Research article

Designing health information technology tools to prevent gaps in public health insurance

**Jennifer D. Hall, Rose L. Harding, Heather Angier,
Sonja Likumahuwa-Ackman, and Deborah J. Cohen**
Department of Family Medicine, Oregon Health & Science University, Portland, USA

Jennifer E. DeVoe
Department of Family Medicine, Oregon Health & Science University, Portland, USA,
and OCHIN Inc., Portland, USA

Rachel Gold, Aleksandra Sumic, and Christine A. Nelson
OCHIN Inc., Portland, USA

Author address for correspondence
Jennifer D. Hall
Department of Family Medicine
Oregon Health & Science University
3181 SW Sam Jackson Park Road, FM,
Portland, OR 97239, USA
Email: haljenni@ohsu.edu

ABSTRACT

Background Changes in health insurance policies have increased coverage opportunities, but enrollees are required to annually reapply for benefits, which if not managed appropriately can lead to insurance gaps. Electronic health records (EHRs) can automate processes for assisting patients with health insurance enrollment and re-enrollment.

Objective We describe Community Health Centres' (CHCs') workflow, documentation, and tracking needs for assisting families with insurance application processes and the health information technology tool components that were developed to meet those needs.

Method We conducted a qualitative study using semi-structured interviews and observation of clinic operations and insurance application assistance processes. Data were analyzed using a grounded theory approach. We diagramed workflows and shared information with a team of developers who built the EHR-based tools.

Results Four steps to the insurance assistance workflow were common among CHCs: 1) identifying patients for public health insurance application assistance; 2) completing and submitting the public health insurance application when clinic staff met with patients to collect requisite information and helped them apply for benefits; 3) tracking public health insurance approval to monitor for decisions and 4) assisting with annual health insurance reapplication. We developed EHR-based tools to support clinical staff with each of these steps.

Conclusion CHCs are uniquely positioned to help patients and families with public health insurance applications. CHCs have invested in staff to assist patients with insurance applications and help prevent coverage gaps. To best assist patients and to foster efficiency, EHR-based insurance tools need comprehensive, timely, and accurate health insurance information.

Keywords: Community Health Centres, electronic health records, insurance, Medicaid

INTRODUCTION

Lapses in health insurance coverage are associated with reduced access to care, poor health outcomes,[1–9] increased emergency department utilization, and higher health system costs.[10] Changes in public health insurance policies have increased coverage opportunities for low-income patients in the United States, but enrollees are required to verify income and reapply for benefits annually or bi-annually, which can lead to lapses in coverage.[11] Timely reapplication can prevent gaps in coverage and thus reduce unmet health care needs.

To help low-income patients gain health insurance and prevent coverage gaps, many community health centres (CHCs) and other primary care clinics have invested in staff to assist patients with the complex process of applying or reapplying for public health insurance. CHCs are vital to the United States' 'safety net' and uniquely positioned to help patients remain insured. Although CHCs provide care regardless of insurance coverage, patients with insurance are more likely to receive needed services.[12–16] Further, maximizing patients' insurance coverage improves CHCs' ability to sustain an enhanced array of services.

CHCs seeking to provide support for families navigating the insurance application process might benefit greatly from health information technology (health IT) tools designed to track and manage patients' insurance and application information.[17,18] Electronic health records (EHRs) have the potential to automate and support such tools. Clinical decision support tools often 'push' clinical information to clinicians to support prevention, screening, diagnosis, treatment and/or chronic disease management activities.[19] We propose that similar EHR-based strategies can also be used to support insurance assistance. This paper presents qualitative findings about CHCs' workflow, documentation, and tracking needs to assist patients with the insurance application process. We also describe the suite of innovative health IT tool components we developed to meet these needs and help families seen in CHCs to obtain and maintain public health insurance coverage.

