Methodological Challenges in Studying Patient-Centered Communication in Cancer Care

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Five M's for Process and Outcomes

- 1) Measurement
- 2) Monitoring over time
- 3) Mediators
- 4) Moderators
- 5) Making Sense of Associations

Multiple Methods of Measuring Patient-Centered Communication (PCC)

- Patient report
- Physician report
- Peer assessment
- Observational measures
  - Videotape
  - Audiotape
- Standardized patients
- Medical records
- Care diaries

Measuring the PCC Functions

- Fostering healing relationships
- Exchanging information
- Eliciting and validating emotions
- Managing uncertainty
- Making decisions
- Navigating the system

How is a "healing" relationship operationalized?

What is the basis for determining when uncertainty has been managed optimally?
How far do existing measures take us in measuring uncertainty—e.g., MUIS/Merle Mischel's measures: 1) parents' perception of uncertainty in illness scales;
2) adult uncertainty in illness scale

What is a decision? What is an informed decision?

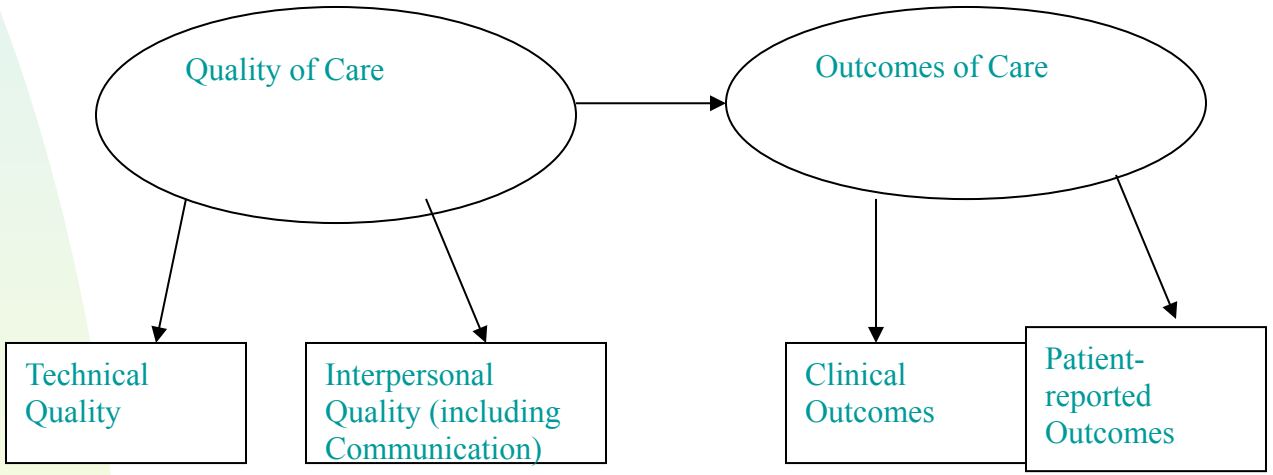
Monitoring over time

- In contrast to single physician and cross-sectional design
- Doctors nested within patients
  - Multiple providers (physicians, nurses), multiple interactions over time, and multiple channels of communication (face-to-face, phone, email)
  - EMRs and PHRs

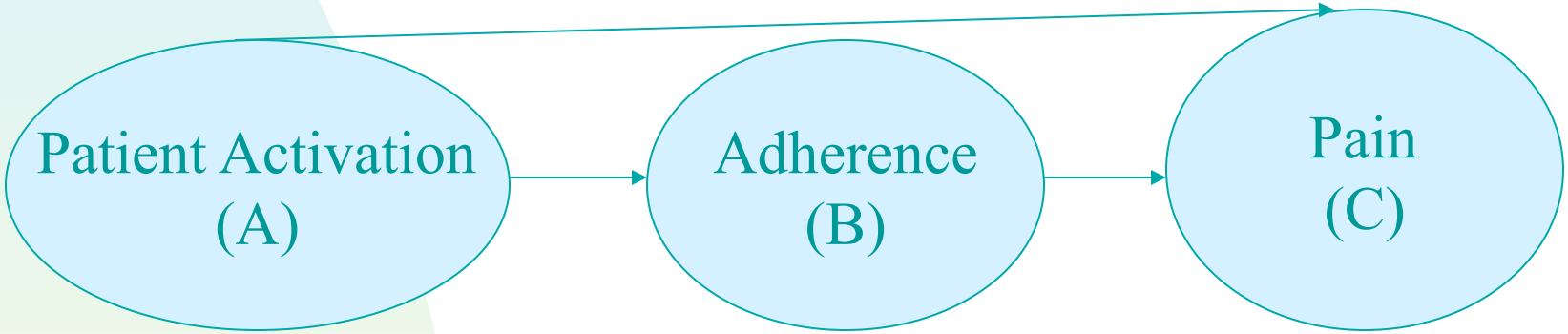
Evaluating Outcomes

- PCC should result in patients having more positive perceptions of care, better functioning and well-being, and increased survival
- Mediators and moderators not well understood

Quality of Care and Outcomes of Care



Testing Mediators



Oliver, Kravitz, Kaplan and Meyers (2001)

Evaluation of Mediation

- Model 1: A direct effect on C
- Model 2: A direct effect on B
- Model 3: B direct effect on C*
- Model 4: In multivariate model predicting C from A and B, A direct effect on C reduced compared to Model 1

Evaluating Moderators

- Moderator = significant interaction
  - Education is a moderator of relationship between patient involvement in care and satisfaction with care if it has a positive effect for those with at least a high school degree but a non-significant effect for those without a high school degree
- Possible moderators (individual, group, organizational)?
  - Coping style
  - Family resiliency

Making Sense of Associations

- Non-randomized study designs
  - Self-selection of treatment
- Statistical Adjustments
  - Casemix adjustment
    - Age, education, prior health, etc.
  - Propensity models
  - Unmeasured burden of illness
    - Sicker patients receive more intensive process of care.
    - Standard regression analyses show that more intensive and higher quality care is associated with worse outcomes
    - Instrumental variable models may help account for unmeasured burden of illness
      - McClellan, McNeil, & Newhouse (1994)

Paths mentioned

- Continuity relationship -> better outcomes
  - “Effect modifier” (Kurt Stange) or main effect
- Main effect
- PCC -> Treatment acceptance -> Outcomes (Ed Wagner)
- PCC -> Imagine disease experience -> Better decisions (Albert Mulley)
- Terror reduction -> Think clearly -> Better decisions (Tim Quill)
  - Better decision is consistent with values (satisfied with decision)
- Nurse call -> self-efficacy/empowerment-> outcome (Merle Mischel)
- Structural differences
  - NCI comprehensive care clinic (Terrance Albrecht)
  - Health care team -> facilitate access to information (Steve Taplin)
  - Medical home -> coordinate info (Ed Wagner)

Discussion