MARYLAND HEALTH CARE COMMISSION

Comprehensive Care Facilities

Adoption of Health Information Technology

November 2016

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Introduction

Comprehensive Care Facilities (CCFs) provide individualized medical and nursing services for residents over an extended time due to disease, disability, or advanced age.[1] A CCF is often referred to as a nursing home, long-term post-acute care (LTPAC) provider, or a skilled nursing facility.[2] CCFs are an integral component of the care continuum as they provide both post-acute and end-of-life care. Post-acute care allows a patient to receive specialized follow-up care to restore medical and functional capacity prior to transitioning back home or to an independent/assisted living or residential care facility.[3] The Maryland Health Care Commission (MHCC) assesses health information technology (health IT) diffusion among CCFs statewide. Adoption and meaningful use of health IT is essential to improve patient outcomes, enhance health care delivery, and reduce costs.

Approach and Limitations

Information from MHCC's Annual Long Term Care (LTC) Survey (survey) was used in assessing health IT adoption among CCFs.[4] The survey collects a wide-range of information on CCFs[5] and has included health IT questions since 2013.[6] Responses to the health IT questions are presented in this report and inform policy development. Information was self-reported by CCFs and not audited for accuracy. CCFs interpretation of the questions may have influenced responses. Information regarding CCF adoption of health information exchange (HIE) was obtained from the State-Designated HIE, the Chesapeake Regional Information System for Our Patients (CRISP).[7]

Findings

EHR Adoption and Use

Electronic health record (EHR)[8] adoption has grown steadily among CCFs statewide over the last two years. Unlike hospitals and some health care practitioners, CCFs do not qualify for the federal EHR meaningful use incentives.[9] Approximately 85 percent of CCFs have adopted an EHR, which is a 17 percent increase since 2013.[10] CCFs indicated using EHRs to support care delivery, quality assurance,

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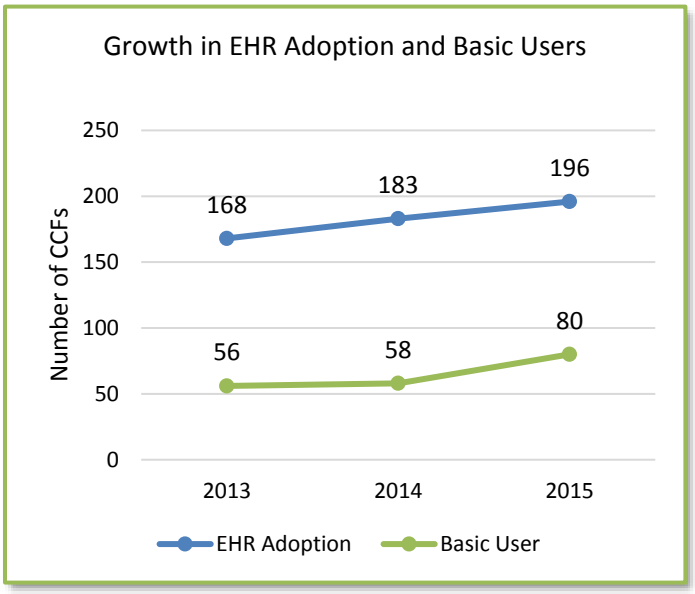
[1] COMAR 10.07.09.02(B)(6), Residents' Bill of Rights: Comprehensive Care Facilities and Extended Care Facilities. CCFs are generally considered a type of long-term post-acute care service provider.
[2] National Care Planning Council. About Long Term Care. Available at: http://www.longtermcarelink.net/eldercare/long_term_care.htm.
[3] American Hospital Association. Long-term and Post-acute Care Providers. Available at: http://www.aha.org/about/membership/value-ltpac.shtml.
[4] More information about the annual survey is available here: http://mhcc.maryland.gov/mhcc/Pages/home/surveys/surveys_ltc.aspx.
[5] Information collected pertains to services offered; facility and resident demographics; financial, ownership and administrative information; and adoption and use of health IT.
[6] See Appendix A for health IT survey questions.
[7] In 2009, MHCC and the Health Services Cost Review Commission designated CRISP as the State-Designated HIE. For more information, visit: http://mhcc.maryland.gov/mhcc/pages/hit/hit_hie/hit_hie.aspx.
[8] EHRs are real-time, patient-centered records that include the medical and treatment histories of patients, as well as a variety of tools to assist in the clinical decision-making process.
[9] Federal incentives include those established under the Medicare and Medicaid EHR Incentive Programs.
[10] See Appendix B for information about the length of time using an EHR reported by CCFs.

