

## **Use of Electronic Health Records to Facilitate Colorectal Cancer Screening *Recommendations for Improvement***

The following recommendations were proposed, following the September 25<sup>th</sup>, 2015 National Colorectal Cancer Roundtable meeting, *Improving Electronic Health Records (EHRs) to Support the Delivery of Colorectal Cancer Screening (CRC), Including for Those with a Familial Risk*. These recommendations represent opportunities to positively impact effective use of EHRs in community health centers and other settings, to improve colorectal cancer screening.

### **Section 1 -- Proposed recommendations for vendor improvement**

1. Work with Electronic Health Record (EHR) vendors to implement the following functionalities: To make these improvements, it will be optimal to convene EHR vendors, key federal partners, Health Center Controlled Networks (HCCNs), Primary Care Associations and NACHC to discuss requested improvements in EHRs specific to CRC screening. By representing community health center (CHC) purchasers on a larger scale and coordinating requests for improvement, a collaborative effort focused on the need for improvement may have more influence than hearing from individual CHCs alone. Tools outlined below should be optimized for usability and efficiency. In addition, recognizing that resources vary, implementation should be possible without needing large IT departments.
  - a) *A comprehensive and editable cancer screening summary dashboard.* The dashboard would pull in all cancer screening test data (reports, scans, images) so that the user can see all colonoscopy, mammogram and other cancer screening reports. The dashboard should display the patient's current status (up-to-date, overdue), dates of past tests, next due date, screening interval, and results of their last exam and any associated pathology. This should be accessible in the provider interface as well as in a consumer-friendly patient portal. Providers and designated staff should be able to edit the dashboard to add past procedures, results and to change screening intervals. They should also be able to enter into discrete fields reasons a screening is not done such as a contraindication or a patient refusal.
  - b) *Detailed documentation of prior colonoscopies.* There should be a quick, easy way to enter the results of past colonoscopies/surgical history in structured data fields. Ideally, this would be a one or two-click process with a means of differentiating between a verified colonoscopy (e.g. supported by documentation) vs. a self-reported exam. Pathology results should be filed discretely to enable clinical decision support. Additionally, with payor and vendor support, systems would be able to import past colonoscopy results from claims data and other EHRs. Forcing

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standardized, structured fields for positive/negative or Cancer/no cancer, etc. would help yield valid and reliable data.

- c) *Clinical decision support and evidence based interventions.* In an effort to improve patient care while reducing workload for the entire health care team, EHRs should provide patient and provider reminders for tests that are due using appropriate screening intervals, based on colonoscopy report results, pathology results, past medical and family history. Reminders are most useful if they go to the right member of the health care team at the appropriate time. However, institutional workflows vary and therefore the EHR should have flexibility to designate where and when reminders trigger. Additionally, the EHR should have reporting functionality at the provider, department and institutional level to assist with quality improvement, and population health initiatives.
- d) *Family history data functionality.* The EHR should have fields for family history collection utilizing standardized content and searchable fields with alerts to the provider when history is incomplete or needs updating. This may include development of a patient portal where patients can review family history as it is recorded in the EHR and can enter data to alert the health care team. Patient entered data should be easy to incorporate into the EMR after review by the healthcare team.
- e) *Clinical decision support systems based on specific family history data.* Primary care providers are not necessarily aware of the nuances of screening for patients with a family history of CRC, let alone those with family histories of other conditions that make them genetically more susceptible to CRC. Therefore, the EHR should incorporate screening alerts based on clinical practice guidelines developed by the ACS and national medical societies based on the details of family history of CRC and other conditions.
- f) *Comprehensive training tools.* The above tools will require training modules that can be used at implementation, with new hires and as periodic refresher training. This training should be appropriate for end user or other representatives, who could then work with end users.

