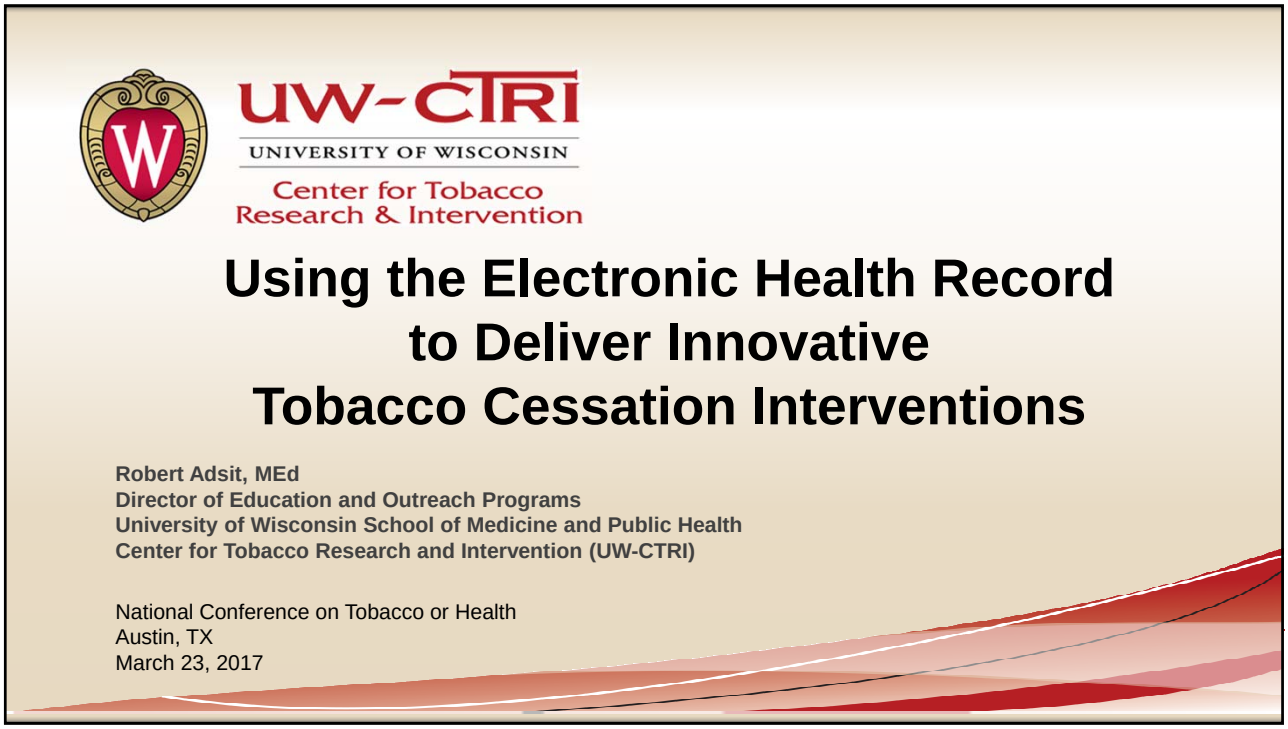
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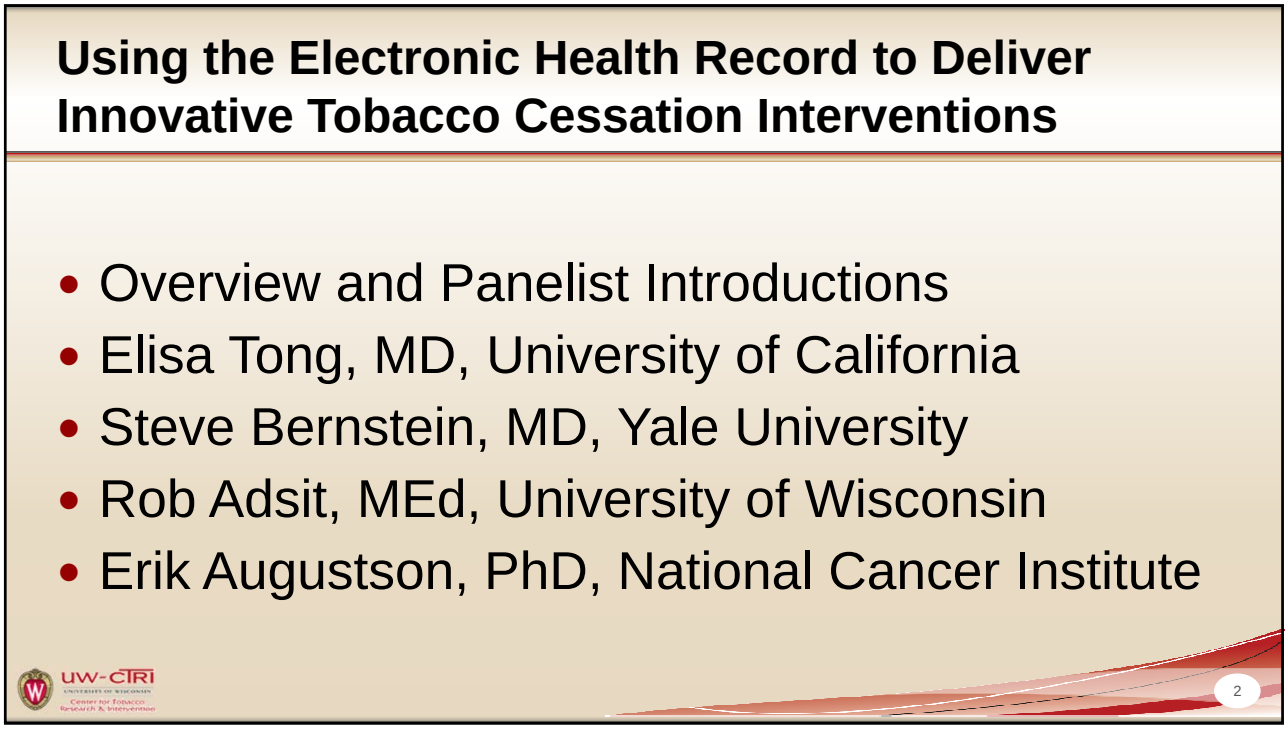
UNIVERSITY OF WISCONSIN
Center for Tobacco
Research & Intervention
Using the Electronic Health Record
to Deliver Innovative
Tobacco Cessation Interventions
Robert Adsit, MEd
Director of Education and Outreach Programs
University of Wisconsin School of Medicine and Public Health
Center for Tobacco Research and Intervention (UW-CTRI)
National Conference on Tobacco or Health
Austin, TX
March 23, 2017


