Title Slide: Multilevel Interventions in Health Care: Building the Foundation for Future Research

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Slide 2: Background

- US health care over spends
- U.S. Health Care Underachieves
    - 54.9% with chronic illness get recommended care
    - 19th in reducing avoidable mortality
    - 13th in infant mortality
- Costs for cancer care are large and growing
    - $124.6 billion – 2010
    - 27% increase anticipated for 2020

Total Health Expenditures per capita, U.S. and Selected Countries, 2003
Australia: $2,886
Austria: $2,958
Belgium^: #3,044
Canada: $2,998
Denmark^: $2,743
Finland: $2,104
Franco: $3,046

Germany: $2,983
Iceland: $2,455
Italy: $2,314
Japan@: $2,249
Luxembourg^: $4,611
Netherlands@: $2,909
Norway: $3,769
Sweden: $2,745
Switzerland: $3,847
United Kingdom^: $2,317
United States: $5,711

^: Break in series; see "Comparability over time" at
http://www.irdes.fr/ecosante/OCDE/411.html
@: O E C D estimate

Slide 3: Assumptions

- We need to do better
- Reductionist approaches have limitations
    - New technologies take 17 years to be widely adopted
    - Evidence based innovations are not adopted
    - Practices inconsistent with evidence persist.
- We can learn from other research fields
- We can do better
    - In pursuit of health
    - Rethinking our questions about delivering care
    - Considering multilevel interventions

Slide 4: Multilevel Interventions defined…

Address the health outcomes for patients
    Patient-Centered Care
Target at least 2 other levels in a multilevel model of improving health status
Measure effects at each level

Slide 5: Sparse MLI Intervention Literature

- *Commit* – individuals, orgs, community
    - Smoking cessation in community
- *Assist* – individuals (+), groups, orgs.

    - RCT Smoking cessation among heavy smokers
- *Catch* – students, families, schools
    - RCT of 4 communities to reduce cholesterol and BMI

Slide 6: Project Background

- June 2009 workshop with experts

Jeff Alexander	Arnold Kaluzny	Mario Schootman
John Ayanian	Joe Morrisey	Stephen Shortell
Allen Dietrich	Electra Paskett	Kurt Stange
Mary Fennell	David Murray	Sally Vernon
Ann B Flood		

- Generated issues and recommendations
- Resulted in this conference & JNCI supplement with focus on critical topics and considerations

Slide 7: Conference Topics

- Section I: multilevel influences and interventions across the cancer care continuum
    - *Taxonomy and operational definitions* (Stephen Taplin)
    - *Multilevel issues impacting care* (Jane Zapka)
    - *State of the science for MLI interventions in health and health care* (Kurt Stange)

Slide 8: Conference Topics

- Section II: challenging conceptual issues and opportunities for research on multilevel interventions
    - *Intervention development* (Brian Weiner)
    - *Time as a factor in analyses* (Jeff Alexander)
    - *Research design* (Paul Cleary)
    - *Modeling as an analytic tool* (Joe Morrissey)
    - *Measures in MLI research* (Martin Charns)

Slide 9: Conference Topics

- Section III: Current reality and future directions for multilevel interventions and research
    - *Linking multilevel approaches in healthcare reform* (Kelly Devers and Richard Warnecke)

- *Applications of interventions in a multilevel context* (Elizabeth Yano)
- *Genomic medicine in a multilevel context* (Muin Khoury)
- *Synthesis & emerging themes* (Steve Clauser)

Slide 10: We look forward to your comments

- This conference is designed to seek your input
  - See the summaries in your folder
- Participate in the discussions
  - We expect lively critical feed back

Slide 11: **Session I**

Multilevel influences and interventions across the cancer care continuum

Slide 12: Levels Definitions vary

- Ecological/Psychological model
  - Intrapersonal
  - Interpersonal
  - Policy
- "Systems" model
  - Individuals/groups
  - organizations
  - economic & social systems (community, state, nation)
- Units of human organization- Biopsychosocial model
  - Individuals
  - Groups (family, health care team)
  - Organizations
  - Community
  - Nation

Slide 13: The Layered Context of Care

[image]
Shows an ellipse with 7 concentric ellipses inside it. All the ellipses come together at the bottom and move to a different section. Starting from the outermost ellipse to inner most, the sections are as follows:

- National Health Policy Environment
- State Health Policy Environment
- Local Community Environment

- Organization and/or Practice Setting
- Provider/Team
- Family & Social Supports
- Individual Patients

Individual Patients go Improve Quality of Cancer Care and then to Improved Cancer-Related Health Outcomes.
[End image]

Slide 14: Progression across the continuum affects quality & outcomes

[image]
Shows the connections from Care Processes to Outcomes. There are three main sections, The Care Process(es) connected to Impact which is connected to Outcomes.

