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Family practice providers' perspectives on clinical practice guidelines and recommendations for Hepatitis C screening of baby boomers

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Abstract

Background: Clinical Practice guidelines (CPGs) are developed to guide clinical decisions. CPG adoption varies by provider and practice setting. In 2012 and 2013 U.S. preventive care organizations expanded hepatitis C virus (HCV) screening CPGs to include screening of those born between 1945 and 1965. This qualitative study examined the adoption of CPGs generally and of the HCV screening CPG among a group of family practice providers.

Methods: Individual, semi-structured interviews with 31 family practice providers (12 medical residents, 18 attending physicians, and 1 advanced practice nurse) at community-based family medicine practices were completed in 2016. Questions considered knowledge and beliefs about CPGs (in general and the expanded HCV guidelines in particular) and self-assessed HCV screening rates. Three researchers independently, then collectively, reviewed interview transcripts to identify common and emergent themes.

Results: All subjects viewed CPGs as useful tools and reported prioritization of CPGs and delivery of preventive services. Prioritization was influenced by awareness, knowledge, CPG source, agreement among professional organizations, time constraints, perceived importance of the health condition, and difficulty of implementation. Generally, awareness of CPGs occurs informally through conversation or independent reading, though some formal or systematic means are used. Smart tools which prompt action at point of care were used by a few subjects and were deemed likely to improve practice. Awareness of the expanded HCV screening guideline varied by position although knowledge of guideline details was limited. Most subjects considered their patients to be of low-risk for HCV infection and estimates of HCV screening rates were low (2-25%).

Conclusion: Preventive practice guidelines are well accepted, but implementation varies. Knowledge of and attitudes about age-based HCV screening guidelines is low and lack of reminders at point-of-care limit screening initiation. Improved education and systems-based approaches to improve screening practices are essential to reap benefits of expanded guidelines.

Introduction

Clinical practice guidelines (CPGs) assist providers by synthesizing and evaluating information to support clinical decisions [1]. Multiple organizations and agencies promulgate CPGs. In 2018, the United States Preventive Services Task Force (USPSTF) alone maintains 82 recommendations for primary care providers (PCPs), mostly concerning primary and secondary prevention services [2]. The promise of CPGs to support decisions is evident by their inclusion in the Patient Protection and Affordable Care Act (ACA) which includes a provision that requires most health care insurers to cover, at no cost to patients, preventive services graded "A" or "B" by the USPSTF [3].

However, despite the availability of CPGs, many adults do not receive the recommended preventive care [4-8]. CPG adoption is influenced by knowledge of the guidelines; their format, source, and development; the health condition under consideration; and characteristics of the clinician and practice [9-12]. The adoption of revised CPGs is influenced by the perceived relative advantage of the new guidelines over older guidelines [11].

In 2012 and 2013, respectively, the Centers for Disease Control and Prevention (CDC) and the USPSTF revised their CPGs for screening for Hepatitis C Virus (HCV) infection [13-14]. An estimated 2.5 million–4.7 million people in the U.S. are chronically infected with HCV which, if untreated, may lead to advanced liver disease and hepatocellular carcinoma [15-16]. Nearly 75% of the U.S. HCV cases occur among baby boomers (those born from 1945 to 1965), and almost half of the infected members of this cohort are unaware of their infection [15-16]. Current treatment modalities eliminate HCV infection in more than 90% of patients, significantly reducing HCV-associated morbidity and mortality [17]. Recognizing the benefits of improved treatments for HCV, the prevalence of infection, and the large undiagnosed population, CDC and USPSTF added one-time, age-based screening for those born from 1945 to 1965 to their existing

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risk-based guidelines [15-16]. The USPSTF assigned a "B" grade to its recommendation, indicating its net benefit is moderate or substantial [14].

However, only an estimated 13.8% of baby boomers reported being screened for HCV in 2015 and previous studies have found that 20% of PCPs fail to identify baby boomers as an HCV risk group and that physicians are confused about the screening recommendations [18,19]. More evidence about the impact of the expanded guidelines is emerging, but is still limited. This article presents a qualitative examination of family practice providers' perceptions of and experiences with CPGs in general, and the USPSTF age-based HCV screening recommendation. The study was conducted to provide feedback to specific PCPs and to inform the development of a national-level examination of HCV screening practices.