Using the Electronic Health Record to Deliver
Innovative Tobacco Cessation Interventions
• Overview and Panelist Introductions
• Elisa Tong, MD, University of California
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Overview

Effective and efficient delivery of evidence-based smoking cessation treatments to patients a key public health need.

Electronic health record (EHR) technology creates capacity to intervene with patients who smoke to: a) universally identify and document tobacco use status; b) guide clinicians in a brief clinical intervention; and, c) refer patients to external resources such as a tobacco cessation telephone quitline or an mHealth/eHealth cessation resource such as smokefree.gov and smokefreeTXT.

This panel will share examples of innovative adoptions of EHR technology to advance the medical treatment of tobacco dependence from the University of California, Yale University, the University of Wisconsin, and the National Cancer Institute.

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Using the Electronic Health Record to Deliver Innovative Tobacco Cessation Interventions

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Elisa Tong, MD University of California

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Using the Electronic Health Record to Enhance Tobacco Dependence Treatment

Steven L. Bernstein, MD

April 2017

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Disclosure

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NIH National Heart, Lung, and Blood Institute

June-Marie Weiss, MA, MEd
James Dziura, PhD
Michelle DeWitt, RN
Patrick O'Connor, MD, MPH
Jeanette Tetrault, MD
Lauretta Grau, PhD
Benjamin Toll, PhD
Ted Miller, PhD
Allen Hsiao, MD
L. Scott Sussman, MD
Teresa O'Leary
Timothy Pham

Yale SCHOOL OF MEDICINE

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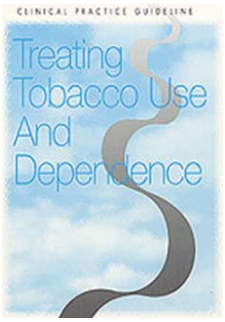
YALE NEW HAVEN HEALTH

Evidence-based intervention to be implemented

- Tobacco dependence treatment in the hospital
- Opportunity to quit
- Relapse rates high post-discharge
- Sustained quits possible if intervention persists >1 month post-discharge
- Nicotine replacement medications, counseling via toll-free quitline

Rigotti et al., Cochrane Database, 2011



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Implementation science team/investigators/ partners

- Yale-New Haven Hospital
  - Hospitalists
  - Residents
  - CMO/CQO
  - CIO
  - COO
- Yale School of Medicine
  - Dept. of Internal Medicine
  - Dept. of Emergency Medicine
- Epic
  - Yale team
    - CMIO, analyst
  - Wisconsin HQ
- Alere (quitline vendor)

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Research design

- 2-arm randomized trial
  - 250 physicians:
    - 100 control, 100 intervention
- Treatment arm: decision support in Epic to promote tobacco treatment + academic detailing + audit/feedback
- Control: academic detailing
- 1000 inpatients, age ≥18 years
- 1 year follow-up
- Primary endpoint: 1 year cessation rate
- Secondary: use of order set by MDs

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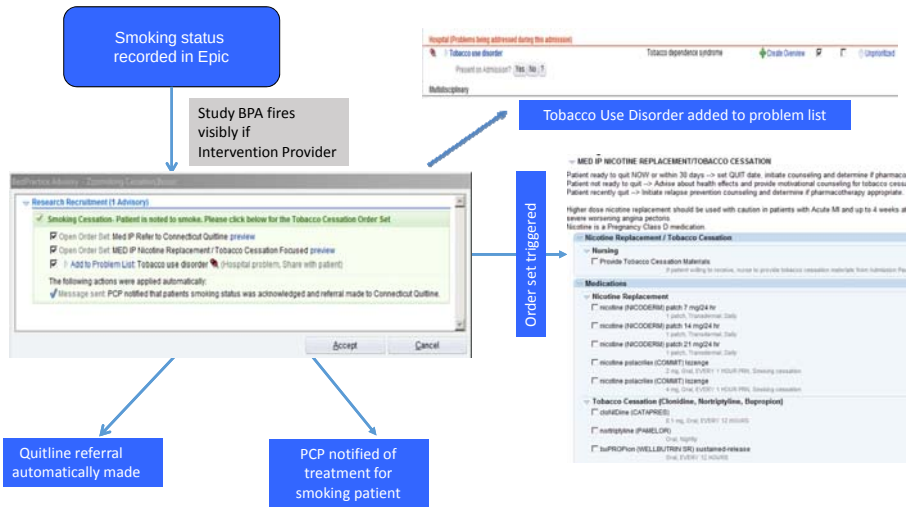
Implementation strategy



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Outcomes

Aug. 2013 – Dec. 2015: 255 physicians enrolled

1044 patients enrolled for follow-up

Variable	Intervention	Control	P value
No. patients	4883	5007	
Quitline referral	1457 (30%)	0 (0%)	<0.001
Medication ordered	1670 (34%)	1432 (29%)	<0.001
'Tobacco Use Disorder' added to problem list	2037 (42%)	110 (2%)	<0.001
Email sent to PCP	4868 (99%)	0 (0%)	<0.001

Bernstein et al., Translational Behav Med, Feb 13. doi: 10.1007/s13142-017-0470-8

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Progress to date/lessons learned/future directions

- Randomizing by provider is possible
- Identifying stakeholders and engagement strategies is essential
- Building e-tools takes time
- Profound improvement in process measures; effect on clinical outcomes not yet clear
- Great potential of health IT to improve treatment of substance use in scalable fashion

