PROSPEC: Using an information technology-supported patient-centered intervention to reduce disparities in prostate cancer screening discussions

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Background

- Prostate cancer screening among asymptomatic men is controversial
  - Treatment can reduce quality of life
  - Unclear that treatment reduces prostate cancer mortality.
- Current guidelines
  - Practitioners should discuss screening with patients
  - Decision to be screened should be one shared between patient and physician
  - *This discussion and shared decision making is not as prevalent when the patient is African American, and thus at higher risk of prostate cancer.*

Objective

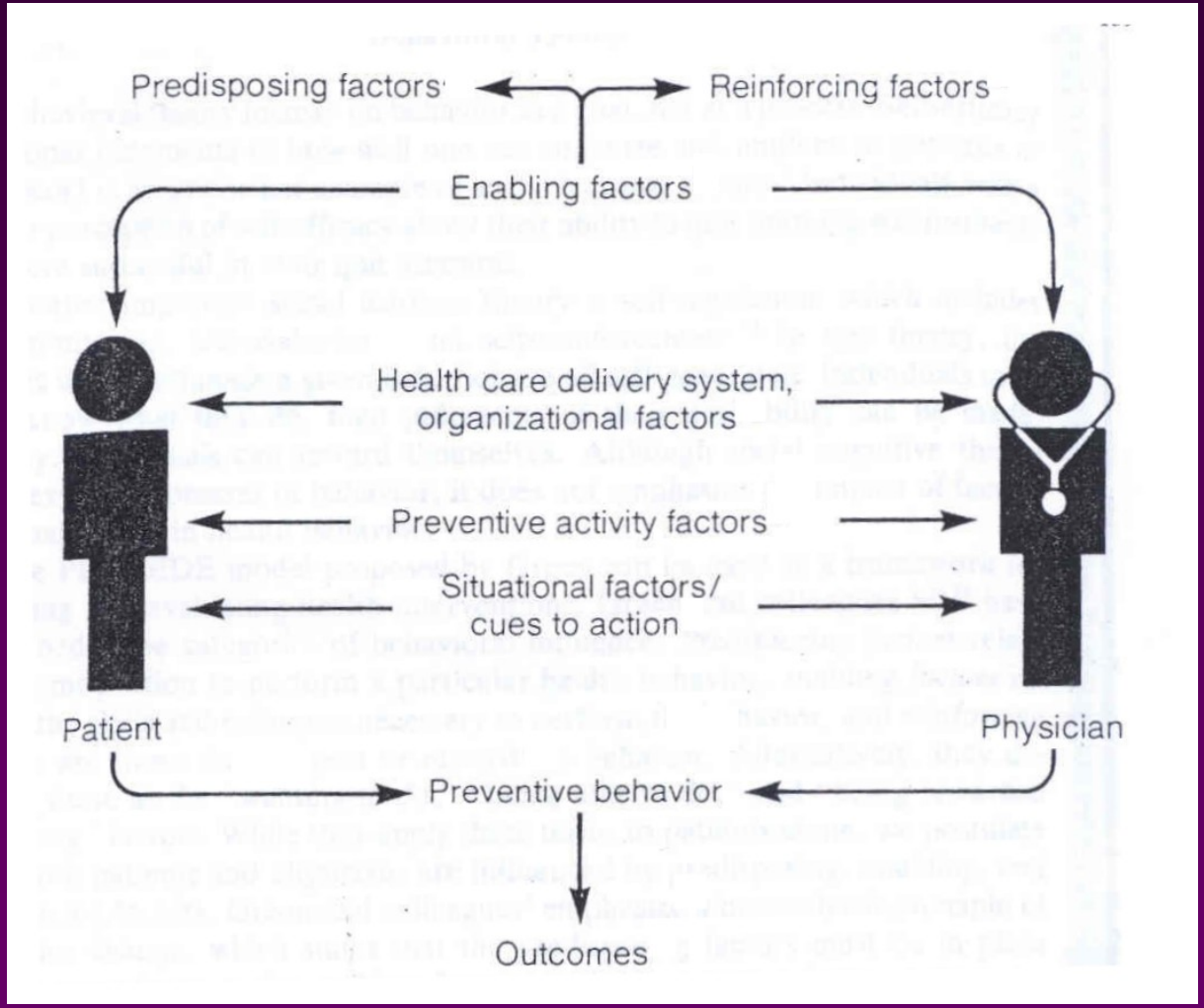
- To develop and evaluate a patient-centered intervention designed to address the racial disparity in the incidence and quality of prostate cancer screening-related discussions.
- The purpose of the intervention is to provide men with knowledge and skills needed to initiate and participate in a discussion about prostate cancer screening with their physician.