and the completion of patient assessments. Information included in the EHR on patient assessments is used to meet federal reporting requirements. CCFs are required to submit certain clinical quality measures to the Centers for Medicare & Medicaid Services (CMS) on a quarterly basis.[11]

While most CCFs have implemented an EHR, only about 41 percent are using the system at a basic level.[12] Features of an EHR, when implemented by a CCF, that constitutes basic use include: activities of daily living, assessments (other than the minimum data set), care plans, demographic information, diagnostic-related information, discharge summaries, vital signs, and laboratory information. The overall number of CCFs using their EHR at a basic level has increased by 43 percent over the last two years. Several CCFs indicated their ability to implement basic features of an EHR are hindered by competing priorities, costs that can be associated with EHR modules, and the need to provide additional staff training.[13]



Note: N=233 (2013); N=230 (2014); and N=230 (2015)

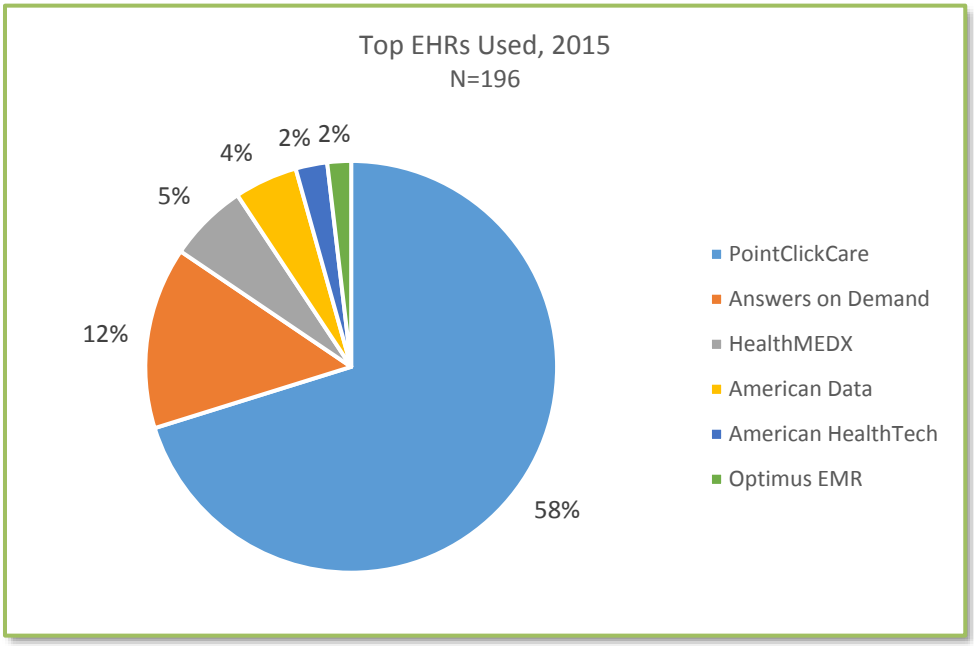
Five of the seven basic level use features align with criteria established under the national Health IT Certification Program (certification program).[14] These criteria include care plans, demographic information, diagnostic-related information, discharge summaries, and vital signs and laboratory data. The certification program provides assurances that an EHR system meets established performance standards.[15] Unlike EHRs in hospital and ambulatory settings (e.g., primary care practices), national certification of LTPAC EHRs does not exist. In May 2014, the Health Information Technology Policy Committee (Committee) developed draft LTPAC voluntary certification criteria.[16] The Committee makes recommendations to the federal Office of the National Coordinator for Health