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Tobacco Quitline eReferral

- EHR-based, HIPAA-compliant, closed-loop
- Developed with Epic, largest U.S. EHR vendor and Optum, Wisconsin's quitline vendor
- Two clinic pilot study: 8 fax referrals year prior to test; 199 eReferrals in first 6 months
- 2017 clinical trial: 2 health systems; 24 primary care clinics
- Workflow as important as EHR functionality
- Onsite training of all clinic staff

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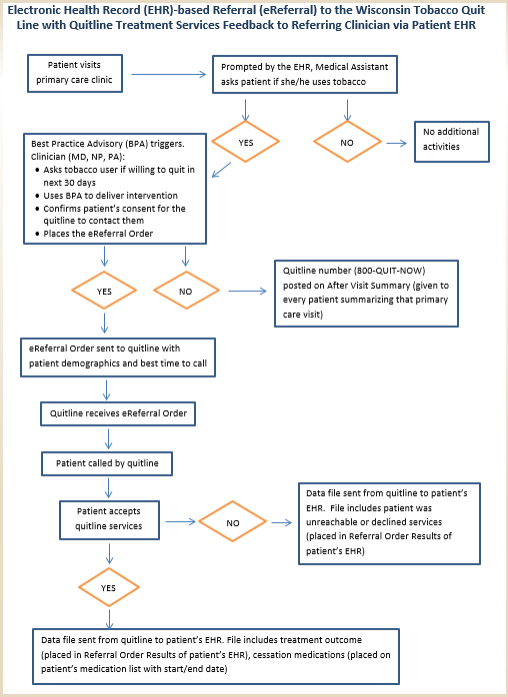
Workflow



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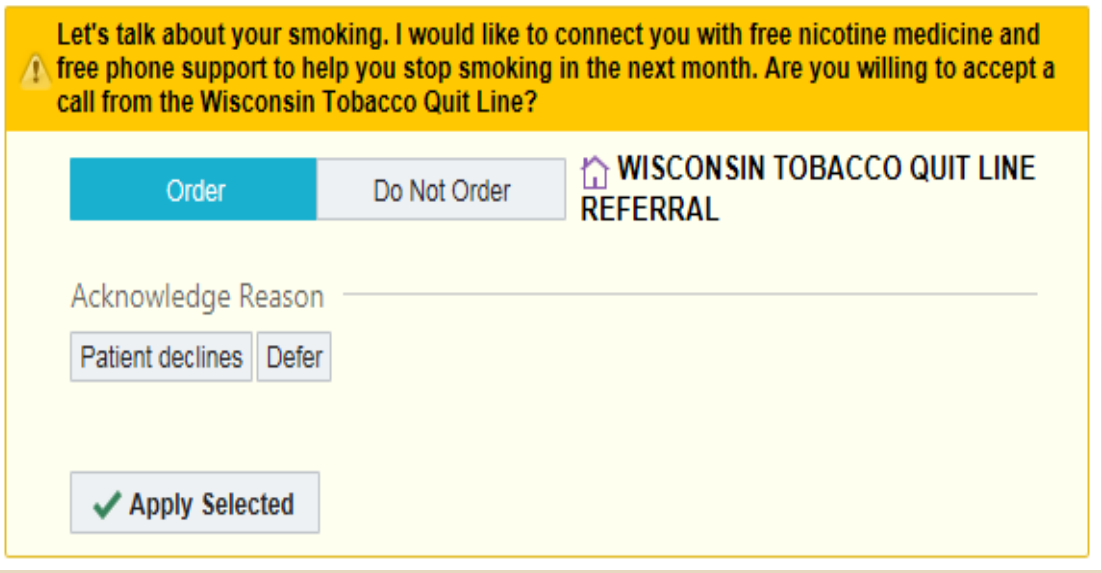
Best Practice Advisory



