

COVID-19's Impact on Community Resilience Practice: Lessons Learned from an Academic-Community-Government Partnership to Reduce HBV

Min Jeong Jeon, M.S.N., R.N., A.P.R.N., C.P.N.P.-PC¹

Annie Coriolan Ciceron¹

Y. Tony Yang, D.Sc., LL.M., M.P.H.^{1,2}

Hee-Soon Juon, M.S.N, Ph.D.³

Jane Pan, B.S.⁴

Daisy Le, Ph.D., M.P.H., M.A.^{1,2}

¹ The George Washington University, School of Nursing, Washington, DC

² The George Washington University, Milken Institute School of Public Health, Washington, DC

³ Thomas Jefferson University, Department of Medical Oncology, Philadelphia, PA

⁴ Hepatitis B Initiative of Washington DC (HBI-DC), Washington, DC

Corresponding author:

Daisy Le

1919 Pennsylvania NW, Suite 500

Washington, DC 20006

Phone: 415-385-7330, Fax: 202-296-1229

daisyle@gwu.edu

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DECLARATIONS

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LIST OF ABBREVIATIONS

WB-HBV: Washington-Baltimore Metropolitan Area Hepatitis B Virus

ACG: Academic-Community-Government

HBV: Hepatitis B Virus

HCV: Hepatitis C Virus

HBsAg: Hepatitis B Surface Antigen

DC: District of Columbia

CBPR: Community-based Participatory Research

HCC: Hepatocellular Carcinoma

CDC: Centers for Disease Control and Prevention

IRB: Institutional Review Board

COVID-19: Coronavirus 2019

WB: Washington-Baltimore

EMR: Electronic Medical Records

ABSTRACT

Background: Essential to the global elimination of viral hepatitis are insights and guidelines on how to coordinate and sustain community health efforts during times of public health crises. A community-based participatory research-driven academic-community-government (ACG) partnership was formed to improve the hepatitis B virus (HBV) screening and vaccination infrastructure for at-risk communities in the Washington-Baltimore metropolitan region.

Objectives: We describe the challenges and innovative adjustments made by the partnership to provide continued prevention modalities to reduce HBV during the earlier phases of the COVID-19 pandemic.

Methods: Key informant interviews were conducted to assess program implementation facilitators and barriers.

Results: Three thematic categories about the pandemic's impact on the ACG partnership emerged: innovations in hepatitis screening, access and linkage-to-care, and collaborative leadership. Lessons learned included the need to identify gaps in care, foster a safe environment for patients and staff, and provide technical assistance to enhance health information technology and systems infrastructure.

Conclusions: Despite COVID-19, partnership members remained agile and responsive to community needs. Sustaining an effective ACG partnership requires regular and transparent communication, as well as shared and equal decision-making opportunities.

KEYWORDS

Community health partnerships, Hepatitis B virus (HBV), community-based participatory research (CBPR), Coronavirus 2019 (COVID-19), Viral hepatitis, Cancer health disparities

BACKGROUND

The coronavirus 2019 (COVID-19) pandemic severely disrupted preventative health screenings worldwide. During the COVID-19 pandemic, routine medical visits were postponed, and telemedicine was widely utilized in place of in-person visits to minimize transmission of COVID-19.^{1,2} More pressing community needs including COVID-19 screenings and vaccinations, personal protective equipment, and food took priority over other preventative care services such as hepatitis screenings.³⁻⁵ A recent study conducted among 12 non-European and 32 European countries showed that viral hepatitis testing and hepatitis B virus (HBV) vaccination rates have been negatively impacted by the economic downturn of the COVID-19 pandemic.⁶ Chronic hepatitis B virus (CHB), often asymptomatic, increases the risk of hepatocellular carcinoma (HCC) or liver cancer.