[11] Medicare or Medicaid certified nursing homes are federally required to perform Minimum Data Set (MDS) clinical assessments of their residents and report MDS information to the Centers for Medicare and Medicaid Services. More information is available at: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/NHQIQualityMeasures.html.
[12] The MHCC, in collaboration with CCFs, identified system functions that constitute basic EHR adoption.
[13] See Appendix C for more information about the top EHR adoption challenges reported by CCFs.
[14] Certified EHR Technology meet certain criteria related to technological capability, functionality and security. More information is available at: https://www.healthit.gov/policy-researchers-implementers/onc-health-it-certification-program.
[15] Information on the certification program is available at: https://www.healthit.gov/policy-researchers-implementers/onc-health-it-certification-program.
[16] For more information visit: https://www.healthit.gov/buzz-blog/federal-advisory-committees/seeking-feedback-voluntary-ehr-certification-behavioral-health-longterm-postacute-care-settings/.

Information Technology (ONC). The proposed voluntary certification program failed to garner support from providers and EHR vendors; ONC decided not to adopt the certification program. CCFs nationally were concerned about supporting a voluntary program that could lead to a requirement to use only certified EHRs without adoption incentives. Vendors were largely concerned about the financial impact of federal mandates on functionality.

EHR Vendor Landscape

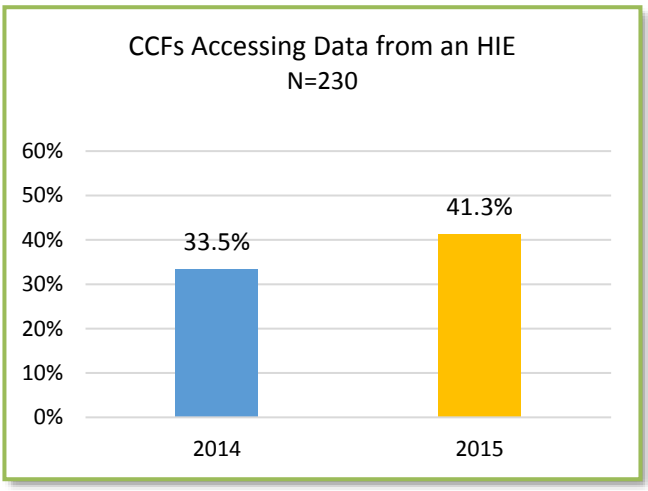
CCFs statewide have overwhelmingly adopted PointClickCare (PCC) at 58 percent as compared to the nearest competitor's solution, Answers on Demand, at 12 percent. Results from a recent national survey of CCFs suggests that user satisfaction is the leading reason for widespread adoption. Survey results indicated that PCC scored favorably in ease of use, functionality, interoperability, and scalability.[17] The leading benefits of an EHR solution deployed statewide include: 1) less time in training as staff move to other CCFs, 2) a strong technical users group, and 3) the ability to connect a large number of CCFs to CRISP with a single vendor interface. On the other hand, balanced competition generally results in lower costs and greater innovation.

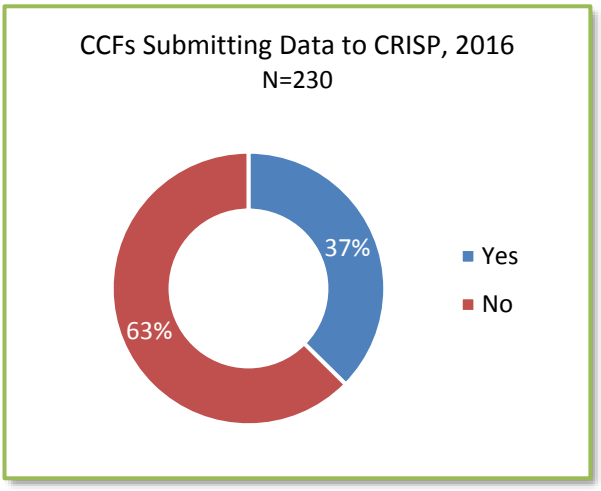


HIE Adoption and Use

[17] Which Vendors Deliver on the Fundamentals: KLAS Long Term Care 2014 Summary Report. May 2014. Available at: http://pages.pointclickcare.com/rs/wescomsolutions/images/PointClickCare_KLAS_Summary_Report.pdf.

