Targeting rural health disparities in lung cancer screening by co-creating a decision aid

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Conflicts of interest

• None
Objectives

• Understand how our Colorado ISC³ uses D&I science methods to overcome rural inequities in cancer outcomes
• Recognize our approach to equity: representation and representativeness
  • Deliverable from this process: Decision aid for lung cancer screening
• Consider how this approach informs our future directions and advances the field
The Problem: Persistent health disparities plague rural populations

- Rural vs. Urban inequities
  - ↑ Cancer mortality
  - ↓ Lung cancer screening (LCS) rates

- Contextual contributors:
  - LCS-specific: requires a documented shared decision-making process
  - Other factors:
    - ↓ income
    - ↓ college education
    - ↑ unemployed/uninsured

Colorado ISC3 themes: Factors that influence shared decision making

- Multi-level stakeholder perspectives on values and cost that drive their decisions
  - Rural clinic clinicians/staff
  - Rural patients

- Adapt to multi-level context

- Rural primary care issues:
  - Reach
  - Implementation
  - Sustainability
Colorado ISC3: Our approach to equity

• Populations
• Theories/Models/Frameworks
• Intervention/Implementation Strategies
• Evaluation/Equity outcomes
Colorado ISC3: Our approach to equity

• Populations: representation of rural voices
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Colorado ISC3: Our approach to equity

• Populations: representation of rural voices
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• Implementation Strategies/Interventions
• Evaluation/Equity outcomes
PRISM: Expanded RE-AIM framework

- **Framework/Model**: PRISM
  - Representation
  - Organizational levels
  - Patients/End-users

- **Implementation strategies**
  - Tailor to fit context

- **Intervention**:
  - Tailor form of the intervention function to fit context

- **Outcomes**: assess equity (representativeness) for each RE-AIM outcome

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www.re-aim.org
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Colorado ISC$^3$: Case example pilot study

- Problem: Low rural Lung Cancer Screening (LCS) rates

- Goals of pilot study:
  - Understand PRISM contextual factors related to low rates of shared decision making for lung cancer screening in rural clinics
  - Using an iterative human-centered design process, tailor the form of the LCS decision aid to context
Setting
Methods: interviews with stakeholders

• **Representation** in interviews of stakeholders:
  • Future decision aid end-users
    • Rural primary care staff/clinicians/leaders
    • Patients in these rural practices
  • Context assessed according to PRISM:
    • Cultural and contextual factors related to LCS
    • Rural clinic characteristics related to LCS
Results: key barriers to SDM

• Clinicians need support to deliver SDM for LCS
  • Not systematically offering LCS to patients
  • Not using decision aids -- too long/complex
• Patients with current/past tobacco use:
  • Mixed opinions about LCS

• Opportunity to introduce LCS systematically
  • Co-create a decision aid
Co-creation of decision aid

• Human-centered design process
  • Support clinician/staff: Pros and Cons of LCS
  • Keep it simple for patients: visuals + text
  • Based on International Decision Aids standards*

• **Representation**: iterated with LCS researchers, rural clinicians and leaders, rural patients and community advisory members
  • 17 cycles of iteration over 12 months
  • Iterations sought to balance simplicity, usability, and required elements

The Decision: Should I Screen for Lung Cancer?

This decision aid is to help you think about the pros and cons of lung cancer screening, so you can make the right choice for you.

- Lung cancer can occur without symptoms in the early stages and it can grow quickly.
- The goal of lung cancer screening is to find lung cancer early, so that it can be treated and cured.
- Screening for lung cancer uses a low-dose CT or CAT scan to take pictures of your lungs. It takes about 10 minutes, it is painless, and you keep your clothes on during the process.

Am I Eligible for Lung Cancer Screening?

To be eligible you must meet all of the following:

1. You are 55 – 77 years old
2. You smoked at least a pack per day for a total of 30 or more years, or 2 packs per day for a total of 15 years (1 pack = 20 cigarettes)
3. You currently smoke or quit less than 15 years ago
4. You do not have symptoms of lung cancer (coughing up blood, unexplained weight loss - people with these symptoms need different testing)
What Is the Right Choice For **YOU**?

- **Chance of false alarm**
- **Exposure to radiation**
- **Can lead to unnecessary treatment**
- **Other:**

- **Painless, requires minimal prep**
- **Peace of mind**
- **Can reduce the risk of dying from lung cancer**
- **Other:**

**Don't Test**

**Test**
Implications for the field

• By co-creating a decision aid to guide SDM for LCS counseling with representation from rural stakeholders, there is great potential to ↑equity:
  • Representative adoption of LCS by rural clinics
  • Representative reach to rural populations

• Key elements of this co-creation process to ↑equity and sustainability
  • Use of our PRISM framework that attends to representation of stakeholders and representativeness of outcomes
  • Tailoring implementation strategies to the multi-level context
  • Tailoring the form of intervention functions to the multi-level context
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