Methods

- The intervention design was informed by preliminary qualitative research and an evidence-based ontology implemented in Protégé, both guided by the Systems Model of Clinical Preventive Care.
- Intervention prototypes developed and evaluated iteratively by lay focus groups.

Conceptual framework

Systems Model of Clinical Preventive Care[§]



[§] Walsh JME and McPhee SJ. *Health Ed Q* 19(2):157-175 (1992)

Three Sources of Information

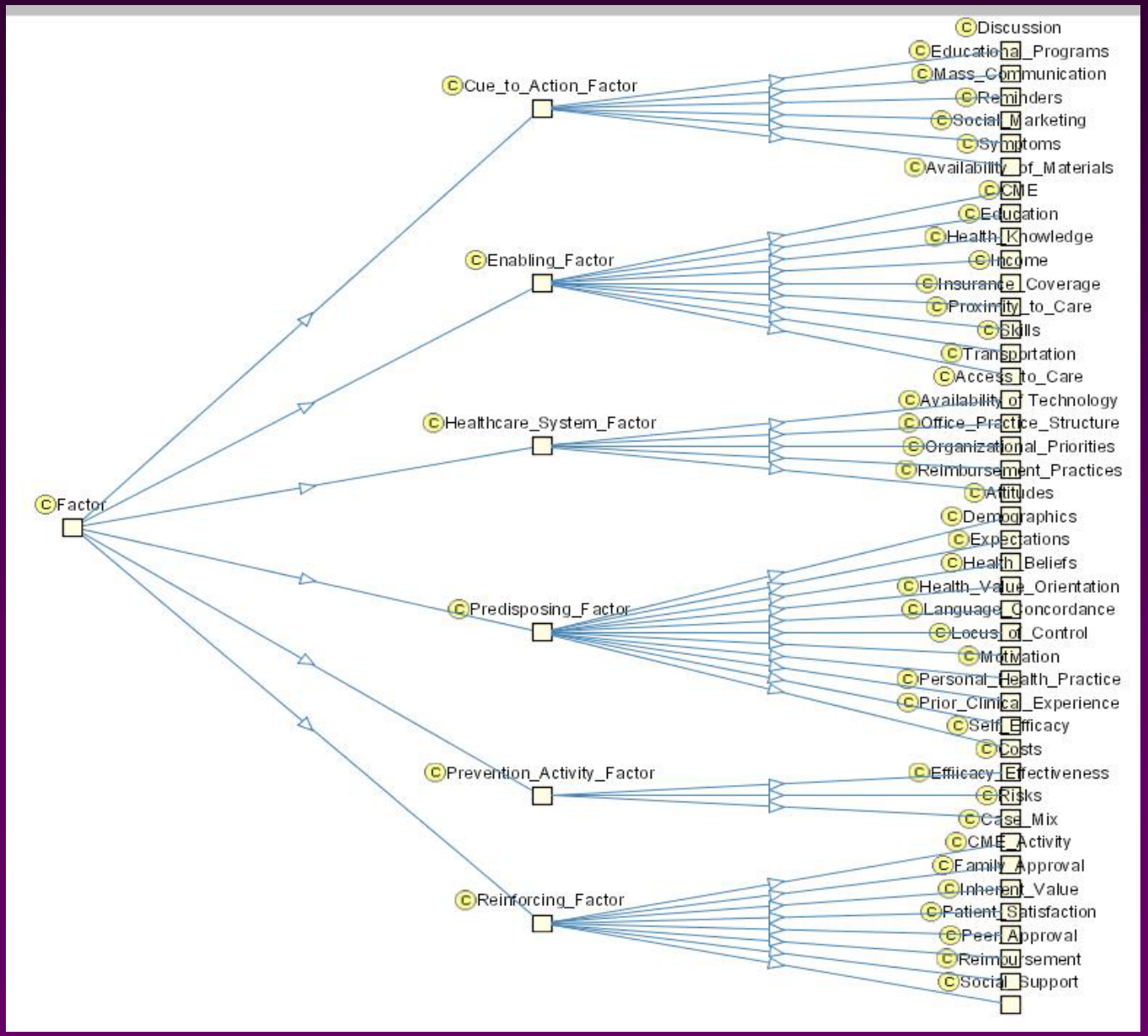
- Evidence-based ontology
- Community-based interviews
- Physician interviews