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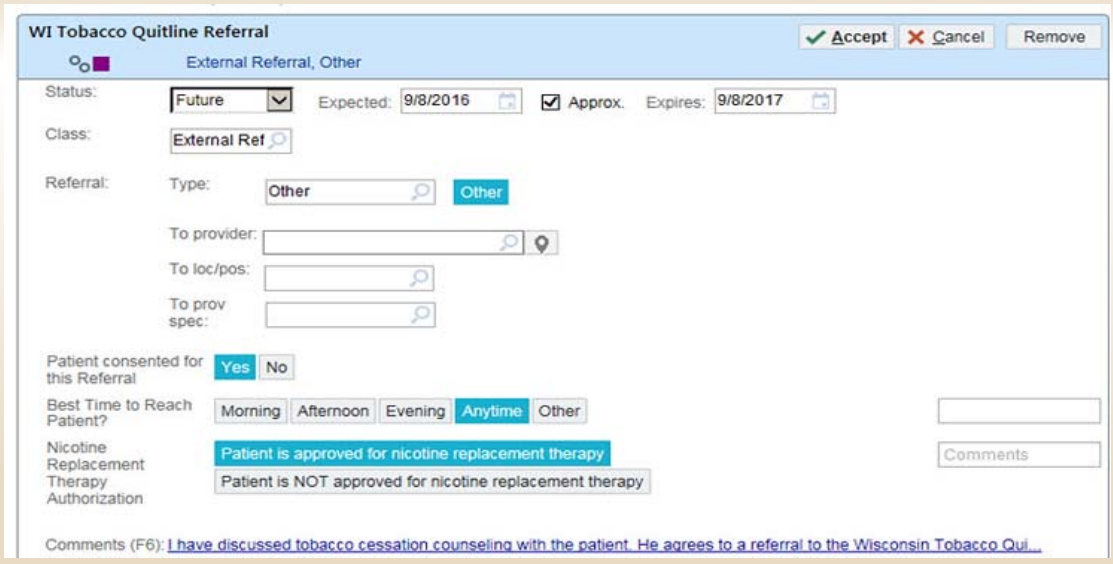
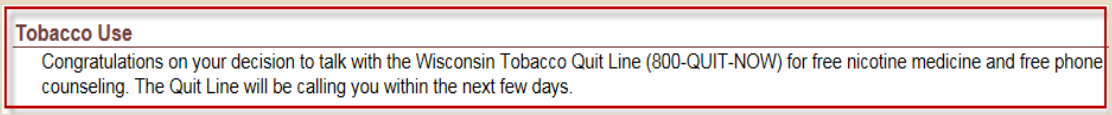
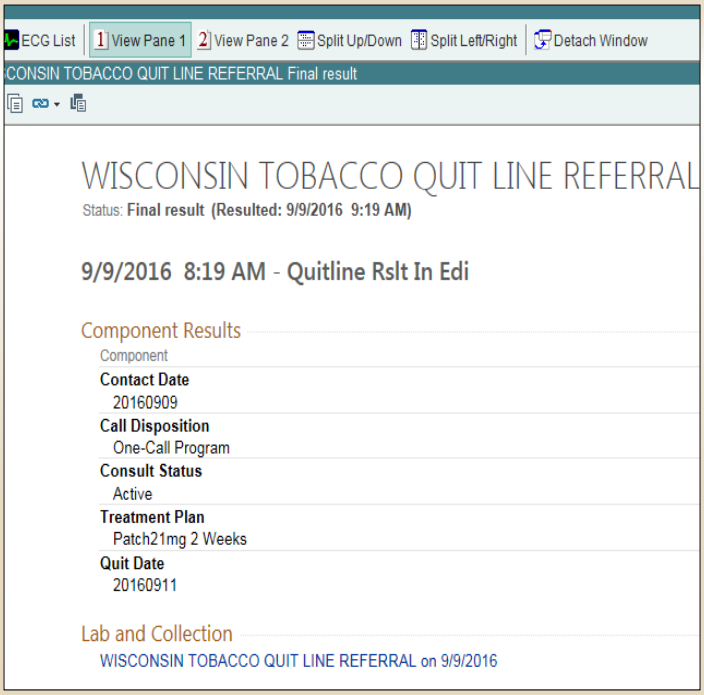
Tobacco Quitline Order



