedfast, bed rails or both) compared to 28 in other units.

### 2e) Skin Condition: Stages 1 to 4 of pressure ulcers

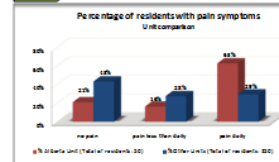
Graph 3



- The information reported in this graph comes from Section "M" Item(s) "1" on the MDS;
- Out of 50 residents in Alberta Unit, 5 had at least one pressure ulcer in the last 7 days; of these, 2 residents had Stage 4 ulcers.

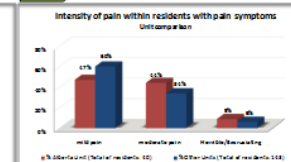
### 3e) Health Conditions: Pain Symptoms

Graph 4



- The information reported in this graph comes from Section "J" Item(s) "2a" on the MDS.
- Out of 50 residents in Alberta Unit, 40 have pain; among these, 32 have Pain daily;
- About twice as many residents in Alberta Unit have daily pain;
- This may mean that pain is assessed more in Alberta Unit.

Graph 5



- The information reported in this graph comes from Section "J" Item(s) "2b" on the MDS.
- Among residents in Alberta Unit with pain, 4 out of 40 report "Horrible or Excruciating" pain while on other units 3 out of 40 report "Horrible or Excruciating" pain;
- The overall intensity of pain for residents of Alberta Unit is slightly higher than in the other units.

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