### **Section 2 – Proposed recommendations for NCCRT/NACHC/HCCN/state PCAs**

1. Communicate to CHC leadership (e.g. Board of Directors, CEO and CMO/Clinical Directors) about the importance and potential payoff of investing valuable staff time on EHR optimization.

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Providers in CHCs are time-pressured, and it is a challenge to identify staff who have the time to invest in learning more about their EHR's capabilities, examine workflows, identify reporting errors, use the EHR's functionality to improve performance, etc. Therefore, CHC staff often utilize their EHR at levels below full functionality, never realizing their system's possibilities or even misusing their EHR, despite substantial investment in the EHR. CHC leadership may be encouraged to set aside time for EHR optimization by hearing success stories from peer organizations that have seen improvements in patient care, greater efficiency, or receipt of pay for performance incentives as a result of taking the time to improve their EHR use. Further, when CHC's invest in adoption of a new system, they should consider investing in staff time and incentives for EHR optimization as an integral part of the investment. Help members of the health care team better see the linkages between broader EHR/QI steps they need to take to remain a viable business and the CRC-specific things this initiative wants/needs them to do, in order to achieve the CRC goals.

2. Encourage CHCs to run more frequent reports on important quality issues (e.g. HEDIS measures, UDS measures) and report data to clinicians/teams.  
Reporting both group and individual data has been shown to be a strong means of demonstrating the value of the EHR for patient population management, reinforcing the importance of entering structured data effectively to ensure accurate reporting, and motivating providers to focus on improving screening efforts. Externally shared reports may help with accountability.
3. Consider ways to increase CHCs organizational focus on colorectal cancer screening through quality/process improvement initiatives, short term grants or promotion of shared campaigns, such as 80% by 2018.  
Many CHCs emphasize other health issues (e.g. diabetes, hypertension, cervical cancer) based on patient demographics or funding streams, but CRC is typically not high on the priority list. When CHCs focus their efforts on a particular disease, even for a short period, attention to workflow, entry of structured data and other aspects of EHR use optimize performance and these improvements often endure even after the focus period ends.
4. Create change through Meaningful Use mechanisms. Research and identify opportunities to leverage Meaningful Use to spur improvements.
5. Secure funding for on-site IT assistance for CRC quality improvement.  
Funding has been shown to lead to greater institutional focus on screening issues. There is a clearly demonstrated need for funding to support on-site IT assistance in order for CHCs to make better use the significant federal investment that was made in EHR acquisition.

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### **Section 3 – Proposed recommendations for EHR training and support**

1. Collect and distribute best practices on EHR use to facilitate cancer screening. Create a guide or toolkit to help with dissemination. Consider ACS, NACHC or HRSA sponsored learning session tailored for the most prevalent EHR systems. Include model approaches from CHCs with varying staff sizes, budgets and levels of IT sophistication, which would be valuable those who do not think they have enough resources to make significant improvements to the system.
2. Explore ways to systematize EHR training and optimization, such as providing ongoing technical assistance through Health Center Controlled Networks, NACHC or state Primary Care Associations. Currently, EHR utilization is highly dependent on the skills and motivation of individual staff members at each CHC. Some CHCs with highly motivated staff are able to overcome non-intuitive systems and lack of training to still make the most of their EHR, but others are not. The difference appears to be simply whether or not the CHC happens to have staff members with a strong orientation toward the technology or a focus on quality improvement. One way of overcoming this limitation may be the creation of model workflows that can be shared across networks or distributed through state Primary Care Associations, but other opportunities should also be explored. Some staff may be persuaded if they understand that bad data or mistakes that go uncorrected can have very real implications for patient health. Other staff may be motivated if they understand how poor EHR practices mean they are underreporting their UDS measures. Do case studies to highlight success stories as a way to motivate staff.
3. Consider ways to offer in-person assistance to CHC staff, as clinicians and IT staff have cited this as an effective way to improve knowledge and use of EHRs. This includes raising awareness of features, proper documentation/use of structured data, report generation, and use of population management features. Other options include:
  - a) Shadowing or online tutorial by clinical trainers and superusers
  - b) Telephone or webinar EHR “optimization” training sessions
  - c) Scheduled phone consultations from Superusers, who understand both the EHR system and the workflow
  - d) Additional in-person assistance from vendors with trainers well versed in clinical needs
  - e) Training incorporated into the daily workflow, so as to not become an “add on”
4. Encourage CHC staff to become more active in EHR user groups offered by NACHC or their respective vendors. Most respondents do not appear to be taking advantage of user