After Visit Summary





Tobacco Quitline Order Result

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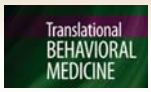

Using the electronic health record to connect primary care patients to evidence-based telephonic tobacco quitline services: a closed-loop demonstration project

Robert T. Adsit, MEd,[1] Bradley M. Fox, MD,[3] Thanos Tsiolis,[3] Carolyn Ogland, MD, FAAP,[2] Michelle Simerson, CMA,[2] Linda M. Vind, BS,[2] Sean M. Bell, MBA,[4] Amy D. Skora, BS,[1] Timothy B. Baker, PhD,[1] Michael C. Fiore, MD, MPH, MBA,[1]

Transl Behav Med. 2014 Sep; 4(3): 324–332.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4167898/

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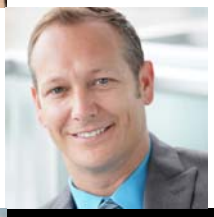
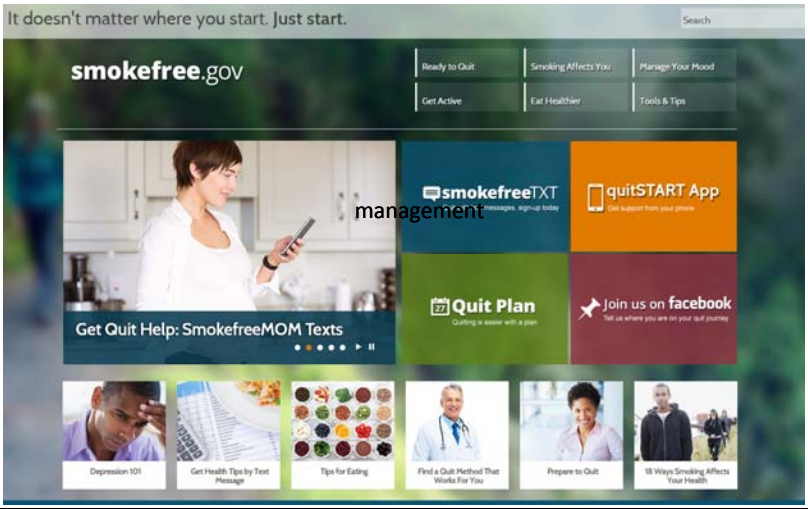


The use of EHRs to Connect to mHealth Behavioral Health Interventions: Example from NCI's Smokefree.gov Initiative

smokefree.gov

Erik Augustson, PhD, MPH
Director, Smokefree.gov Initiative
Tobacco Control Research Branch
Behavioral Research Program
National Cancer Institute

THE SMOKEFREE.GOV INITIATIVE (SFGI)



management

smokefree.gov

SMOKEFREE.GOV INITIATIVE (SFGI)

- Evidence-based Behavioral mHealth Intervention
- Reach & engage multiple groups
- Multiple health risk behaviors
- Population scale
  - ~4.5 million smokers in FY2016
- Multi-platform
  - 6 Websites
  - 15 Text-based intervention programs
  - 2 Smartphone Apps
  - Social media platforms

smokefree.gov

mHEALTH POTENTIAL

- Reach
- Reduces cost burden on healthcare system
- Engagement with intervention platforms
- Role of mHealth interventions with in larger public health infrastructure
  - **Integration with existing cessation and clinical services**
  - **Role of EHRs?**

smokefree.gov

Integration into EHR Pilot Project

- Epic EHR Vendor & Univ of Wisconsin
- Closed-loop electronic referral
  - Clinician identifies smoker & assesses interest
  - Patient selects program
  - Information passed to SFTXT
    - Cell #, basic demographics
  - Confirmation text is sent to patient from SFTXT
- At program completion (6-weeks)
  - SFTXT passes information to EHR/Clinician
  - Patient outcome:
  - Completed program (Y/N)
  - Smoking status (Y/N/Unknown)

smokefree.gov

Questions and Discussion

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