METHODS

This study was conducted as part of a mixed methods implementation and feasibility study designed to develop and test health IT tools to support health insurance outreach and application assistance in CHCs. We used qualitative methods (observation and interviews) to identify clinic workflows and tasks involved in helping patients apply for health insurance. These findings informed the development and refinement of EHR-based tools for supporting insurance application processes in primary care settings.[18]

Sample

We purposively selected two intervention and two comparison CHCs from the pool of clinics participating in the mixed methods study (N = 8). These clinics are members of the OCHIN Inc., practice-based research network, and share a common EHR.[20,21] We observed clinic operations and conducted one-on-one, semi-structured interviews with five to seven people at each clinic (N = 26). Participants, including clinic administrators, clinicians, and staff were selected because of first-hand knowledge or experience with how their CHC provides health insurance application support to patients.

Data collection

Between July 2013 and September 2013, a small multidisciplinary team of researchers spent two to three days at each clinic systematically observing clinic operations to understanding the insurance assistance process.[22] Field researchers recorded detailed observations about the workflows, documentation and tracking methods and other resources (e.g. registries, patient lists, excel spreadsheets, paper filing and reminder systems) currently used by CHC staff to support patients with public health insurance applications. In interviews with clinic personnel, we asked questions to clarify the insurance assistance process and solicited recommendations on how the EHR could be customized to improve current tasks and workflows to better manage patient gaps in insurance coverage.

Data management

Interviews were audio-recorded, professionally transcribed, and reviewed for accuracy. Within 24–48 hours after an observation visit, field researchers used their notes to write detailed fieldnotes. Fieldnotes and interviews were de-identified and entered into Atlas.ti (Version 7.0, Atlas.ti Scientific Software Development GmbH, Berlin, Germany) for analysis.

Analysis

Our multi-disciplinary team, which included experts in communication, primary care, and public health, used a grounded theory approach to analyze the data.[23] We began by immersing ourselves in the data to understand what was observed in the clinic and to make sense of factors such as activities, tasks, and information needed for CHC staff to assist patients with insurance application and reapplication processes. In the first analysis phase, we analyzed interview and fieldnotes clinic-by-clinic. During this within-case analysis process (in which the clinic is the case), we discussed, interpreted and made sense of the data as a group. Often we debated about how to interpret data, and this rich discussion informed how we named and tagged segments of text to represent emerging themes. Emergent naming conventions were refined into a codebook. When our team was consistent in how we coded text, we divided the remaining data, asking team members to analyze and code the data individually. We met regularly to review how we analyzed remaining data to ensure consistency and discuss findings. Then, we compared emerging themes across clinics to identify patterns in how CHCs used tools to support insurance application assistance processes and tasks, and common recommendations for

Table 1 Clinic characteristics

	Number of Active Patients	% of OHP[a] Patients	Enrollment Assistants Per Clinic	Paper Tracking	Spreadsheet Tracking	EHR Reminder Messages
Clinic 1	11,411	48.7%	4		X	X
Clinic 2	10,052	70.7%	4		X	
Clinic 3	7,333	59.2%	1	X		
Clinic 4	8,393	50.5%	2	X		

[a]OHP = Oregon Health Plan public insurance

how the EHR could be customized to improve current tasks and workflows to better manage patient gaps in insurance coverage.

Health IT tool development

We diagramed the insurance application assistance workflows using Microsoft Visio7 (see Appendix A) and shared them with a team of developers who built the health IT tools described below. Developers engaged in a modified user-centered design process to refine the tools, as described elsewhere.[18] The Institutional Review Board at Oregon Health & Science University approved this study.

RESULTS

Study clinics differed in size and percent of visits covered by public health insurance (see Table 1). These clinics had specific staff called "enrollment assistants" to help eligible patients apply and reapply for public health insurance. Despite some differences in their approaches and tracking methods, enrollment assistants at the four study clinics engaged in similar processes and tasks to help patients.