About 41 percent of CCFs are accessing data from an HIE, which is an increase of about eight percent over the prior year.[18] While some CCFs participate in community-based HIEs, most participate with the State-Designated HIE, CRISP.[19] CCFs generally use CRISP to access clinical information through the CRISP query portal.[20] In 2013, CRISP began accepting electronic clinical information from CCFs; about 86 CCFs provide information on their residents to CRISP.[21] Generally speaking, broad adoption of HIE enables treating providers to securely share information from EHRs, which can improve quality and outcomes and avoid costly mistakes.



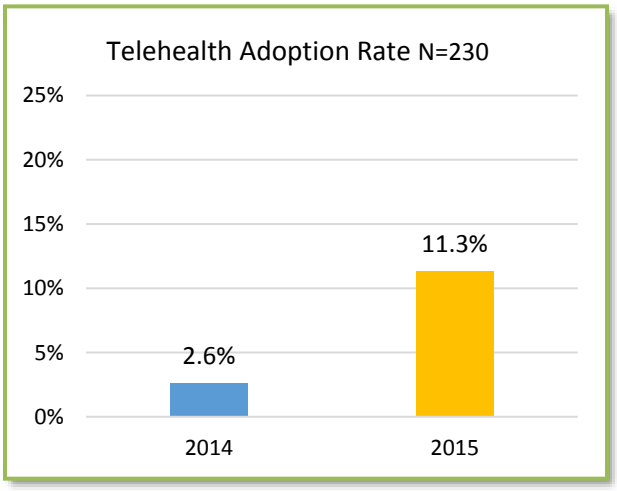


Telehealth

The adoption rate of telehealth[22] among CCFs increased by nearly nine percentage points since last year. This increase is primarily due to Genesis HealthCare's decision to use telehealth to support after-hours care of their residents. CCFs report adopting telehealth as a way to provide residents treatment during non-acute episodes; residents with an acute condition are transferred to the hospital.[23] A recent study found that nursing homes using telehealth for after-hours physician

[18] The MHCC first started collecting HIE and telehealth adoption information from CCFs in the 2014 annual survey.
[19] Community-based HIEs are generally hospitals that have deployed exchange services within a particular region. Information about HIEs registered with the State is available here: http://mhcc.maryland.gov/mhcc/Pages/hit/hit_hie/hit_hie_registration.aspx.
[20] The CRISP query portal is an online service that allows authorized users to look up patients' information, such as hospital encounters, laboratory/radiology reports, and discharge summaries. More information is available here: https://crisphealth.org/services/crisp-clinical-query-portal/.
[21] All 86 CCFs are sending encounter information to CRISP, which includes information regarding a patient's admission to and discharge from the CCF; five are sending laboratory reports, one is sending radiology reports, and two are sending other clinical notes/reports.
[22] Telehealth is the delivery of health education and services using telecommunications and related technologies in coordination with health care providers.
[23] See Appendix D for information regarding reported uses of telehealth and CCFs' plans for implementing telehealth.

coverage significantly reduced residents' readmission rates as compared to nursing homes not using telehealth.[24] Several local hospitals[25] are collaborating with CCFs to implement telehealth as a way to help prevent unnecessary utilization, reduce costs, and improve health care quality, which align with the goals of the all-payer hospital system modernization initiative.[26] Nationally, an estimated 78 percent of Medicare beneficiaries discharged to a skilled nursing home in 2006 that resulted in a 30-day readmission were considered potentially avoidable, costing Medicare an estimated $3.39 billion.[27] Avoidable transfers and hospitalizations put patients at risk for acquiring infections and other potential health complications and can be stressful for the patient and their family. Telehealth can help reduce avoidable hospitalizations, minimizing these risks and patient and caregiver stress.



Remarks

Health care reform requires moving toward more accessible, patient-centered care where emphasis is placed on efficiency and cost-savings. CCFs are a critical element to Maryland achieving the goals of health care reform. In 2014, Maryland embarked on an initiative to modernize its unique all-payer rate-setting system for hospitals. CMS will evaluate the success of this initiative based on Maryland achieving quality targets designed to promote better care, better health, and lower costs. CCFs are vital to achieving these targets in post-acute settings. Although health IT is an essential underpinning of health care reform, implementing the technology can be disruptive to established workflows. Overall, CCFs should be commended for their adoption of health IT. However, more work is needed to ensure CCFs are well-positioned to benefit from the technology as health care refrom progresses.

