Analytics, Big Data, and Partnerships

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Cost & Best Value

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Using Data Visualization to Detect Nursing Intervention Patterns

Each image (streamgraph) was created in d3 from longitudinal public health nursing intervention data for a single patient. Data were generated by use of the Omaha System in clinical documentation.

Key:
- Colors = problems
- Shading = actions (categories)
- Height = frequency
- Point on x-axis = one month

From 403 images, 29 distinct patterns were identified and validated by clinical experts.

Documentation patterns suggest both a unique nurse style and consistent patient-specific intervention tailoring.


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Methods
Do PHNs Tailor Interventions?
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PHN Signature Styles?
Data Quality Issue vs. Signature?

Pattern discovery exercise

- Interpretation and analysis
- Comparison with investigator findings