Figure 1 shows the predominant workflow observed across the clinics for assisting patients with public health insurance. We identified four steps in this process: 1) identifying patient for public health insurance application assistance; 2) completing and submitting the public health insurance application; 3) tracking public health insurance approval and 4) assisting with public health insurance reapplication. Below, we describe the CHCs' documentation and data tracking needs in each of these steps and the health IT tools we developed to support clinic staff in accomplishing each task.

## Identifying patients for public health insurance application assistance

Clinics identified uninsured patients in need of application assistance when scheduling an appointment or during check-in. Patients without insurance were immediately referred to an enrollment assistant, and an application assistance appointment was typically scheduled the same day as the patient's clinical appointment. All four clinics utilized an 'insurance scrub' process in which front desk staff confirmed scheduled patients' insurance coverage by using the Oregon Medicaid Management Information System (MMIS) – a database which indicates Medicaid or Children's Health Insurance Program (CHIP) coverage for the day of service. The MMIS reveals a patient's insurance status on the date of service; it does not specify insurance benefit expiration or reapplication information. Thus, utilizing MMIS data, only patients without insurance were referred to enrollment assistants.

Clinic staff did not have a reliable way to identify patients needing to reapply for benefits before their coverage ended, as described by one enrollment assistant: 'With [Medicaid] you don't know when their insurance is going to expire. I mean, they can come in one day and then the next day they don't have it. So ... There's really no way of telling' [Clinic 3]. As shown by the example below, CHC staff at all four sites reported that an insurance end date – available via the EHR – was an important and desirable feature for preventing insurance coverage gaps:

It would be nice if [the tool] had that feature that would say something to the effect that insurance will be terminating, or reapplication of insurance needs to happen at this date so we could inform the patient they might want to stop by and pick up an application [Clinic 3, Front Desk Staff].
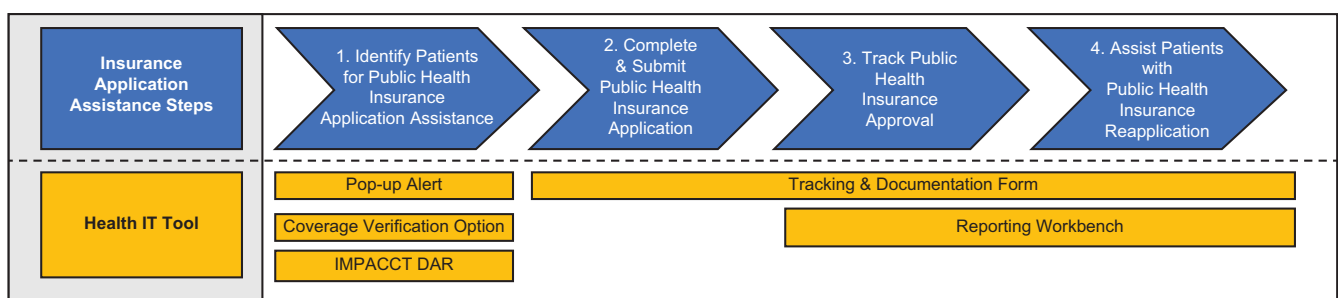
Figure 1 The insurance application assistance process
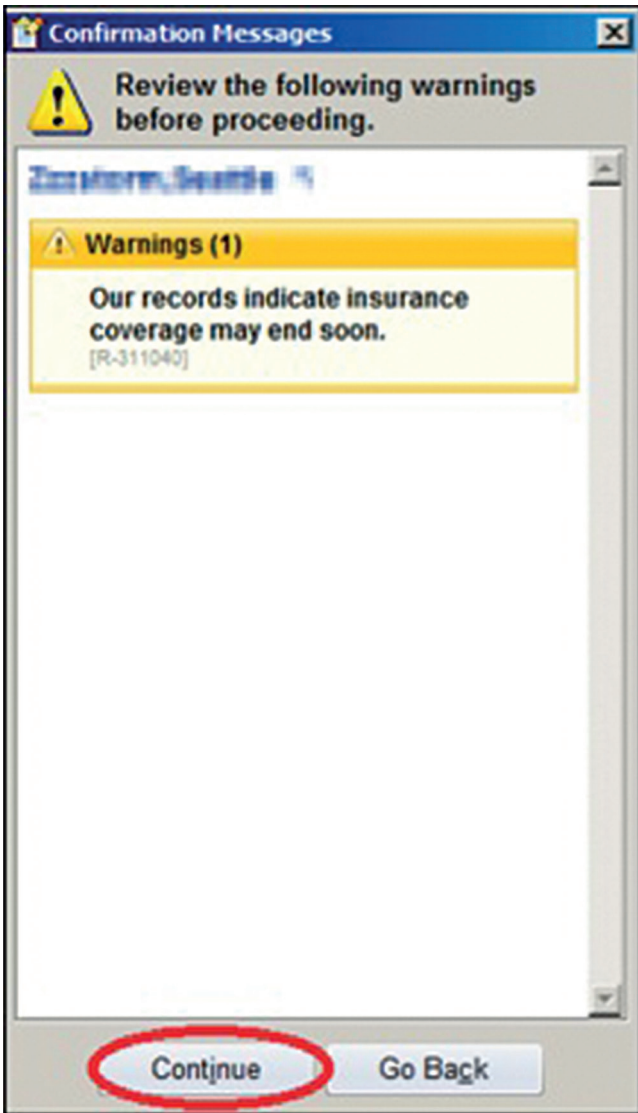
*Selected comorbidities: diabetes, hypertension, COPD, depression, dementia

