AMERICAN LUNG ASSOCIATION.

Integrating Tobacco Cessation into Electronic Health Records: Promising Practices and Lessons Learned

Tobacco use is the leading cause of preventable death and disease in the United States. The most important thing any smoker can do to improve his or her health is to quit using all tobacco. Approximately seven out of ten smokers want to quit, but only half receive advice to quit from a health professional and make a quit attempt annually, and only one out of ten quit successfully.[1] Electronic health records (EHRs) can be a valuable tool for providers when advising and assisting their patients in quitting. This document includes a number of promising practices and lessons learned that can be useful for state tobacco control programs and others in the tobacco control community who want to work with health systems to integrate or improve tobacco cessation into EHRs.

Electronic Health Records

Electronic health records (EHRs) are a digital version of someone's medical record. Health information is collected and managed by healthcare providers and EHRs allow it to be electronically exchanged between them.[2] EHRs facilitate the standardization of some services, provide clinical decision support, and encourage optimal patient care. When EHRs are fully functioning, all members of the healthcare team have access to the latest information, providing the possibility for more coordinated and patient centered care. However, there are a variety of EHR vendors which each have their differences in user interfaces and documenting health status.

The *Health Information Technology for Economic and Clinical Health Act (HITECH Act)* (2009), enacted as part of the American Recovery and Reinvestment Act of 2009 (ARRA), required the Department of Health and Human Services (HHS) to issue Meaningful Use regulations to incentivize the adoption and use of EHR technology. These Meaningful Use regulations financially incentivized healthcare clinicians/providers and hospitals to utilize EHRs to allow for the exchange of clinical data between providers and other entities, such as insurers and patients, to improve quality of care. Providers were required to report on quality measures to demonstrate "meaningful use" of EHRs. These policies encouraged clinicians/providers and hospitals to build and use EHRs, which have allowed for the easy measurement of data. Additionally, efforts prioritizing value-based care have led to a greater emphasis on quality measures.

Tobacco Cessation and Electronic Health Records

When the Meaningful Use rules were finalized, it was divided into stages to create flexibility for clinicians/providers and hospitals to transition.

- Stage one focused on data capture and sharing;
- Stage two focused on advancing clinical processes;
- Stage three focused on improvements outcomes from clinical processes.

For tobacco control, Meaningful Use regulations required documentation in the EHR of smoking status for all patients 13 years old and older.*

* While Meaningful Use requires documentation of smoking status in the EHR, health systems can modify EHRs to include the documentation of all tobacco use, in addition to smoking status

Meaningful Use has been transitioned to Promoting Interoperability, which makes up one of the performance categories for the Medicare Access and CHIP Reauthorization Act (MACRA). Data continues to show high rates of EHR use and screening of smoking status.

Studies have been conducted to determine the effectiveness of EHRs as tools for promoting tobacco dependence treatment. These studies have concluded that EHR modifications to support smoking cessation have led to increases in documentation of smoking status in EHRs and referrals of patients to cessation counseling.[3] EHRs have been utilized to make the delivery to tobacco use treatments standard practice by providing electronic referrals for additional treatment services (e.g. referral to a telephone tobacco quitline). EHRs also have the capacity to remind clinicians/providers to record tobacco use, give a brief intervention to quit and prescribe medications.

Common Utilization of Electronic Health Records for Tobacco Cessation

There are different levels of EHR integration of tobacco cessation by health systems. When working on integrating tobacco cessation in EHRs and developing a workflow, it is incredibly important to work with the team of providers (e.g. physician, nurse, medical assistant, receptionist etc.) and walk through the process of what happens and who does what during a patient visit. Below are examples of successful integration of tobacco assessment and tobacco cessation treatments into EHRs.

1. **Put in place a mandatory screening intervention.** Once a patient has been identified and documented as a tobacco user, clinicians/providers receive a best practice alert with a screening intervention. This intervention would include either the 5 As or 2 As & R.
    - The 5 As: Ask, Advise, Assess, Assist, Arrange
    - 2 As & R: Ask, Advise, Refer[†]

    Either intervention can be used to guide a provider through a conversation with their patients to discuss quitting, deliver advice and cessation treatment and/or provide referrals. What is ultimately integrated in the EHR will depend on workflow, staff roles, tobacco dependence treatment available resources, and health plan and Medicaid coverage for tobacco cessation.

