

Project Demonstration & Documentation

Project Documentation - step By step Project Development Procedure

Team Id	NM2023TMID04415
Project Name	Block chain Technology For Electronic Health Records

Abstract:

Background:

While the majority of smokers visit a primary care physician each year, only a small proportion of them receive evidence-based tobacco dependence treatment. The electronic health record (EHR) provides an opportunity to prompt clinicians to deliver tobacco dependence treatment in primary care.

Methods:

Over 1 year, Dean Health Systems worked with the University of Wisconsin School of Medicine and Public Health to modify the existing Dean EHR system (Epic Systems Corp, Verona, Wisconsin) to improve identification and treatment of adult smokers visiting primary care clinics. Modifications included evidence-based prompts that helped guide medical assistants to identify smokers and clinicians to deliver a brief tobacco cessation intervention (medication and Wisconsin Tobacco Quit Line referral). Eighteen primary care clinics provided data 1 year before and 1 year after implementing the EHR modifications.

Results:

A higher percentage of adult patients had their tobacco use status identified after EHR modification compared to pre-implementation (71.6% versus 78.4%, $P < .001$). During the post-implementation year, 6.3% of adult smokers were prescribed tobacco cessation medication, 2.5% of adult smokers had documentation of counseling, and 1.5% of adult smokers had counseling billed (pre-implementation data not available).

Conclusions:

This demonstration project showed that a large health care system can increase the delivery of tobacco dependence treatment interventions (increased identification of smokers and relatively high rates of delivering specific tobacco dependence clinical interventions) building on an existing EHR platform. The project demonstrated that brief, evidence-based tobacco dependence interventions can be incorporated into primary care, especially when the EHR is used to improve clinic workflow.

Figures:

The screenshot shows a software window titled "Vitals" with a blue header. Below the header, it says "Taken on 12/19/2007 at 1436". The main area contains several input fields for vital signs: BP (118/76), SpO2 (empty), Pulse (88), Weight (180 lbs (81.65 kg)), Resp (empty), Height (6' (1.829 m)), Temp (empty), Source (empty with a magnifying glass icon), PF (best) (empty), and LMP (empty with a magnifying glass icon). A pop-up window titled "Tobacco Use" is open on the right, showing "Not Asked" and "Types: Cigarettes, Cigars, Chewing". Below this, it says "Packs/Day: Years: Pack Years: 0" and "Last verified: <Never verified>". The pop-up has "Verify" and "Edit" buttons. At the bottom of the "Vitals" window, there are buttons for "Restore", "Close F9", "Previous F7", and "Next F8".

Figure 1:EMR Screenshot of vitals section...

SMOKING CESSATION DHS AMB

▼ **SMOKING CESSATION**

- ▼ Documentation for Progress Note
 - ☐ SMOKING CESSATION HISTORY (Can be Asked by Rooming Staff)
 - ☐ SMOKING CESSATION DOCUMENTATION
- ▼ Provider Medication Choice Recommendation - *Read Only - Do not check box*
 - ☐ SMOKING CESSATION MEDICATION CHART *Rt click and READ ONLY
- ▼ Chantix (Varenicline) Prescribing Instructions
 - ☐ CHANTIX PRESCRIBING INSTRUCTIONS*Rt click and READ ONLY
- ▼ First Line Medication (Do not order a rescue medication with Chantix) The full 12 week course of medicine
 - ☐ CHANTIX STARTING MONTH PAK - DHP Tier 1, 0.5 MG TAB X 11 & 1MG TAB X 42
 - ☐ CHANTIX CONTINUING MONTH PAK - DHP Tier 1, 1 MG BID, QTY-60
- ▼ Alternative Medications instead of Chantix
 - ☐ BUPROPION SR 150 MG - DHP Tier 1, ONE TAB DAILY FOR FIRST 3 DAYS, THEN 1 TWICE DAILY
 - ☐ NICOTINE 21 MG/24 HR TRANSDERMAL PATCH # 30, refill x 2
 - ☐ NICOTINE 14 MG/24 HR TRANSDERMAL PATCH #30, refill x 2
 - ☐ NICOTINE 7 MG/24 HR TRANSDERMAL PATCH #30, refill x 2
- ▶ Rescue Medication (Not to be used with Chantix)
- ▼ Diagnosis - Not covered by Medicare *** Must add additional condition diagnoses if available ***
 - ☐ TOBACCO USE DISORDER
- ▼ Use Association button to ATTACH CONDITION DIAGNOSIS
 - ☐ SMOKING CESSATION COUNSELING 3-10 MINUTES - Use for NON-Medical Assistance patients
 - ☐ SMOKING CESSATION COUNSELING > 10 MIN - Use for NON-Medical Assistance patients
- ▶ Change to Use for Medical Assistance patients
- ▼ LOS - 25 Modifier Has Already Been Added - Select One

Right click data row to edit. Loading SmartSet succeeded.

Figure 2:EMR Screenshot prompted clinical intervention...