Figure 2 Pop-up alert: a warning alert that appears when scheduling an appointment or checking in a patient whose insurance may soon expire

To address this need, a new pop-up alert (Figure 2) was included in the set of EHR tools and was designed to appear before a patient's insurance was due to expire. It was viewable by staff working in the registration page of the EHR, and could be seen when scheduling an appointment and at check-in without logging into MMIS. Other tools (Figures 3 and 4) with similar functionality were also developed and purposefully located in the registration section of the EHR so that schedulers and front desk staff could see the information and refer patients to enrollment assistants for an insurance assistance appointment. Our team worked closely with the State of Oregon to obtain a monthly data file to populate the tools with an end date.

Completing and submitting the public health insurance application

At insurance assistance appointments, enrollment assistants helped patients complete insurance applications. Then the enrollment assistants submitted applications to the state on behalf of the patient. To assist patients with public health insurance enrollment and to complete, submit and track the application (Steps 2 and 3; see Figure 1), enrollment assistants needed a place in the EHR to document patient information and actions taken during insurance assistance appointments (e.g. application submission date). Although the state had 45 days to process the application, this date was important because a patient's insurance coverage start date was always backdated to the benefit application date. Enrollment assistants also wanted a place to document the patient case number and the type of insurance for which the patient was applying (e.g. Medicaid, CHIP, Citizen Alien Waived Emergent Medical). The EHR did not have an appropriate discrete field to document this information; we observed and heard from enrollment assistants at some clinics that they developed spreadsheets for collecting patient application information or sent this information in messages to themselves through the EHR.