Methods

Study design and participants

In 2016, we completed semi-structured interviews with physicians caring for adult patients in two family practice resident training programs (one urban and one suburban) in the Philadelphia area. The programs were selected because they had large patient populations (> 80,000 and > 17,000 annual visits), both new and established providers, a heterogeneous patient mix (in terms of race, ethnicity, age, income, and risk profile), and an interest in learning from the study outcomes. The 31 participants (13 urban, 18 suburban) varied in terms of age (25–70+ years), position (12 residents, 18 attending physicians, and one advanced practice nurse), and years of practice (under one to over 40). The study protocol was approved by University of the Sciences' Institutional Review Board.

Data collection and analysis

In developing the interview guide, we considered literature on CPG adoption (perceived value, decision to adopt, and tools or systems used to stay up to date) and hepatitis C screening (knowledge of the USPSTF screening recommendation, perception of the need for HCV screening in their practices, experiences with and barriers to screening, and self-reported HCV screening rates) [9-12,18-22]. The questions were reviewed by three family practice physicians and adjusted based on feedback. Trained interviewers asked for clarification when needed and requested elaboration when new themes were expressed. Audio recordings were transcribed and were then reviewed by three researchers—first independently, and then jointly—to identify common and salient themes, examine the terminology used, and select extracts that demonstrated the respondents' sentiments.

Results

Preventive care CPGs were viewed as helpful tools and valuable aids when organizing and prioritizing actions during patient encounters: "[…In] primary care where there are so many things to keep track of, [the CPGs] give some structure to well visits […] period". Generally the participants were aware of the USPSTF and knew that it develops and grades preventive care guidelines. However, fewer than half of the participants knew that grade assignment is based on the strength of published evidence, and most of the participants were unaware of the ACA provision for insurance coverage of highly graded preventive services.

Adoption of preventive care CPGs

"Time" was the most frequent and salient response regarding adoption issues: "There is a study that in order to do a routine panel you would have to spend 23 hours a day just doing preventative [services]." All of the participants prioritized service delivery in the face of real and perceived time burdens. Prioritization was influenced by the source of the CPG, consensus or conflict among different sources, perceived risks and benefits, and practice norms.

Certain CPG sources were more "trusted" or preferred. The American Academy of Family Physicians (AAFP) was trusted in part because it was thought to consider the "realities of primary care" and family medicine. The USPSTF was trusted because "they follow the evidence" in making recommendations. The CDC was considered a "good go-to source" for recommendations regarding immunizations, emerging diseases, and outbreaks. CPGs promulgated by subspecialty organizations were often viewed with skepticism; some participants noted that recommendations from such organizations are often "aggressive," "don't consider patient or primary care realities," and "perhaps are designed with the need to keep patients flowing" to specialist offices.

When the content of CPGs differs among sources, the study participants reported following the sources they trusted most, notably the USPSTF or the AAFP. They also reported that they "err on the side of caution," being "more conservative from the standpoint of earlier and more proactive screening." One participant stated that he leaves "the experts to fight it out and then wait[s] for that to distill because they will usually come to some type of consensus and advice for the practicing physician." Another participant said that decisions become individualized and "the risks and benefits should be discussed with the patient."

Prioritization of CPG-based action was also influenced by the attributes of the relevant tests, immediate versus delayed action, input from colleagues, and the perceived impact. The participants found that "some recommendations are either too expensive or unrealistic." However, occasionally, the participants reported using the presence of guidelines to convince patients to follow through with ordered tests. A preference for immediate and simple action was demonstrated through comments such as the following: "If I have a choice between an immunization or a screening test where I can have it performed immediately versus, say, imaging or screening recommendations that are more challenging to implement, I'd focus on the easiest first." The influence of perceived impact was expressed through comments such as the following: "I think that I try to choose those issues that have the clearest likelihood of having an impact, so if I have a choice of colorectal cancer screening or having more decision making about prostate cancer screening, I would pick colorectal screening every time." Participants reported being more likely to perform or order a test if the "screening test is pretty reliable and the most sensitive and specific."

Prioritization of CPG-based action was perhaps most influenced by the real and perceived importance of the health issue under consideration. "I start with the 'biggies': mammograms, colon cancer. Then, if time, [I] move to others." Perceptions of "biggies" was based on clinical experiences, patient concerns, and institutional and insurance-based priorities.