Evidence-based ontology

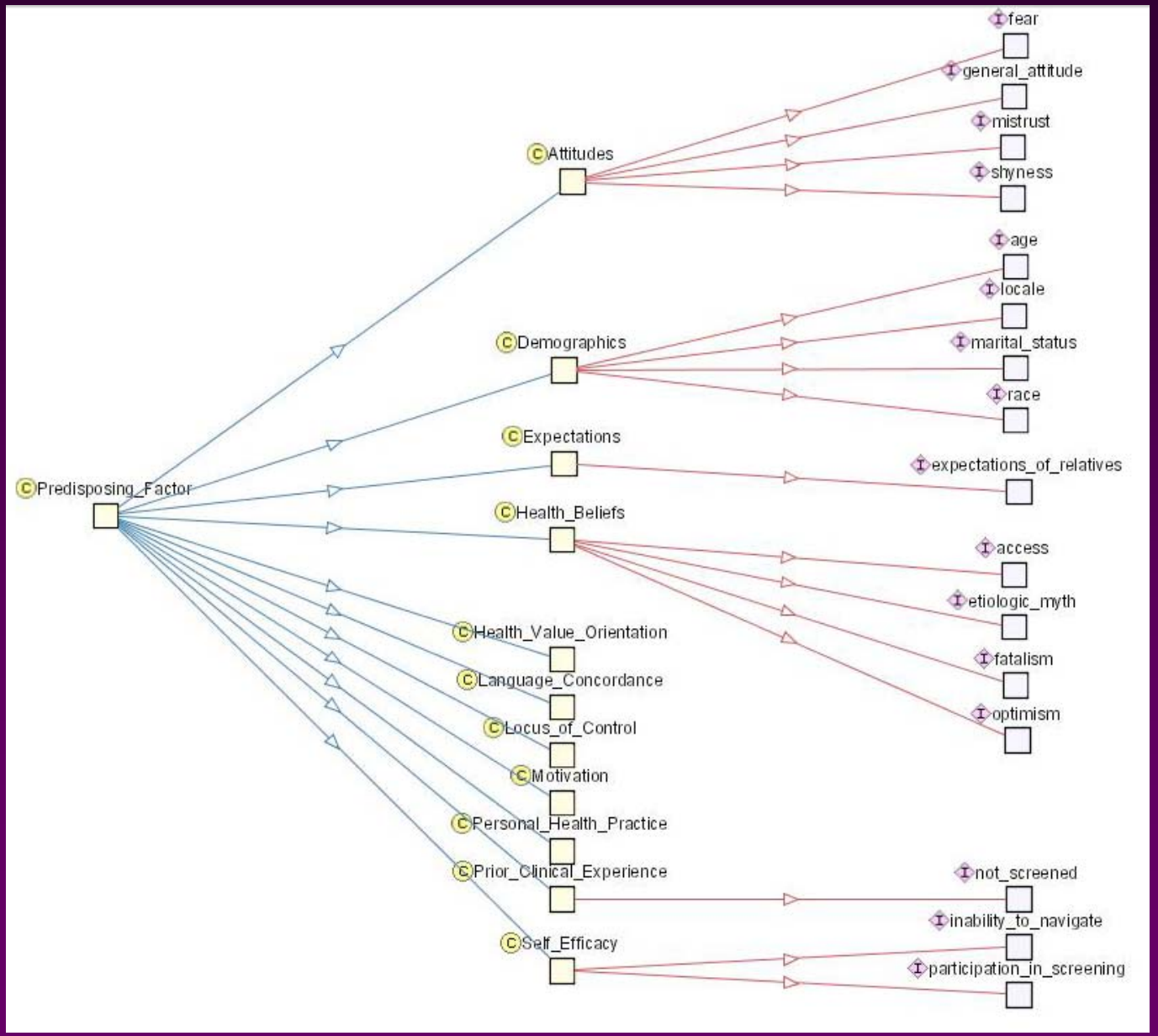
- ~800 items
  - Academic literature
  - Popular press
  - Transcripts
- Items coded in Protégé[§] using the Systems Model as a framework
- Relationships between classes of items elucidated

[§] protege.stanford.edu

High-level Ontology



Focusing on predisposing factors…



Community Interviews

Recruitment and Methodology

- 18 African American males and 14 Caucasian males recruited using the UPHS and a small local paper advertisement
- Eligibility: Age 40-75, No prior prostate history
- Semi-structured interview
  - Questions about health care, thoughts and opinions about prostate cancer and prostate cancer screening, health discussions, and computer usage