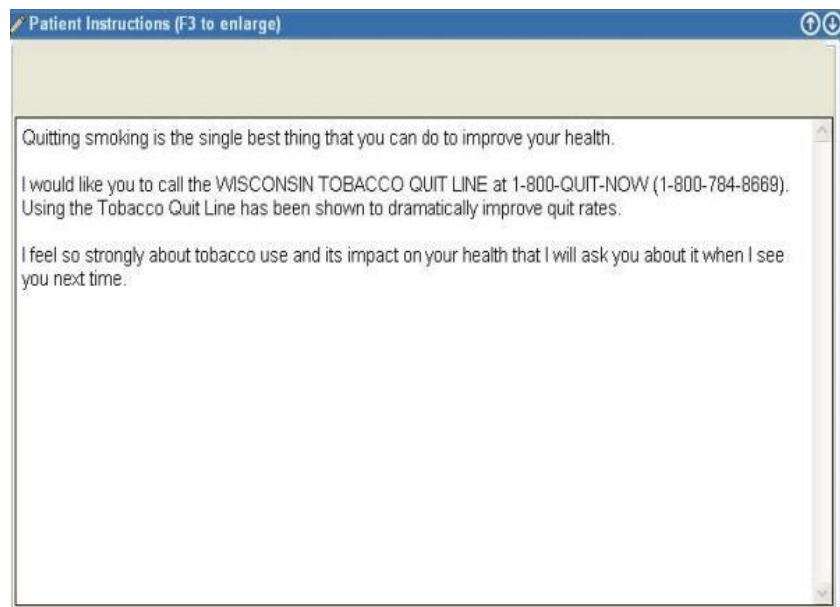
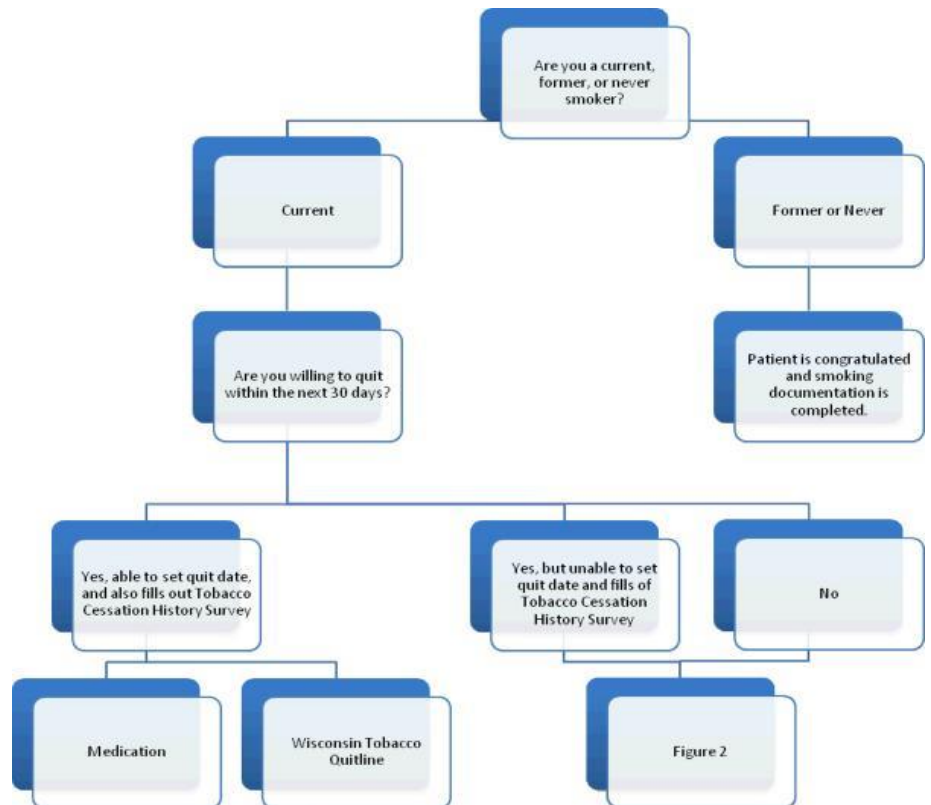


Figure 3:EMR Screenshot demonstrating printable instructions...

Figure 4:Clinic workflow diagram for adult...



References:

1.Tomar SL, Husten CG, Manley MW. Do dentists and physicians advise tobacco users to quit? J Am D Assoc. 1996;127:259–265. - [PubMed](#)

2.Fang CY, Ma GX, Miller SM, et al. A brief smoking cessation intervention for Chinese and Korean American smokers. Prev Med. 2006;43:321–324. - [PubMed](#)

3.Ferreira-Borges C. Effectiveness of a brief counseling and behavioral intervention for smoking cessation in pregnant women. Prev Med. 2005;41:295–302. - [PubMed](#)

4.Fiore MC, Jorenby DE, Schensky AE, et al. Smoking status as the new vital sign: effect on assessment and intervention in patients who smoke. Mayo Clin Proc. 1995;70:209–213. - [PubMed](#)

5.Glasgow RE, Whitlock EP, Eakin EG, et al. A brief smoking cessation intervention for women in low-income planned parenthood clinics. Am J Public Health. 2000;90:786–789. - [PMC](#) - [PubMed](#)