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groups, but those who do, report finding that they're a helpful way of learning how to address common EHR problems. Reward collaboration and sharing.

5. Consider developing "SWAT teams" consisting of EHR specialists to provide troubleshooting, optimization training and reporting guidance to CHCs who lack professional IT staff. Teams should specialize in each of the four EHR systems that are most prevalent in CHCs. Ideally, they would include both technical and clinical specialists who can shadow clinical users as well as staff members who are responsible for pulling data out of the EHR.
6. Incorporate tailored patient education material on the importance of CRC screening to help address patient barriers that can be automatically generated through the EHR and distributed to patients in a way that aligns with the workflow. It is important that this material be *persuasive* in nature rather than *instructive* (e.g. not how to perform an FOBT test or prepare for a colonoscopy, but why it is important) and should be tailored to the screening recommendation made for the patient. Ideally, this material could be incorporated into future EHR systems as an automatic deliverable once a colonoscopy is ordered, but initially providers in CHCs would welcome such material even on paper. Consider enhancing distribution of, or co-branding with content from high-quality materials already developed by the CDC.

### **Section 4 – Proposed recommendations for optimizing EHR functionality**

1. Encourage CHC staff to make use of their EHR's automated patient reminder systems. Several EHR systems have the capability to deliver automated reminders to patients who are overdue for screening, have unreturned stool tests, or have not completed a colonoscopy referral. However, almost none of the CHCs in this study say they are using these reminders. Taking the time to set up practice protocols for when automated reminders are appropriate and how they should be delivered (e.g. mail, text, email) will pay off in reducing the time that staff need to spend tracking down patients and resolving incomplete tests.
2. Advocate that CHC staff receive EHR refresher training on a periodic basis. Responses suggest that most CHC staff simply make do with the initial training they received and never take time to learn more about what their system is capable of once they have mastered the basics. In reality, providers need to use the EHR for a period of time before they can identify gaps in knowledge or perceived functionality, and then go back for more support or training, perhaps with a list of functions that they need the EHR to fulfill. Unfortunately, this is not the training model in most settings. Even if vendors do

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not support refresher training, CHC staff should be encouraged to focus on optimization of EHR workflows on at least an annual basis, using whatever resources are available to them (e.g. HCCN, internal IT support, new budget allocations for vendor refresh training).

3. Identify and promote model “add on” features or applications that high performing clinics or HCCNs have developed on their own to augment or improve their EHR’s screening functionality.

Many high performing clinics have developed their own screening templates, reminders, and/or reporting tools. So that users with fewer IT resources do not have to “reinvent the wheel,” NCCRT should consider ways to facilitate the exchange of ideas or code between CHCs that are willing to share this information. Vendors should be encouraged to allow for, and even facilitate, free distribution of these adaptations.