Support for implementing CPGs

Participants discussed the use of and the need for smart tools, such as applications and electronic medical record systems (EMRs), and the benefits of reports and reminders generated and distributed by health systems and insurance companies: "Sometimes there are reminders in the EMR […] and a lot of times the insurance companies will send

us care gap reports to indicate that some of our patients may need screening [...]." Some were dissatisfied with their EMR systems, which they described as "cumbersome" and lacking the desired prompts. A few senior physicians referred to "reminder fatigue" caused by receiving too many prompts. Several residents reported using mobile applications at the point of care to identify which preventive services should be delivered. When we asked others if an application would help, some were positive: "I would probably check it […] An app is great because you are walking around with it and can hold it." The advanced practice nurse participating in this study developed a "low-tech app," which was a "cheat sheet" to help her to recall which preventive services should be considered given a patient's gender, age, and health status.

Discovery of new or changed CPGs

Few participants reported systematic methods for keeping up-to-date on preventive care guidelines. Most reported learning of guidelines through AAFP publications, journal club, lectures, and interprofessional interactions. Generally, residents relied on attending physicians or faculty to inform them: "I think that being in a learning environment, I am more privy to know about guideline changes from other residents or attending [physicians]." These participants were able to provide examples of how their institutions facilitated learning about CPGs: "I would say it's more my peers and like colleagues […], I guess just chatting with each other in the back room. Overhearing things. Sending out group emails. Once in a while a grand rounds presentation on something new." Some mentioned the desire for an application that "could send out an alert saying, 'new recommendations.'"

Views on the USPSTF HCV screening CPG

The research team was interested in awareness, adoption, and implementation concerning the expanded USPSTF guidelines for HCV screening among baby boomers. Most of the participants reported attending a lecture or training session that included HCV, and most knew the older, risk-based HCV screening recommendations. Some reported attending a lecture or training session that included HCV. Only 10 participants were aware of the age-based screening recommendation, and, among these participants, knowledge of the details of the guidelines was limited.

Generally, the participants agreed that patients would benefit from early HCV detection and treatment, but the perceived value of HCV screening in their practice varied by practice location, patient risk profile, and experience with HCV infections. Many senior physicians valued HCV screening less, compared with other "B" grade preventive services. However, the senior physicians who provided care in shelters or syringe exchange programs and those who served higher-risk populations assigned a higher value to HCV screening. One provider noted that, although baby boomers might be at "a little bit of higher risk, I've yet to uncover one individual that's been diagnosed in my [own] practice with asymptomatic Hep C, [but] I know that, in general, in our urban practice, there is a good amount of IV drug use and unprotected sex." Some participants questioned the need for HCV screening because they regularly check patients' liver function tests.

Barriers to HCV Screening

The participants mentioned time, the number of preventive services recommended for this age group, and the prevalence of other chronic diseases as barriers to the HCV screening of baby boomers: "This is a group of patients that are starting to have medical problems, such as high blood pressure, diabetes […] so it becomes a time and priority issue"; "I can't get to them all in one visit." When asked what influenced the prioritization of other services over HCV screening, the participants responded in terms of practice quality indicators and expected services: "It is hard to get even any preventive screening at all, depending on the patient and how many medical conditions they have […] so I tend to focus on big cancer screenings, like the colonoscopy, mammograms, and pap smears." HCV screening, reportedly, was unlikely to make the list of "biggies."

Forgetfulness, unfamiliarity with the recommendation, and patient push-back were also mentioned: "It is something that I should be doing, but when I am in the room with them it is not something that is a reflex for me yet." Occasional patient push-back was thought to result from the stigma associated with "an infection resulting from sexual promiscuity and drug use." One attending physician noted that the USPSTF recommendation makes justifying HCV screening easier, because patients perceive less judgement from the physician when age is the reason provided for an HCV test:

I mean some people are surprised—why would you check for Hep C, but as soon as you say this is the guideline, it kind of takes away any stigma and that everybody born in this time-period is screened. So, whether they are a CEO or again someone who I know is an active injection drug user or has in the past injection drug use. It really doesn't matter. It is very easy.

One participant mentioned that when the testing is approached as "routine rather than special […] just added to the lab slip," it is less likely to result in patient push-back.

HCV screening rates for baby boomer patients

During this study, the practices' EMRs were not programmed to generate HCV screening data. This, and factors such as difficulty linking an action for a specific patient to a specific provider when multiple providers may be seen, as well as tests conducted by other practices or prior to the EMR establishment, made it impossible to determine HCV screening rates. Therefore, the participants were asked to estimate the percentage of their baby boomer patients who were screened for HCV infection. Responses ranged from 2% to 60%, with the highest rates reported by a few participants caring for high-risk patients. Most participants stated they did not screen baby boomers unless other risk factors were present.