Despite the availability of an effective vaccine and improved screening strategies for HBV,⁷ the burden of CHB infection remains significant with a worldwide prevalence of 257 to 291 million affected persons.^{8,9} Compared to non-Hispanic Whites, racial and ethnic minority groups, particularly those who are foreign-born, have been found to have higher CHB incidence and proportion of HCCs attributable to HBV.¹⁰ 70% of CHB infections are found among immigrant communities; the highest prevalence is among individuals born in Asia (58%) and Africa (12%).^{11,12} In the Washington-Baltimore (WB) metropolitan region, the prevalence of HBV infection was 6.1% among Asian-born immigrants and 3.7% for African-born immigrants from 2009 to 2015.¹³

In 2016, the World Health Organization (WHO) called for all countries to work towards the common goal of eliminating viral hepatitis as a global public health threat by 2030 through immunization, screening, and treatment programs.¹⁴ Achieving this goal requires increased

engagement with affected communities to better address their distinct needs,¹² as well as stronger mobilization of a range of stakeholders (including, e.g., policymakers, funders, diverse types of health professionals, and the civil society) to expand the types of services provided to these communities and to effectively integrate these services within the healthcare system.

Community-based participatory research (CBPR), a collaborative approach that emphasizes the equitable involvement and effective dialogue between community stakeholders and academic partners throughout the research process,¹⁵ has increasingly been used to promote health equity in communities,¹⁵⁻¹⁸ and should be leveraged to accelerate our progress towards hepatitis elimination. For example, active engagement with and continued commitment to community organizations that can provide culturally appropriate education and care could increase awareness of HBV vaccination and testing as prevention measures for HCC, and address stigma around hepatitis virus infections, as well as any myths or misunderstandings regarding HBV infection and treatment, especially among racial and ethnic minorities.¹⁹⁻²² While community health workers can aid various underserved and vulnerable populations access services,²⁰ the integration of computerized standing orders, electronic medical records (EMR)-based automated reminders, and continuing education for health care professionals at the health systems level, can prompt HBV testing.^{21,22} The COVID-19 pandemic, however, has placed a major strain on national healthcare systems, and essential, now, to the global effort to eliminate viral hepatitis are insights and guidelines on how to sustain such CBPR efforts during the current crisis.

The Washington-Baltimore Metropolitan Area Hepatitis B Virus (WB-HBV) Demonstration Project, a CBPR-driven collaborative academic-community-government (ACG) partnership, was formed to implement strategies and interventions to improve HBV screening and vaccination infrastructure for at-risk communities for HBV and HCC, especially Asian and

African-born immigrants, in the District of Columbia (DC), Maryland, and northern Virginia. The ACG partnership is comprised of eight local organizations, including four community organizations, three local health departments, and an academic institution. The local organizations were specifically selected in the ACG partnership as they were actively providing HBV outreach, education, screening, and linkage-to-care and treatment services to the foreign-born population in the Washington-Baltimore (WB) metropolitan region. During a pandemic, having a sustainable CBPR model for continued community-driven hepatitis screening and vaccination is important to address disparities that continue to exist due to reduced prevention modalities in at-risk communities.²³ The purpose of the ACG partnership was to develop and maintain a sustainable model to allow for HBV health information exchange between providers in the WB metropolitan region. This article describes the challenges and innovative adjustments made by the ACG partnership to provide continued prevention modalities to reduce HBV among racial and ethnic minorities in the WB metropolitan region during the COVID-19 pandemic.

METHODS

Approach

This exploratory study was led by an external evaluation team of three individuals who were not directly involved in providing community screening services for the WB-HBV Project. From November 2020 through March 2021, the evaluation team invited ACG partnership taskforce members to participate in key informant interviews about their experiences implementing the WB-HBV Project during the COVID-19 pandemic. These individuals, delineated as ‘active members’, are defined in the current study as individuals serving as official representatives within the WB-HBV Taskforce, the key stakeholders instrumental in forming and steering the official task force under the demonstration grant. Qualitative data analysis was used

to gather emergent themes on program implementation facilitators and barriers (i.e., capacity and needs) during the earlier, and one of the most interrupted time periods of a global public health crisis. The study was reviewed and approved by the George Washington University Institutional Review Board (IRB# NCR203030).

Data Collection and Measures

Study information and informed consent documents were emailed to active members of the WB-HBV Project Task Force who expressed interest in the key informant interviews. The evaluation team conducted all semi-structured interviews, which lasted no longer than one hour via phone or WebEx. Interview questions related to the COVID-19 pandemic focused on the ACG partnership's capacity, barriers, or challenges surrounding hepatitis prevention efforts in years 1, 2, and 3. Recommendations for overcoming the barriers or challenges were also identified. Examples of the questions asked, included:

Program Implementation Barriers/Challenges

- Can you share what have been the major barriers or challenges in the ACG partnership so far?
- What were some of the challenges due to the COVID-19 pandemic?
- What do you see as barriers or challenges over the next few years?