2. **Connect patients who use tobacco to the state quitline through bi-directional eReferrals.** Bi-directional (closed-loop) eReferrals facilitate providers referring their patients to the tobacco quitline and receiving follow-up information regarding whether the patient engaged with the quitline. Building this into the EHR is a great first step in patients who use tobacco receiving external help. This will require health systems to work with their state quitline and it is important to note that quitlines have different technological capabilities, which can be a challenge when working to coordinate the eReferrals. Once the closed-loop system has been built, a provider can place a referral order to the quitline after verbal consent from the patient. The quitline will call the patient and the engagement/treatment information provided by the tobacco quitline will be returned electronically and populate the referred patient's medical record.

[†] Information on the 5As and the 2As & R can be found at https://www.cdc.gov/tobacco/campaign/tips/partners/health/materials/twyd-5a-2a-tobacco-intervention-pocket-card.pdf

This closed-loop tobacco cessation treatment extender reminds providers to follow-up with patients because the referring provider knows the outcome of the tobacco quitline eReferral and can also help a health system when reporting on tobacco use and cessation quality measures.[‡]

SAMPLE WORKFLOW

At the beginning of a patient health care visit, the medical assistant or nurse will be prompted by the EHR to ask about and document smoking/tobacco use status. Patients who are documented as a current smoker/tobacco user will prompt an alert for the clinician/provider that this patient is a smoker/tobacco user.

The alert will include a script to ask the patient if they are interested in quitting tobacco use. If the patient says yes, more scripting guides the clinician/provider through a cessation intervention. One component of the treatment intervention might include a referral order if the patient accepts a referral to the tobacco quitline. The referral order can be auto-populated with the patient's contact information. The provider will be prompted to document the patient's preferred time for the tobacco quitline to call them and confirm the patient's consent. The clinician/provider places the referral order, which is automatically and electronically transmitted to the tobacco quitline.

When the quitline calls the patient – they have the option to decline services. If the patient is unreachable, declines services, or accepts services, the information is returned to the referred patient's record as a referral order result. If the patient accepted tobacco quitline services (e.g. counseling) that information also populates the patients' record. [**]

Strategies to Integrate Tobacco Cessation in Electronic Health Records

There are multiple strategies for health systems change and here are three promising strategies to integrate tobacco cessation in EHRs.

1. **Develop a deep understanding of what the health system incentives are surrounding tobacco reporting.** A greater emphasis on quality measures has erupted with a national shift from paying for volume in healthcare towards value-based care. Quality measures drive the delivery and documentation of high-quality patient care. Most quality measures reporting is voluntary, but several private payers and accrediting organizations require healthcare systems to report quality measures. In these circumstances, quality measures are tied to reimbursement levels and accreditation status. Almost every major quality measure program includes a measure on tobacco.[§] Assisting a health system to meet tobacco cessation quality measures can garner buy-in to get tobacco cessation integrated into the EHR. It is a powerful argument for institutional leadership as their focus includes public reporting and finances.

[‡] Unidirectional eReferrals are also an acceptable method of working with state quitlines and are less costly than bi-directional eReferrals.

[**] For an image of the eReferral – look at page 780 of the Journal of the American Medical Informatics Association, 2019, Vol. 26, No. 8-9

[§] For more information on quality measures and tobacco cessation, look to the Lung Association's Quality Measures Guide.

2. **Work with provider champions to develop personal and professional relationships with the Information Technology (IT) team.** The IT team tends to monitor the EHR software and make the modifications to them. Going to their office, understanding what their priorities are and what institutional pressures they are dealing with will go a long way. When working with the IT team, it is also important to consider that their ability to help clinicians and quality of care is a function of who they report to. It is essential to understand the organizational structure of the healthcare system and develop strategies around that. As a result of that, it is also important to develop relationships with the health system leadership, including quality directors or analyst staff.

UNDERSTANDING ORGANIZATIONAL STRUCTURES

Not all health systems have the same organizational structure. When working to implement tobacco cessation into EHRs, the Information Technology (IT) department is a key partner. Understanding the reporting structure of the IT department including who they report to - the Chief Medical Officer, Chief Financial Officer or another individual is important. It is also important to align the goals of tobacco cessation/EHR integration with the goals of the department and the decision maker.

3. **Ensure providers are involved in the EHR modification process.** Once a request has been sent in to integrate or improve tobacco cessation in the EHR, it will likely go through a review process. Most health systems have their own internal approval process, which can include a committee that reviews all requests to optimize the EHR. It is important that if a health system does have this process, to include frontline providers (e.g. physician, nurse, medical assistant, receptionist, etc.) as members of the committee. An EHR system could fail because it does not easily integrate the changes being requested into the already existing workflows. Frontline providers utilize EHRs on a daily basis and can provide first-hand knowledge of use when reviewing modification requests.