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[24] Grabowski, D. C., & O'Malley, A.J. (2014) Use of Telemedicine Can Reduce Hospitalizations of Nursing Home Residents and Generate Savings for Medicare. Health Affairs, 33(2), 244-250.
[25] Hospitals include: Union Hospital of Cecil County, Prince Georges' Hospital, Atlantic General Hospital, and University of Maryland Upper Chesapeake Health.
[26] More information is available here: http://www.hscrc.maryland.gov/hscrc-stakeholders.cfm.
[27] Mor, V., Intrator, O., Feng, Z., & Grabowski, D.C. (2010) The Revolving Door of Re-hospitalization from Skilled Nursing Facilities. Health Affairs. 29(1), 57-64. Available at: https://www.ncbi.nlm.nih.gov/pubmed/20048361.

Appendix A: Annual Long Term Care Survey Health IT Questions

SECTION 8 Health Information Technology

1. Has your facility adopted an EHR?

   An electronic health record (EHR) is a digital patient health record that can contain information about a patient's medical history, diagnosis, medications, etc. EHRs DO NOT include Excel, Access, or similar tools. An EHR system may interface with the Minimum Data Set (MDS) software, but MDS software alone does not constitute an EHR system.

2. If No to q1, is your facility (select one):
   a. Implementing an EHR within 12 months?
   b. Implementing an EHR beyond 12 months?
   c. Undecided about implementation timelines at this time?

3. If yes to q1, please answer the following questions regarding your EHR system:
   a. EHR Vendor Name: _____
   b. How long has your facility been using an EHR? (select one)
      i. Less than 1 year
      ii. 1-2 years
      iii. 2-3 years
      iv. 4 years or more

4. Listed below are challenges that might prevent a facility from adopting an EHR. Select the top three challenges associated with adopting an EHR that your facility has encountered, with (1) being the most challenging, followed by (2) then (3).
   a. EHR product's ability to meet facility's needs
   b. Limited availability of facility's technical resources
   c. Cost to update and/or maintain an EHR system
   d. Unclear return on investment
   e. Privacy/security concerns
   f. Competing priorities
   g. Cost to acquire an EHR system
   h. Staff education and training
   i. Workflow re-design
   j. Other (specify)

5. Which EHR system features are used by your facility? (select all that apply)
    - Activities of daily living (ADLs)
    - Advance directives
    - Allergy list
    - Drug-laboratory interaction alerts
    - Assessments other than the minimum data set (MDS)
    - Bar Code Medication Administration (BCMA) Technology that uses an infrared scan of the bar codes on a resident's bracelet and medication package at their bedside
    - Care plans
    - Clinical guidelines (based on resident problem list, gender, age, etc.)
    - Clinical reminders
    - Computerized Provider Order Entry (CPOE): A system for ordering providers to enter resident care orders directly into the computer system at the point of care
    - Diagnosis or condition list
    - Electronic Medication Administration Record (eMAR): An electronic format of a patient's medication record
    - Electronic prescribing (e-Prescribing)
    - Infection Surveillance Software (ISS): An application that electronically tracks the rates of infection outbreaks in the facility
    - Medical history
    - Medication lists
    - Problem lists
    - Discharge summaries
    - Demographic characteristics of residents
    - Vital signs and laboratory data
    - Radiologic reports
    - Radiologic images
    - Physician Notes
    - Other (specify):
6. Select the top three needs for exchanging health information electronically, with (1) being the greatest need, followed by (2) and (3).
    a. Exchange of advance directives

b. Perform medication reconciliation

c. Avoid duplicate testing (e.g., laboratory)

d. Care coordination

e. Reporting data to certain entities for compliance (e.g., quality initiatives, accreditation programs)

f. Other (specify): (Include three fields with a 100 character limit)

8. Does your facility access data from a health information exchange (HIE)?

A health information exchange enables health care providers to transfer data through electronic networks among disparate health information systems. Information available through an HIE typically includes laboratory results, radiology reports, discharge summaries, consultation notes, history and physical notes, operative notes, and secure clinical messaging and referrals. Providers may access information through an HIE via an online portal, secure messaging, or through their EHR system or other system.