This type of documenting process was particularly important in clinics with more than one enrollment assistant, as patients did not always work with the same person. While Clinic 4 developed a tracking spreadsheet stored on a shared drive and accessible to all enrollment assistants, the other clinics did not have a comparable process.
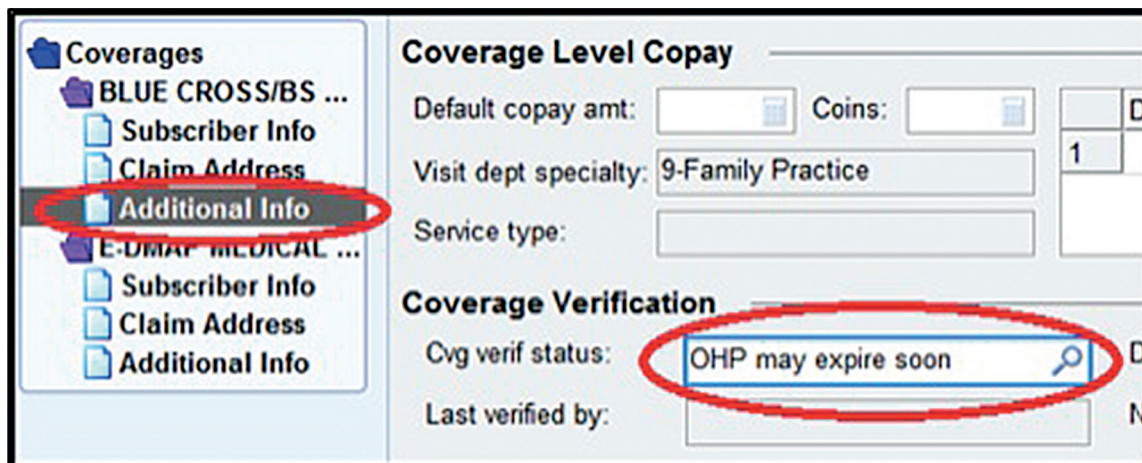
Figure 3 Coverage verification option: a dropdown menu option under "Coverage Verification" that indicates insurance coverage may soon expire

Time	Patient	Prov/Res	Appt Notes	Insurance Specialist Appt Date	Medicaid Redetermination Date
11:20	Test, Patient 1	James Gordon, MD	Separation parents, Mom only	11/29/2014	12/31/2014
11:40	Test, Patient 2	Ana Garcia, NP	Headaches/back pain	11/29/2014	12/31/2014
12:00	Test, Patient 3	Jill Hunter, MD	FU counseling=aa		03/31/2015

Figure 4 IMPACCT department appointments report: an additional column added to the department appointments report indicating that insurance coverage may soon expire

This is the second appointment they have had with an enrollment assistant. It sounds like Enrollment Assistant A asked the family to come back with proof of income. Enrollment Assistant B now asks the mom if she brought the income information. I notice that she is not reviewing any notes from the last appointment. I later learn that there are not any notes to review. The enrollment assistants send staff messages to themselves to document what they have done and Enrollment Assistant B does not have access to Enrollment Assistant A's notes. At the end of the appointment, it is determined that the mom needs to provide more income information about the hus-band's business. The new appointment is scheduled for two days from now. It is with Enrollment Assistant C that is working on Thursday [Clinic 1, Fieldnotes].

To address this need, we developed the tracking and doc-umentation form for insurance applications (see Figure 5).

The form was designed for enrollment assistants to record necessary insurance application data, including fields to capture the status of the application (submitted, pending, approved, and denied), application filing date, the insurance type, the enrollment assistant who opened the form, and a free text field for entering notes about missing information and/or action steps for the next appointment. These fields were chosen based on the spreadsheets some clinics used prior to tool development.

Tracking public health insurance approval

Enrollment assistants at all four clinics monitored the sta-tus of insurance applications to answer state caseworker questions and to ensure timely processing. Some enroll-ment assistants sent themselves reminder messages timed to coincide with the state's 45-day deadline. Others used a paper tracking system as a reminder to confirm a patient's approval status:

Figure 5 Tracking and documentation form for insurance applications: a form for collecting needed data to provide insurance enrollment assistance

Figure 6 Reporting workbench, follow up report, resulting table: reporting function designed to identify patients who have a tracking and documentation form in epic and need a follow-up

I ask the enrollment assistant if she tracks insurance applications. She says she does. She looks them up in the MMIS system about 30 days after they apply. She uses a folder with paper applications. She opens one of many file cabinets to show me the folder of patient applications that say "verified" and another that says "unverified" that she will look up later this month. If it's been more than a month and they're still not approved she will call the state [Clinic 2, Fieldnotes].

These enrollment assistants kept folders with copies of the applications, reviewing these monthly as a reminder to check patients' application status.