Discussion and Conclusions

For preventive care CPGs to impact practice and patient outcomes, providers must be aware of them, know about their content, believe in their value, and be confident and comfortable implementing them [23]. The family practice providers in this study appreciated and used CPGs during patient care encounters. However, these providers also questioned the motives of some CPG sources, and our results indicate that clinical action may be delayed until a trusted source publishes its own CPG on a given issue. The USPSTF was recognized and trusted as an independent advisory body, but few of our providers knew of the USPSTF's grading system or its role in the ACA. It may be possible to leverage providers' trust in the USPSTF to increase the adoption of and adherence to key, highly graded preventive care services by better disseminating information on the no-cost provisions in the ACA.

Few participants engaged in systematic efforts to stay up-to-date on CPGs, but most were interested in doing so and expressed a desire to make this effort more automatic. Enhanced, targeted efforts by the AAFP, healthcare systems, or insurers to promote highly graded CPGs may prove beneficial in improving the adoption and delivery of preventive care services. These same entities could influence preventive care action by increasing reporting and feedback on a

comprehensive list of highly rated preventive services—not just "the biggies." The "biggie" preventive services mentioned by participants—mammograms, colorectal cancer screening, and immunizations—are those for which quality metrics have been developed and evaluation systems are in place; they are the services that providers generally adopt [4,24]. The time needed to add an HCV screening during a baby boomer's office visit is minimal, requiring little more than checking an additional box on a lab order sheet and little more discussion than what is necessary for other guideline-based testing such as lipid profiles. If the HCV screening test is positive, more discussion is required, but this will be necessary for only a small portion of patients.

Despite recommendations by the CDC, USPSTF, and AAFP [13,14,24,25]—the three advisory organizations trusted by our subjects—little perceived value in age-based HCV screening was noted, and HCV screening tended to be carried out only for patients with risk factors covered in the older screening guidelines. Consistent with previous studies of HCV screening in primary care and physicians' perceptions of HCV risk [19-22,26] our participants generally assumed that their patient populations were at low risk for HCV infection, and their self-reported screening rates were low (except for the few participants practicing in high-risk settings). Our findings indicate that the promise that age-based recommendations would change practice has not been fulfilled and moving HCV screening into the "biggie" category clearly requires more than a high grade from the USPSTF and consensus among advisory bodies. Although studies incorporating computer-based reminders have resulted in only slight increases in HCV screening rates, [27,28] our participants believed that they would be more likely to perform a preventive action if they were reminded to do so at the point of care.

Our study was limited in terms of size and location, including 31 providers located in one metropolitan region. However, this is typical for qualitative studies aiming to collect meaningful knowledge from participants in their practice environments and to identify salient issues to inform broader inquiry. Our use of family practice training programs allowed us to concentrate on primary care and on providers at all stages of practice, but the results may not represent other types of PCPs or those working in non-training programs. As with all qualitative studies, interviewer and coding biases may have influenced the results. We attempted to minimize this through pilot testing, the use of a semi-structured interview guide, interviewer training, and the use of multiple independent coders.

Despite the perceived value of CPGs and their increased role in medical practice, family practice providers are selective in their adoption and implementation of CPGs. National and international goals to eliminate HCV will be reached only when PCPs identify those already infected and initiate the treatment cascade. Most family practice providers in this study did not view membership in an age cohort as a risk factor for HCV and did not value the need for screening among baby boomers. The implementation of programs and systems that recognize the realities of family practice, account for the terminology used, and provide feedback may improve the adoption and implementation of HCV-related CPGs.

