Electronic Health Record Use in Oral Health Integration

Health information technology (HIT) plays an important role in oral health integration. Every field-testing site dealt with the challenges of modifying their user interface to accept new information as structured data, optimizing decision support features, and creating accurate reports. One of the most important findings was the range of creative solutions that practices were able to devise in order to overcome the barriers they encountered in adapting their HIT to support oral health integration. A recurring theme is that ad hoc changes to the electronic health record (EHR) to support innovation (in this case, oral health integration) are disruptive to the type of system-wide controls on the EHR that are required to maintain the standardized processes on which reliable HIT depends. And yet, as these examples show, care teams were able to find creative ways to innovate within these constraints. This case example shares stories from three of the 19 field-testing sites, including EHR challenges encountered and work-arounds developed.

Multnomah County Health Department - East County

The East County Health Center, located in Gresham, OR, on the eastern border of Portland, is one of seven primary care clinics managed by the Multnomah County Health Department.

The East County Health Center uses an EHR hosted by a national service provider that (by necessity) limits each site's ability to modify the user interface on an ad hoc basis. The lengthy standardized process required to modify the EHR was a barrier to creating tools to support the oral health integration work. Aron Goffin, MPH, program specialist senior, explains, "We couldn't build a new oral health template, so we did a work-around and created three SmartPhrases: one for assessment, one for the oral exam, and then one for the after-visit summary that includes educational messages and referral information, including contact information for how to schedule a dental appointment." When it comes to reporting, SmartPhrases are more limited than structured data fields. Goffin shares, "We can report that the SmartPhrase was used. We can't report on the answers to the screening questions, but we can see how many times fluoride varnish was administered since that requires an order." Initial data showed the pilot was off to a strong start. "By the end of the first month we had nine patients who were seen for their nine-month well-child visit, and six of them received fluoride varnish. The three that did not may not have had any teeth, or the parents might have declined. It's an opportunity for us to look back at the charts and figure out what happened," says Goffin.

Community Health Center of Cape Cod

Community Health Center of Cape Cod (CHC of Cape Cod) is a multisite health center located on Cape Cod, MA. It is a federally qualified health center (FQHC) offering co-located dental care and behavioral health services.

CHC of Cape Cod uses an EHR hosted by a national service provider, and when first embarking on oral health integration, focusing on a target population of patients with diabetes, the staff encountered roadblocks to utilizing the EHR to support the work. Justina Johnson, MA, explains, "At first the EHR didn't support what we were doing, so we had to make our own spreadsheets, our own systems, to track patients. There was no way we could report the data; we were not able to see what difference we were making." This was not encouraging. Johnson admits, "It makes a big difference to be able to be recognized for our hard work and see the outcome of that." Eventually, Katy O'Connell, chief information officer, was able to figure out a way to create reports based on the time/date stamps associated with the specific EHR features the care teams were using to document oral health screening. Johnson explains the workflow if a patient needs a referral: "I place and pend the referrals, and the clinician signs the order and sends it through the EHR. I add patient education to the progress note so that when their after-visit summary prints, they get some diabetes oral health education." O'Connell shares, "Our key resources were having a quality improvement person on staff to make changes to the EHR, and having leadership understand and support what we

needed. We also have a data analyst on staff, which is critical. When we created a new SmartPhrase, I could go to her and ask to get it included in the reports. It wasn't challenging to create the SmartPhrase work-around, but getting the reports out is harder. We'd never reported on SmartPhrase data before." O'Connell explains, "We learned from our EHR service provider that SmartPhrases are reportable because they have a unique ID when they are created. To report on any of the responses embedded within a SmartPhrase requires a special build by the service provider, but no special build was required simply to know if a SmartPhrase was used." The next step was for the data analyst to learn how to extract the data in a report. O'Connell continues, "Our data analyst had to learn in what table in the reporting database this information was stored. A reporting analyst working for the service provider directed us to the place in the database that stores the time and date record each time the SmartPhrase is used. Our data analyst was able to query in SQL to see all of the instances when the SmartPhrase for the oral exam, PEMOUTH, had been used." In the end, the work-arounds made a significant difference to the clinicians and staff at CHC of Cape Cod. West shares, "You have to build oral health into your processes; you have to embed it in everything that you do."

Lowell Community Health Center

Lowell Community Health Center (Lowell CHC) is a large FQHC recognized as a Level 3 patient-centered medical home (PCMH) by the National Committee for Quality Assurance (NCQA) located in Lowell, MA, a small community northwest of Boston.

Samantha Jordan, DMD, MPH, dental director, explains, "The existing pediatric templates include oral health risk assessment questions, but they are not consistent across the templates [templates are age-range specific]. The questions are in some templates but not all. The templates are generally out of date and need to be overhauled." The pilot team started by conducting an audit of all of the templates in the EHR to determine where the inconsistencies were. Jordan continues, "We've created our ideal age-based risk assessment questions, and we're figuring out how to best incorporate those into the template when the templates get an overall update." Frequently templates need to be updated for more than oral health, so the pilot team has run into a barrier. "The challenge we've run into is that there are a lot of competing interests with ideas about how the templates should be changed. We need to make sure changes and modifications are done systematically and thoughtfully, which means we can't make changes without including time for both planning and evaluation," admits Jordan. Lowell CHC has not let the lack of customized
EHR templates prevent them from conducting screening assessments, administering fluoride varnish, and providing oral health education information to their pediatric target population, though their ability to report data on those activities is limited.

Summary

The stories shared above clearly illustrate the important role HIT plays in oral health integration, as well as some of the challenges faced by the pilot practices and the work-arounds they developed. Despite the HIT complexities, all sites were able to make significant progress toward fully integrating oral health into their practices for their patient populations.

About the Oral Health Integration in Primary Care Project

Organized, Evidence-Based Care Supplement: Oral Health Integration joins the Safety Net Medical Home Initiative Implementation Guide Series.

The goal of the Oral Health Integration in Primary Care Project was to prepare primary care teams to address oral health and to improve referrals to dentistry through the development and testing of a framework and toolset. The project was administered by Qualis Health and built upon the learnings from 19 field-testing sites in Washington, Oregon, Kansas, Missouri, and Massachusetts, who received implementation support from their primary care association. Organized, Evidence-Based Care Supplement: Oral Health Integration built upon the Oral Health Delivery Framework published in Oral Health: An Essential Component of Primary Care, and was informed by the field-testing sites' work, experiences, and feedback. Field-testing sites in Kansas, Massachusetts, and Oregon also received technical assistance from their state's primary care association.

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