Once an application was approved or denied, enrollment assistants with access to the EHR (enrollment assistants at clinic 3 did not have access) entered the updated insurance information into the EHR and notified the patient about the decision. Additionally, Clinics 1 and 4 notified the billing department, which also alerted the clinic to bill for services the patient received during the 45-day application processing period.

To address the need for a reminder to check the status of an application, the tracking and documentation form (Figure 5) was designed to include a field for entering a follow-up date 30–45 days after the application submission date. An additional tool, the reporting workbench (Figure 6), was created so that enrollment assistants could access a daily report, listing patients who needed application status verification, and then update the application status field in patients' tracking and documentation form to indicate application approval or denial and enter the patient's insurance membership number or other relevant information into the insurance ID field. In the EHR, this information could be shared with others in the clinic and with patients.

Assisting with public health insurance reapplication

In the state of Oregon, public health insurance is active for 6–12 months from the time of approval and then reapplication is required. Patients, not clinics, receive notification by the US mail to prompt reapplication prior to expiration. After implementing the health IT tools to assist patients with health insurance applications, we heard from CHC staff that benefit

end-date data were not consistent with the information provided by the patient or in MMIS. This may have been due to our project not receiving 'real time' updates from the state (information was transferred monthly) or that data do not reflect all of the special circumstances that change renewal dates. It was very important to CHC staff to have an end-date to trigger an alert when a patient was nearing reapplication time. The best we could do was design the tracking and documentation form and the reporting workbench to allow enrollment assistants to set the follow-up date to align with an anticipated expiration date, and enrollment assistants could run a daily report listing those patients whose insurance they anticipated would soon expire.

DISCUSSION

Health insurance coverage is associated with improved outcomes and access to care for patients,[2,5,6,9,24,25] yet maintaining health insurance can be challenging for families, even when patients are eligible for public health insurance programs.[26–30] CHCs can help keep patients insured by tracking and managing patient health insurance enrollment and reenrollment information. Clinic processes for helping patients with insurance and the tools needed to conduct those tasks has not been studied. We studied these processes, and used the findings to develop a suite of innovative health IT tools to help clinic staff identify patients in need of insurance assistance, complete and submit the application, track application approval, and later identify patients who need to reapply. These tools were based on CHCs' existing workflows and were designed to help staff accomplish their tasks more efficiently. While ensuring a consistent end date continues to be a work in progress, these health IT tool features functioned with an estimated reapplication date; staff identified having an accurate end date as essential for supporting health insurance retention.

There are limitations to this study. This cross-sectional design does not account for ongoing changes in the state application process and requirements that may impact how CHCs assist patients with health insurance. The sample included a small group of CHC clinics, using the same EHR, from a single state. This unique study fills an important gap in the literature by addressing the important role CHCs play in helping underserved patients retain health insurance and

how health IT can be implemented to better support this work; however, more research is needed to examine how variations in health insurance application processes from different states might influence CHC workflows, tasks and tool needs. Health IT tools, such as the ones we developed, require further evaluation to determine factors influencing their use and their impact on patient health insurance coverage.

CONCLUSION

Helping patients maintain consistent insurance coverage is beneficial to both patients and clinics: patients have better access to care, and CHCs are able to sustain vital services for communities. To minimize insurance gaps, the EHR can automate processes to support clinics in providing health insurance enrollment and re-enrollment assistance. Clinics need comprehensive, timely and accurate health insurance information for EHR-based insurance-focused health IT tools to work most effectively.

REFERENCES

1. Schoen C and DesRoches C. Uninsured and unstably insured: The importance of continuous insurance coverage. *Health Services Research* 2000;5(1 Pt 2):187–206.

2. Hoffman C, Schoen C, Rowland D and Davis K. Gaps in health coverage among working-age Americans and the consequences. *Journal of Health Care for the Poor and Underserved* 2001;12(3): 272–89. https://doi.org/10.1353/hpu.2010.0739. PMid:11475546.