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References

1. Cecamore C, Savino A, Salvatore R, Alessandro Cafarotti A, Pellicci P, et al. (2011) Clinical practice guidelines: what they are, why we need them and how they should be developed through rigorous evaluation. *Eur J Pediatr* 170: 831-836.
2. (USPSTF) (2018) United States Preventive Health Services Task Force Published Recommendations.
3. Patient Protection and Affordable Care Act, 855, §18001 et seq. 2010.
4. Borsky A, Zhan C, Miller T, Ngo-Metzger Q, Bierman AS, et al. (2018) Few Americans Receive All High-Priority, Appropriate Clinical Preventive Services. *Health Aff (Millwood)* 37: 925-928. [Crossref]
5. Asch SM, Kerr EA, Keesey J, Adams JL, Setodji CM, et al. (2006) Who is at greatest risk for receiving poor-quality health care? *N Engl J Med* 354: 1147-1156. [Crossref]
6. Foy R, MacLennan G, Grimshaw J, Penney G, Campbell M, et al. (2002) Attributes of clinical recommendations that influence change in practice following audit and feedback. *J Clin Epidemiol* 55: 717-722.
7. McGlynn EA, Asch SM, Adams J, Keesey J, Hicks J, et al. (2003) The quality of health care delivered to adults in the United States. *N Engl J Med* 348: 2635-2645. [Crossref]
8. McMorrow S, Kenney GM, Goin D (2014) Determinants of receipt of recommended preventive services: implications for the Affordable Care Act. *Am J Public Health* 104: 2392-2399.
9. Schuster MA, McGlynn EA, Brook RH (1998) How good is the quality of health care in the United States? *Milbank Q* 76: 517-563, 509. [Crossref]
10. Grol R (2001) Successes and failures in the implementation of evidence-based guidelines for clinical practice. *Med Care* 39: II46-54. [Crossref]
11. Davis DA, Taylor-Vaisey A (1997) Translating guidelines into practice. A systematic review of theoretic concepts, practical experience and research evidence in the adoption of clinical practice guidelines. *CMAJ* 157: 408-416.
12. Swennen MH, van der Heijden GJ, Boeije HR, Rheenan N, Verheul F, et al. (2013) Doctors' perceptions and use of evidence-based medicine: a systematic review and thematic synthesis of qualitative studies. *Acad Med* 88: 1384-1396.
13. Smith BD, Morgan RL, Beckett GA, Falck-Ytter Y, Holtzman D, et al. (2012) Recommendations for the identification of chronic hepatitis C virus infection among persons born during 1945-1965. *Ann Intern Med* 157: 817-22.
14. Moyer VA (2013) Screening for hepatitis c infection in adults: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med* 159: 349-357.
15. Edlin BR, Eckhardt BJ, Shu MA, Holmberg SD, et al. (2015) Toward a more accurate estimate of the prevalence of hepatitis C in the United States. *Hepatology* 62: 1353-1363.
16. Westbrook RH1, Dusheiko G2 (2014) Natural history of hepatitis C. *J Hepatol* 61: S58-S68. [Crossref]
17. (AASLD) (IDSA) (2018) American Association for the Study of Liver Diseases and the Infectious Diseases Society of America. Recommendations for testing, management, and treating hepatitis C. HCV testing and linkage to care.
18. Jemal A, Fedewa SA (2017) Recent Hepatitis C Virus Testing Patterns Among Baby Boomers. *Am J Prev Med* 53: e31-31e33. [Crossref]
19. Thomson M, Konerman MA, Choxi H, Lok A (2016) Primary Care Physician Perspectives on Hepatitis C Management in the Era of Direct-Acting Antiviral Therapy. *Dig Dis Sci* 61: 3460-3468.
20. Southern WN, Drainoni ML, Smith BD, Koppelman E, McKee MD, et al. (2014) Physician nonadherence with a hepatitis C screening program. *Qual Manag Health Care* 23: 1-9. [Crossref]
21. Almario CV, Vega M, Trooskin SB, Navarro VJ (2012) Examining hepatitis C virus testing practices in primary care clinics. *J Viral Hepat* 19: e163-169. [Crossref]
22. Brady JE, Liffmann DK, Yartel A, Kil N, Federman AD, et al. (2017) Uptake of hepatitis C screening, characteristics of patients tested, and intervention costs in the BEST-C study. *Hepatology* 65: 44-53.
23. Keiffer MR (2015) Utilization of clinical practice guidelines: barriers and facilitators. *Nurs Clin North Am* 50: 327-345. [Crossref]
24. Maciosek MV, Coffield AB, Edwards NM, Flottemesch TJ, Goodman MJ, et al. (2006) Priorities among effective clinical preventive services: results of a systematic review and analysis. *Am J Prev Med* 31: 52-61.

25. AAFP (2017) Hepatitis. Clinical Preventive Service Recommendation, American Academy of Family Practice.

26. Ferrante JM, Winston DG, Chen PH, de la Torre AN (2008) Family physicians' knowledge and screening of chronic hepatitis and liver cancer. *Fam Med* 40: 345-351. [Crossref]

27. Litwin AH, Smith BD, Drainoni ML, McKee D, Gifford AL, et al. (2012) Primary care-based interventions are associated with increases in hepatitis C virus testing for patients at risk. *Dig Liver Dis* 44: 497-503. [Crossref]

28. Sidlow R, Msaouel P (2015) Improving Hepatitis C Virus Screening Rates in Primary Care: A Targeted Intervention Using the Electronic Health Record. *J Healthc Qual* 37: 319-323