Challenges and Limitations

While EHRs are incredibly useful tools, there are challenges and limitations that health systems run into. One of the most common challenges health systems face is the time it takes to make modifications to an EHR. It is not a nimble or quick process and if a provider wants to request for customization or optimization of the health system's EHR, it can take up to several months. This makes it difficult to update EHRs to reflect current issues clinicians/providers are working with.

Another challenge a health system might run into when integrating tobacco cessation into EHRs are quality measures. While most quality measure programs include a tobacco measure, these measures are not as comprehensive as cessation treatment guidelines. For instance, with Meaningful Use, providers were not required to provide treatment for tobacco use. Without the financial or accreditation incentive, there can to be less internal buy-in to develop a set of questions around this topic. Also, even if the questions are built into the EHRs, providers might feel more comfortable skipping those questions knowing they or the health system will not be penalized for it. Ultimately, unless treatment/care, such as providing counseling, discussing or prescribing cessation medications is mandated by a quality measure, it is difficult to garner buy-in to build certain questions to enhance aspects of tobacco cessation in EHRs.

One way to try and curtail this issue is to train providers on what is considered comprehensive tobacco cessation treatment. This could be done by developing a training that emphasizes the importance of helping their patients and moving beyond receiving a good performance score. Providers should be encouraged to really engage with their patients who use tobacco and get away from just asking patients if they use tobacco products and telling them to quit.

Moving Forward – Fully Utilizing the Technology

The strategies mentioned above are all ways to successfully integrate tobacco cessation in EHRs, but EHRs have the capacity to do much more. Below are two under-utilized methods to improve tobacco cessation via EHRs.

Proactive Use of EHRs

A majority of health systems primarily utilize their EHRs reactively, meaning, they are used when patients come to a health system for care. From a tobacco cessation perspective, clinicians identify them as tobacco users, refer them to treatment and will often wait for a follow up visit to reengage with the patient.

EHRs can also be used proactively. In a health system using EHRs proactively, clinicians reach out to tobacco users for treatment between appointments. For example, a health system can build a registry of tobacco users from their EHR. Once that electronic registry is built, those individuals can proactively be reach outed to about quitting tobacco in several ways, including:

- Sending an email via a secure patient portal;
- Calling via case managers; or
- Sending information via the mail.

Opt-Out versus Opt-In

Most systems currently use an opt-in approach. With this type of approach, if a patient is identified as a tobacco user, most providers tend to see an alert which could look like: "your patient smokes, would you like to do something about it?" The opt-in method limits the reach of tobacco treatment because a minority of tobacco users (12-20%) will say they are ready to quit within the next month and as a result, few are offered treatment.[4] While motivation to quit is a good sign, several clinical trials have found that smokers who report not being read to quit actually quit at the same rates as those who reported they were ready.[5] In fact, a majority of smokers quit due to unplanned, spontaneous quit attempts.[6]

Patients should be screened for tobacco at every visit, and tobacco users should be counseled to quit at every visit. This can be done by having an opt-out approach because treatment will become the default. Rather than the question being "I see you smoke, would you like to discuss treatment options? it would transition to "I see you smoke, lets discuss the various treatment options." The opt-out approach changes the conversation a provider has with a tobacco user.

Creating an opt-out approach will require the EHR to be modified to reflect that change. EHRs would modify the framing of the alert to say something like: "It is recommended to prescribe the following medications because your patient smokes." It would also be modified to prompt providers to tell their patients that other members of the healthcare team, such as a health educator or behavioral health coach, will stop by or follow-up to discuss quitting. This does not require intense programming; however, it does require developing internal buy-in.

As most smokers want to quit, moving to an opt-out approach could increase the number of patients utilizing tobacco cessation medications and or treatment.[7]

If a health system is interested in transitioning to an opt-out approach, they will need to look at it from several angles:

- Clinicians/providers will have to go through training to develop an opt-out view of tobacco dependence treatment. This can be developed in conjunction with state or local public health departments.
- Providers value professional autonomy. With an opt-out approach, it is important to show providers that their autonomy is respected. It will take time for some clinicians/providers to get comfortable with the opt-out approach and during the transition it would be helpful to give them the ability to override the prompt and allow them to use their best judgement.
- The education of the next generation of healthcare providers is vital. Training students to recognize treatment as the default will be invaluable to ensuring patients will always hear about treatment options in the future.

Conclusion

Electronic health records provide an opportunity for providers to screen for and document smoking status, however this is not enough to increase the quality of tobacco cessation interventions. EHRs can be modified to promote more comprehensive cessation treatment among providers. As indicated by this document, there are several promising methods a health system can implement to integrate and improve tobacco cessation within EHRs.

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