- Yes
- No

8a. If yes to q8, specify the HIE(s) (select all that apply):

- Adventist HealthCare
- Calvert Memorial Hospital
- Chesapeake Regional Information System for Our Patients
- Children's IQ Network
- Fredrick Memorial Hospital
- Peninsula Regional Medical Center
- Prince George's County Public Health Information Network (PGC PHIN)
- Zane Networks, LLC
- Other (specify) (Include three fields with a 100 character limit)

8b. If no to q8, is your facility (select one):

- Planning to access data from an HIE within 12 months?
- Planning to access data from an HIE beyond 12 months?
- Undecided about timelines at this time?

8c. Indicate if your facility would be interested in using the following HIE services from the State-Designated HIE, the Chesapeake Regional Information System for our Patients (CRISP) (select all that apply):

- CRISP Portal
- Encounter Notification Service
- Direct Messaging

9. Does your facility transmit data to an HIE (e.g., provide resident health information, such as comprehensive care facility admissions, discharges, or other clinical information)?

    - Yes
    - No

    9a. If yes to q9, specify the HIE(s) (select all that apply):

    - Adventist HealthCare
    - Calvert Memorial Hospital
    - Chesapeake Regional Information System for Our Patients
    - Children's IQ Network
    - Fredrick Memorial Hospital
    - Peninsula Regional Medical Center
    - Prince George's County Public Health Information Network (PGC PHIN)
    - Zane Networks, LLC
    - Other (specify) (Include three fields with a 100 character limit)

    9b. If no to q9, is your facility (select one):

    - Planning to transmit data to an HIE within 12 months?
    - Planning to transmit data to an HIE beyond 12 months?
    - Undecided about timelines at this time?

10. Has your facility adopted telehealth?

    Telehealth is the delivery of health education and services using telecommunications and related technologies in coordination with health care practitioners. *Telehealth* encompasses both clinical and non-clinical services delivered remotely; the term *telemedicine* refers to the delivery of clinical services delivered remotely.

    Note: For purposes of this survey, MHCC is using the term *telehealth*, which includes telemedicine and use of telehealth technologies.

    - Yes
    - No

    10a. If Yes to q10, indicate if your facility is using telehealth for the following purposes (select all that apply):

- Tele-radiology
- Tele-diagnosis
- Tele-behavioral health
- Tele-consultation
- Emergency
- Remote Monitoring
- Other (specify) (Include three fields with a 50 character limit)

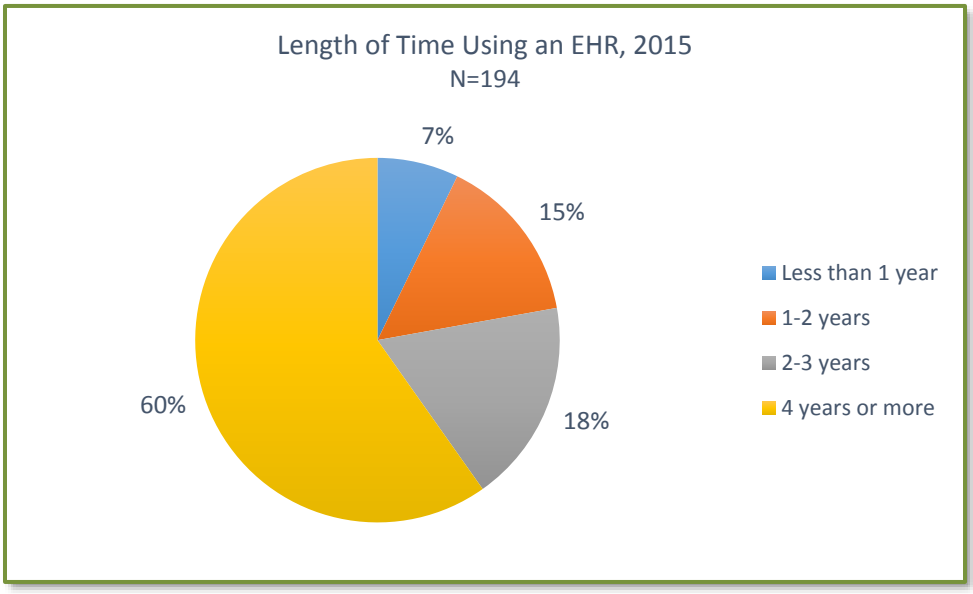
  10a1. Indicate the telehealth technologies your facility is using (select all that apply):