Physician Interviews

Recruitment and Methodology

- Participants
  - 17 completed interviews
    - 9 Internal Medicine faculty
    - 3 Family Medicine faculty
    - 5 CCA physicians
  - 2 pending interviews
  - 10 interviews currently being analyzed
- Methods
  - Semi-structured in-depth interview
  - Chart-stimulated recall

Implications for the intervention

- Model desirable shared decision making behavior in a realistically presented setting
- Tailor content and presentation level to patient's educational level
- Address the patient's specific concerns about PC and PC screening
- Provide a hard copy artifact for the patient to take into the exam room and use as discussion aid
- Provide a hard copy artifact for the patient to take home

Intervention design

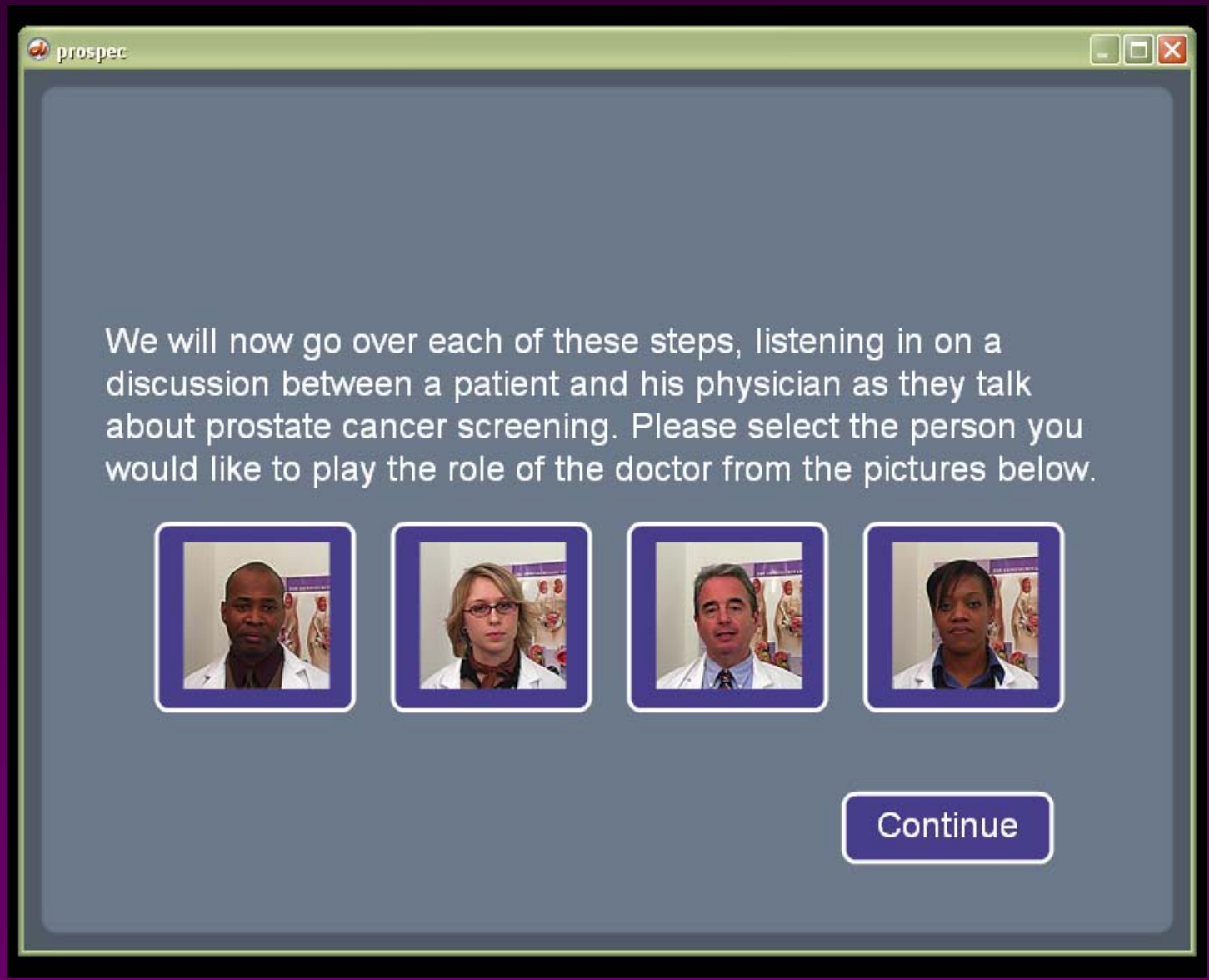
- The intervention uses elements from Cegala's PACE model of physician-patient communication[§]
- Intervention scripts were developed by the entire research team
- The intervention incorporates tailoring on physician race and gender and patient race
- Professionally-acted, simulated clinical encounter that models good physician-patient communication
- The scenario is punctuated by narration and interaction to reinforce key points