Program Implementation Facilitators

- What were some of the innovative adjustments the partnership or your organization had to make due to the COVID-19 pandemic?
- Do you have any recommendations on how the ACG partnership will overcome these barriers or challenges identified?

Data Analyses

With permission, all interviews were audio-recorded and transcribed verbatim. Each transcript was reviewed and thematically coded using QSR International's NVivo software (version 12 Plus).²⁴ Emergent themes from interviews were developed and shared between all reviewers (DL, AC, MJJ) in an iterative and collaborative process. Themes were organized with representative quotations and discrepancies were resolved using a constant comparative approach. Inter-rater reliability was assessed using the Kappa statistics and was $> .80$. The Kappa coefficient is a measure of agreement between coders, with 1.0 indicating perfect agreement.²⁵

RESULTS

Key informant interviews, lasting 30 to 45 minutes, were conducted with 15 of the 20 (75.0%) active partnership members from the WB-HBV Project's task force: two academic, nine community, and four government members (see Table 1). Roles of partnership members varied: from the project coordinator, linkage-to-care provider, to an epidemiologist.

[insert Table 1]

Three thematic categories relating to the impact of the COVID-19 on the ACG partnership emerged from the interviews (see Table 2): (1) innovations in hepatitis screening, (2) access and linkage-to-care, and (3) collaborative leadership.

[insert Table 2]

Innovations in Hepatitis Screening

ACG partnership members described that with the start of the COVID-19 pandemic, community-based events were cancelled, which brought challenges to the hepatitis screenings and vaccinations. Partnership members described how they mitigated the challenges brought on by disruptions in community-wide events and were able to exceed the number of screenings and vaccinations set by the organization. Providing an environment that is COVID-safe for both

patients and staff was an important lesson learned that allowed community partners to reach out to communities during the global pandemic.

Partnership members indicated that the COVID-19 pandemic had initially halted all their work, impeding them from providing routine hepatitis screenings and vaccinations, as planned (“I would say even though it occurred halfway through the first year. It really dominated us insofar as stopping just about all work.”). Community organizations were forced to pause face-to-face hepatitis screenings, especially large community outreach events, to minimize the spread of COVID-19. A government member discussed the work community partners were doing pre-COVID:

“Pre-COVID, they did a really great job with their hepatitis [screening and vaccinations]. They did work at these outreach events where they were seeing over 100 individuals in one setting over the course of like three or four hours. ... They’re very, very useful to the community. They’re very organized, they have several nurses present to collect samples and do testing on-site.”

Although the COVID-19 pandemic placed an unexpected change in how health workers see and screen patients for hepatitis, the ACG partnership members were quick to respond and tackle the challenges presented by the pandemic. A member from a government organization appraised community partners for their prompt and innovative adjustment to screening at the start of the pandemic: “They have a really great innovative team. They are really quick on their feet.”

The challenges caused by the pandemic were mitigated by the introduction of telehealth and a hybrid screening model. Instead of face-to-face screenings that allowed patients to register and get screenings onsite, telehealth and hybrid screening allowed patients to fill out the

registration online, get screened at a nearby laboratory, and the staff to call with results and link them to care.

A community partner explained how they switched from traditional face-to-face screenings to the hybrid screening model:

“Before COVID, all our screenings were in-person screening. ...But we had to change our model to telehealth [and] online screening. People come to our website, fill out a registration form, and then we give them a voucher to go to the lab to do the blood tests. And then we use a telehealth method to provide them with their results, as well as mailing them the results.”

Due to their prompt response and innovations, a community partner described that “deliverables for the number of people screened, the number of vaccinations, [and] the number of educations, were not only met, but also exceeded.” As an academic member described, “these challenges [were] opportunities to make [them] think more creatively” about the way they provided services to the community.