4. Create vendor-agnostic model workflows and vendor specific best practices for colorectal cancer screening. Currently, the majority of CHCs are using one of five EHR systems. Therefore, model work flows for each of the major EHR products would help CHCs make progress toward optimizing their processes. Documentation should particularly emphasize the importance of follow up and tracking, in order to enable accurate reporting, as this is where this project revealed a significant lack of attention. Vendors should be encouraged to allow for, and even facilitate, free distribution of these workflows. Be aware that workflows will vary by FIT test used according to how they are processed.
5. Address alert fatigue. Delineate the items that can be done by support staff.
6. Recognize high performers. State PCAs and HCCNs can recognize high performers. *National Association of Community Health Centers (NACHC), state primary care associations (PCAs) and the Health Services Administration (HRSA) can play a leadership role in the above recommendations.*

### **Section 5 – Proposed recommendations for EHR best practices**

1. Promote best practices of CHCs who have turned their EHRs into high performing systems (possible role for State PCAs). Best practices could include:
  - a) *Assure workflow fit:* Pay greater attention to how their EHR fits with their existing work flow, and revisit how the EHR could be modified after installation to better complement and support the work flow. Have vendors shadow providers to demonstrate best practices and ways to maximize the use of the system.
  - b) *Conduct regular system upgrades:* Keep up with all system upgrades and seek additional online training when updates are installed.

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- c) *Secure assistance from technical staff:* Dedicate technical staff to the EHR system, so they can program, access servers, or customize the software to meet their needs. This can be done efficiently by sharing staff across health center controlled networks.
- d) *Join a Health Center Controlled Network:* Join health center controlled networks where they have access to high quality IT expertise.
- e) *Participate in peer to peer learning:* Make use of facilitated opportunities to learn from other users of the same EHR (e.g. NACHC or vendor-supported user groups).
- f) *Track performance:* Motivate providers to document their activities in structured data through group and individual performance tracking, peer comparison, and/or performance incentives
- g) *Tie quality measures into the use of EHRs:* Convey to providers exactly how data for quality measures is captured (e.g. what to do to get “credit” for a task), and how it will be used to assess performance.
- h) *Train new providers:* Work with new providers to go over the basics. Have them shadow another provider to understand the EHR system. Initially, audit their notes to ensure proper use of the system at the onset.
- i) *Communicate updates:* Integrate clinical and technical staff, both at the beginning of implementation and on an ongoing basis to ensure that clinical staff is making correct use of the EHR and know about the latest updates.
- j) *Host monthly meetings:* Host monthly provider meetings to present new forms, go over system updates and answer questions. Make these efforts worth the providers’ time by coaching them on how to make it easier, use less clicks, be more efficient, and able to deliver better care.
- k) *Identify provider concerns:* Periodically identify provider concerns and barriers to effective EHR use and conduct workflow improvement to address problems.
- l) *Use the EHR to automate Standing Orders:* Make use of standing orders for routine CRC screening, including automation to order stool tests (bulk order) and of referrals for colonoscopy for all patients who have a positive screening FOBT. Have direct interfaces with external labs that allow for resulting and billing of tests. Address issues of tracking and billing for incomplete test (issue for eCW).
- m) *Automate follow up:* Initiate standards for systematic follow up on unreturned stool tests or colonoscopy referrals which are not completed, with particular use of tools

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- that do not require significant staff time to implement (e.g. HIPAA compliant robo-calls, automatically generated postcard reminders).
- n) *Automate screening alerts*: Differentiate between alerts for incomplete screenings for average risk patients and high risk patients (e.g. establishment of a “critical” alert for positive stool tests that have not been followed by a colonoscopy).
  - o) *Standardize collection of core Colonoscopy Measures*: Establish a core set of colonoscopy measures that should always be entered into structured data (e.g. normal/abnormal, number of polyps, histology of polyps, villous architecture or high grade dysplasia in adenomas, or cancer, and follow up requirements).
  - p) *Launch One-click View of a patient’s screening status*: Have a simple “one click” way of viewing *and editing* the screening status of an individual patient.
  - q) *Have providers run self- reports at the end of a clinical day*. This type of quick check is effective in identifying: a) oversights in capturing needed clinical data; b) documentation that is captured in a non-searchable manner c) missing orders for needed clinical test or missed screening recommendation. It also presents a convenient to take the step(s) necessary to correct the oversight.
  - r) *Don’t rush implementation*. Take time to train and test before launching system wide.