  - Interactive video/audio
  - Store-and-forward software
  - Home monitoring devices
  - Robotics
  - Telemedicine carts
  - Mobile devices (e.g., iPads, tablets, cell phones, etc.)
  - Other (specify) (Include 3 fields with a 50 character limit)

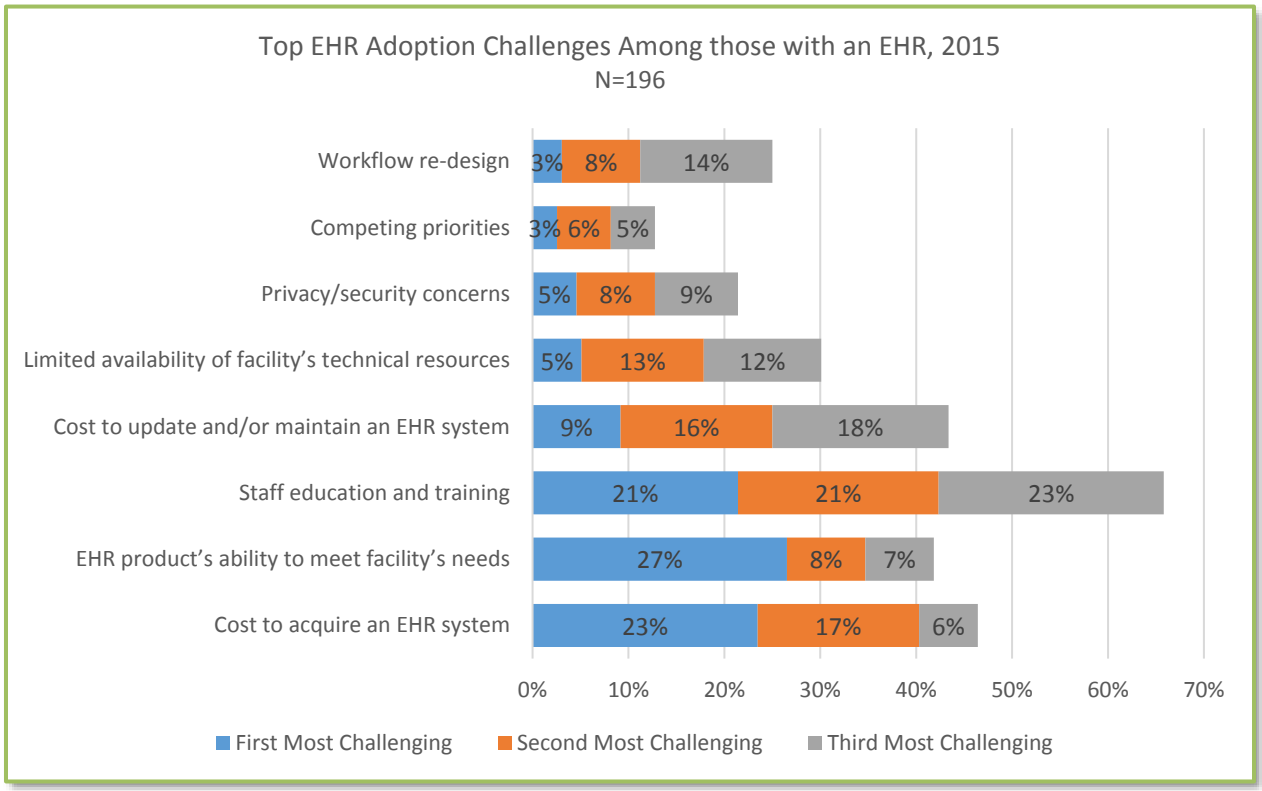
10b. If No to q10, is your facility (select one):

- Planning to implement telehealth within 12 months?
- Planning to implement telehealth beyond 12 months?
- Undecided about implementation timelines at this time?