[§] Cegala et al: *Patient Educ Counseling* 41: 209-222 (2000)

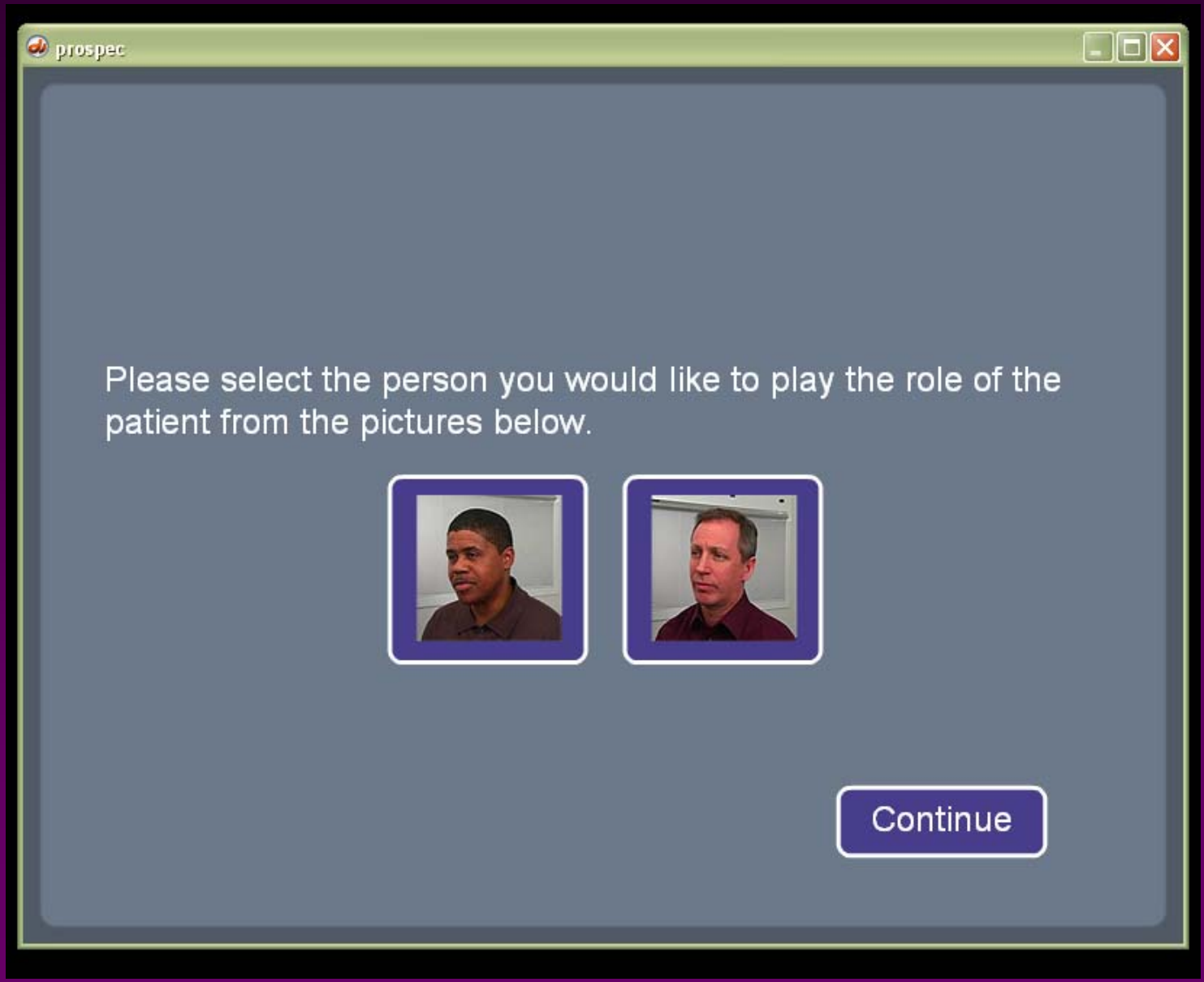
Modified PACE Model

- Ask questions
- Check understanding
- Express concerns

Tailoring on physician

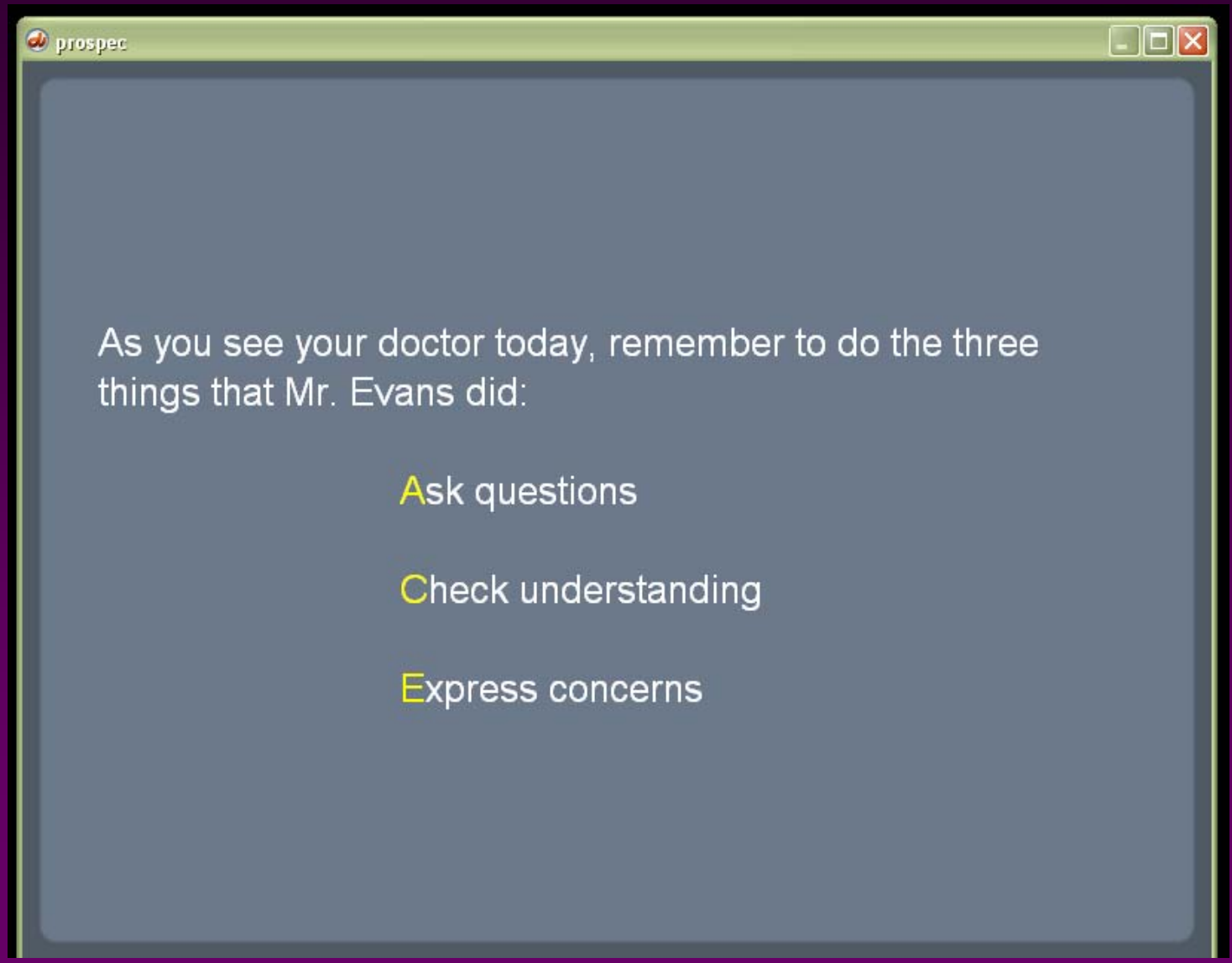


Tailoring on patient



Simulated encounter

Reinforcement



Next steps

- Evaluation of intervention design by focus groups and individual interviews
  - Usability
  - Usefulness
  - What's missing (or should be!)
- Evaluation of intervention efficacy by quasi-experimental pre-post intervention study in primary care

Conclusion

- Participatory design is key- don’t design patient behavioral interventions in a vacuum!
- The intervention is the first to use informatics and information technology in focusing on racial disparities in discussing prostate cancer screening.

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