3. Cassedy A, Fairbrother G and Newacheck PW. The impact of insurance instability on children's access, utilization, and satisfaction with health care. *Ambulatory Pediatrics* 2008;8(5):321–8. https://doi.org/10.1016/j.ambp.2008.04.007. PMid:18922506.

4. Cummings JR, Lavarreda SA, Rice T and Brown ER. The effects of varying periods of uninsurance on children's access to health care. *Pediatrics* 2009;123(3):e411–8. https://doi.org/10.1542/peds.2008-1874. PMid:19254977.

5. Abdus S. Part-year coverage and access to care for nonelderly adults. *Med Care* 2014;52(8):709–14. https://doi.org/10.1097/MLR.0000000000000167. PMid:25023915.

6. Olson LM, Tang SF and Newacheck PW. Children in the United States with discontinuous health insurance coverage. *New England Journal of Medicine* 2005;353(4):382–91. https://doi.org/10.1056/NEJMsa043878. PMid:16049210.

7. Hadley J. Insurance coverage, medical care use, and short-term health changes following an unintentional injury or the onset of a chronic condition. *JAMA* 2007;297(10):1073–1084. https://doi.org/10.1001/jama.297.10.1073. PMid:17356028.

8. DeVoe JE. Being uninsured is bad for your health: can medical homes play a role in treating the uninsurance ailment? *Annals of Family Medicine* 2013;11(5):473–6. https://doi.org/10.1370/afm.1541. PMid:24019280; PMCid:PMC3767717.

9. Hoffman C and Paradise J. Health insurance and access to health care in the United States. *Annals of the New York Academy of Science* 2008;1136(1):149–160. https://doi.org/10.1196/annals.1425.007. PMid:17954671.

10. Peterson TH, Peterson T, Armon C and Todd J. Insurance-associated disparities in hospitalization outcomes of Michigan children. *Journal of Pediatrics* 2011;158(2):313–8. https://doi.org/10.1016/j.jpeds.2010.08.002. PMid:20864119.

11. Oregon Health Insurance Marketplace. Renew your Oregon Health Plan or Healthy Kids. 2015. Available from http://www.oregonhealthcare.gov/renew-your-ohp.html

12. Bailey SR, Marino M, Hoopes MJ, Heintzman J, Gold R, Angier H et al. Healthcare utilization after a children's health insurance program expansion in Oregon. *Maternal and Child Health Journal* 2016;20(5):946–54. https://doi.org/10.1007/s10995-016-1971-7 PMid:26987861.

13. Lave JR, Keane CR, Lin CJ, Rice EM, Amerbach G and LaVallee CP. Impact of a children's health insurance program on newly enrolled children. *JAMA* 1998;279(22):1820–1825. https://doi.org/10.1001/jama.279.22.1820. PMid:9628715.

14. Heintzman J, Marino M, Hoopes MJ, Bailey SR, Gold R, Crawford C et al. Using electronic health record data to evaluate preventive service utilization among uninsured safety net patients. *Preventive Medicine* 2014;67:306–10. https://doi.org/10.1016/j.ypmed.2014.08.006. PMid:25124279; PMCid:PMC4363138.

15. Marino M, Bailey SR, Gold R, O'Malley JP, Huguet N, Hoopes MJ et al. Receipt of preventive services after Oregon's randomized Medicaid experiment. *American Journal of Preventive Medicine* 2016;50(2):161–70. https://doi.org/10.1016/j.amepre.2015.07.032. PMid:26497264; PMCid:PMC4718854

16. Gold R, DeVoe JE, McIntire PJ, Puro JE, Chauvie SL and Shah AR. Receipt of diabetes preventive care among safety net patients associated with differing levels of insurance coverage. *Journal of the American Board of Family Medicine* 2012;25(1):42–9. https://doi.org/10.3122/jabfm.2012.01.110142. PMid:22218623; PMCid:PMC3305239.