- The Care Process(es)
  - Type of Care (front top to bottom the types of care are connected by "Transitions in Care")
    - Risk Assessment (one way connection to)
    - Primary Prevention (one way connection to)
    - Detection (one way connection to)
    - Diagnosis (one way connection to)
    - Ca or Precursor (Rx) (bi-directional connection to)
    - Post-Treatment Survivorship (one way connection to)
    - End of Life Care (connected to)
- Impact
  - Quality measures (connected to)
- Outcomes
  - Patient
    - Risk status
    - Biologic outcomes
    - Health related quality of lfe and well being
    - Quality of death
    - Financial burden
    - Patient experience
  - Population
    - Morbidity
    - Mortality and Cost-effectiveness

[End image]

Slide 15: Intersections of Levels and Process

[image]
Shows the flow process.
Definitions:

- Type of Care: The care delivered to accomplished a specific goal as detection, diagnosis, treatment.
- Transition: The set of steps and interfaces necessary to go from one type of care to another
- Step: The medical encounters or actions that compose a type or transition in care
- Interface: Interactions between providers types and/or organizations and organization units

Process:

- Screening Detection (Type of Care)
    - Performance of the Test (Step)
- Transition
    - Results Reporting (Interface)
        - To referring provider
        - To primary care provider
        - To patient
    - Referral for Diagnostic Evaluation (Interface)
        - Patient understanding
        - Counseling re: fears
    - Appointment Scheduling (Interface)
        - Accessibility
        - Convenience
        - Availability
        - Patient compliance
- Diagnosis (DX) (Type of Care)
    - Performance of Follow-up Testing (Step)
        - Administration
        - Interpretation by Specialist/Laboratory
        - Patient understanding
        - Counseling re: fear
- Transition
    - Results Reporting (Interface)
    - Referral (Interface)
        - Patient understanding
        - Fears
- Treatment (Rx) (Type of Care)

[End image]

Slide 16: Levels Affect Individual's Care Across the Cancer Continuum

[image]
Cylinders representation of care support with support levels inside each cylinder. These are shown as Community (outside cylinder), Organization, Providers, Family and Social Support. The inner most cylinder has the following connection: Assess Risk to degree 1 prevention to Detect to DX to Treat to Survivorship to End of Life
[End image]

Slide 17: The Effect May Vary Across the Cancer Continuum

[image]
Three main cylinders that are side by side to each other. Each cylinder has sub-cylinders in it. These are as follows:

- Organization (First cylinder)
  - Family Support
    - Providers
      - Assess Risk
      - degree 1 prevention
- Providers (Second cylinder)
  - Family and Social Support
    - Detect (Dx)
    - Treat
- Family and Social Support (Third cylinder)
  - Providers
    - Survivorship
    - End of Life

All cylinders are connected at the lowest level: Assess Risk to degree 1 prevention to Detect to DX to Treat to Survivorship to End of Life
[End image]

Slide 18: But how do levels affect each other

- Structure
- Policy
- Incentives

- Interpersonal interaction to affect
    - Education
    - Attitudes (e.g. perceptions of social norms)
    - Skills
    - Behavior

Slide 19: Care occurs in context

[image]
Background collage of caregivers with children and patients.
[End image]

[image]
Shows an ellipse with 7 concentric ellipses inside it. All the ellipses come together at the bottom to out a different section. Starting from the outermost ellipse to inner most, the sections are as follows:

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[End image]

Slide 20: Discussion Question

- What is a level?
- How is *level* distinguished from a mechanism of *influence*?
    - Eg. “Is policy a contextual level or a mechanism of effect?”
        - Policy’s effect can be tested
- What difference does it make?
    - This work is about intervention design and testing

[End Presentation]