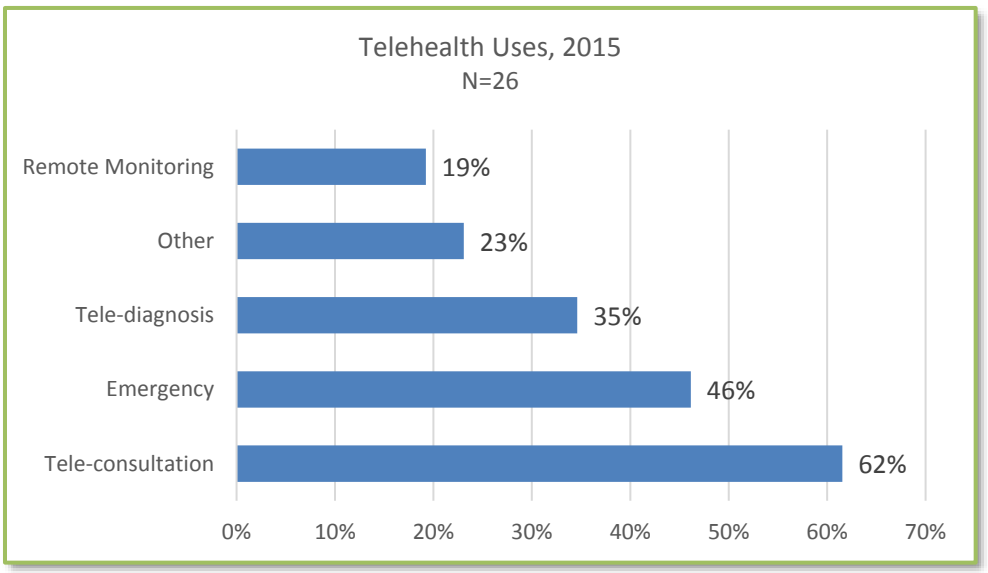
Appendix B: Length of Time Using an EHR among CCFs

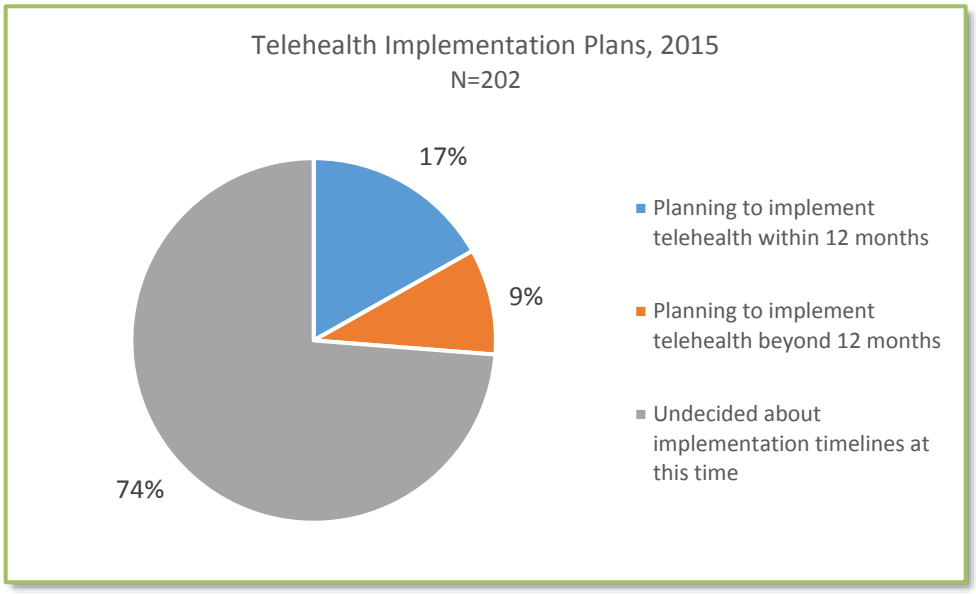


Appendix C: Top EHR Adoption Challenges among CCFs



Appendix D: Telehealth Uses and Plans to Adopt Telehealth among CCFs





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