17. DeVoe JE, Angier H, Burdick T and Gold R. Health information technology – an untapped resource to help keep patients insured. *Annals of Family Medicine* 2014;12(6):568–72. https://doi.org/10.1370/afm.1721. PMid:25384821; PMCid:PMC4226780.

18. DeVoe JE, Angier H, Likumahuwa S, Hall JD, Nelson CA, Dickerson K et al. Use of qualitative methods and

user-centered design to develop customized health information technology tools within federally qualified health centers to keep children insured. *Journal of Ambulatory Care Management* 2014;37(2):148–54. https://doi.org/10.1097/JAC.0000000000000016. PMid:24594562.

19. Karsh BT. Clinical Practice Improvement and Redesign: How Change in Workflow Can be Supported by Clinical Decision Support. Rockville, MD:AHRQ Publications, 2009.

20. Devoe JE, Gold R, Spofford M, Chauvie S, Muench J, Turner A et al. Developing a network of community health centers with a common electronic health record: description of the Safety Net West Practice-based Research Network (SNW-PBRN). *Journal of the American Board of Family Medicine* 2011;24(5):597–604.

21. DeVoe JE, Likumahuwa S, Eiff MP, Nelson CA, Carrol JE, Hill CN et al. Lessons learned and challenges ahead: report from the OCHIN Safety Net West practice-based research network (PBRN). *Journal of the American Board of Family Medicine* 2012;25(5):560–4. https://doi.org/10.3122/jabfm.2012.05.120141. PMid:22956690; PMCid:PMC3582650.

22. Crabtree BF and Miller WL, Ed. *Doing Qualitative Research*, 2nd edition. Thousand Oaks, CA: Sage Publications, 1999, pp.40–70.

23. Glaser, BG. Conceptualization: On theory and theorizing using grounded theory. *International Journal of Qualitative Methods* 2002;1(2):23–38. https://doi.org/10.1177/160940690200100203.

24. DeVoe JE, Ray M, Krois L and Carlson MJ. Uncertain health insurance coverage and unmet children's health care needs. *Family Medicine* 2010;42(2):121–32. PMid:20135570; PMCid:PMC4918751

25. Kempe A, Beaty BL, Crane LA, Stokstad J, Barrow J, Belman S et al. Changes in access, utilization, and quality of care after enrollment into a state child health insurance plan. *Pediatrics* 2005;115(2):364–71. https://doi.org/10.1542/peds.2004-0475. PMid:15687446.

26. Trenholm C, Harrington M and Dye C. Enrollment and disenrollment experiences of families covered by CHIP. *Academic Pediatrics* 2015;15(3 Suppl):S44–9. https://doi.org/10.1016/j.acap.2015.02.013. PMid:25906960.

27. Kenney GM, Haley JM, Anderson N and Lynch V. Children eligible for Medicaid or CHIP: who remains uninsured, and why? *Academic Pediatrics* 2015;15(3 Suppl):S36–43. https://doi.org/10.1016/j.acap.2015.01.009. PMid:25906959.

28. Sommers BD. Why millions of children eligible for Medicaid and SCHIP are uninsured: poor retention versus poor take-up. *Health Affairs* 2007;26(5):w560–7. https://doi.org/10.1377/hlthaff.26.5.w560. PMid:17656394.

29. Hearst AA, Ramirez JM and Gany FM. Barriers and facilitators to public health insurance enrollment in newly arrived immigrant adolescents and young adults in New York State. *Journal of Immigrant and Minority Health* 2010;12(4):580–5. https://doi.org/10.1007/s10903-009-9308-x. PMid:19967450.

30. Sommers BD. From Medicaid to uninsured: drop-out among children in public insurance programs. *Health Services Research* 2005;40(1):59–78. https://doi.org/10.1111/j.1475-6773.2005.00342.x. PMid:15663702; PMCid:PMC1361126.

Appendix A: Diagram of insurance application assistance workflows