Access and Linkage-to-Care

Temporary disruptions in face-to-face routine and non-emergency medical visits brought on changes in how patients see medical providers, and partnership members described how it affected access to and linkage to care services. Although telemedicine was beginning to be adopted widely at the start of the COVID-19 pandemic, a community partner discussed that not every patient knew how to use telemedicine, causing patient attrition or loss to follow-up. Identifying gaps in care, especially among high-risk groups who may need catch-up vaccinations was a lesson learned through the project during the COVID-19 pandemic. Especially as the community partners served the immigrant population, there were concerns with telemedicine as

many of the patients did not know how to use computers. To allow for linkage to and retention in care, staff from community organizations started calling new and existing patients who previously tested positive for hepatitis. A staff from community organization described how they first needed to help patients on the basics on how to use applications on their phones, which all of the patients have, in order for them to get access to basic needs such as employment, food, and COVID-19 screening on top of hepatitis screening and care:

“We also have a lot of people with unemployment with Asian and African immigrants. All our population, they all have a phone, they don’t have a computer, but they all know how to use the app. So we were able to get them and help them with food, and where to get tested for COVID. We were doing that for like three months.”

In terms of following up with current patients with HBV and patients who tested positive, a community organization member stated that providing alternative options such as telehealth and telemedicine allowed the community organizations to provide continuity of care. By providing the options of telehealth to receive care at their own home, instead of an in-office visit, to reduce the possibility of transmission of COVID-19, patients were still able to receive hepatitis care:

“Staff members reached out to individuals who have already participated in the program, followed up with them, talked about COVID, and encouraged anybody who was still seeking treatment to continue their treatment for hepatitis B or C to allow them, with options of filling prescriptions at home, being able to connect to doctors through telehealth, telemedicine, types of services.”

Collaborative Leadership

The ACG partnership collaboratively focused on HBV screening and vaccination infrastructure for at-risk communities across the Washington-Baltimore metro area: created a coordinated care system by building the HBV screening, linkage to care, and monitoring capacity of primary care providers and health departments; and implemented HBV health information exchange (HIE) among providers, allowing for continuous surveillance to combat HBV transmission and reduce morbidity and mortality.²⁶ Lessons learned through the ACG partnership during the COVID-19 pandemic were the importance of supporting organizations with telemedicine and the EMR, advocating charitable work in hepatitis prevention and education, and developing national goals for HBV.

Due to an indefinite pause in large community health fairs that previously allowed for community-wide hepatitis screening and vaccination efforts, the COVID-19 pandemic prompted community organizations to engage in community-wide partnerships to increase hepatitis prevention efforts. For example, a community organization member highlighted that their partnership with other community health clinics allowed for increased hepatitis screening efforts during the COVID-19 pandemic, “They don’t usually screen for hepatitis, but then because we went and we asked, and we partnered with them, and then they provided hepatitis screening to all their patients, and we supported that.”

Members mentioned that having regular meetings with the ACG partnership members to discuss progress and brainstorm ideas to increase hepatitis prevention efforts in the community was helpful during the COVID-19 pandemic. A government member described:

“One thing we did was, we checked the online platform for all our testing partners, across [our jurisdiction], and met monthly. [...] It has really been very helpful because some partners were able to learn from other practices and try to implement.”

Despite much-needed communication between partners, many ACG partnership members discussed barriers in communication, especially due to the switch from in person to virtual partnership meetings, and since the ACG partnership included state health department public health personnel who had to prioritize the COVID-19 pandemic over many other health issues. Even with virtual meetings, with new responsibilities due to the COVID-19 pandemic, originally scheduled standing meetings made it difficult for community partners “in the field” to attend meetings.²⁶ A community organization member discussed that a third task force meeting that was scheduled with partners during the first year was not doable due to the pandemic. A community organization member stated, “Because of COVID, the Department of Health has to readdress their focus on to the COVID pandemic, and so we’re not able to communicate with them as much as like the first half of the year.”

An academic partnership member discussed the benefits of having an ACG partnership, as it is an opportunity to learn from other organizations or disciplines and government partners who are policymakers: “I think we've learned a lot, or there's an opportunity to learn a lot in terms of where the gaps are, [and] what kind of things are needed to improve services for this population. I think as far as that we both have learned a lot.” Partnerships with other community-wide organizations allowed for hepatitis surveillance data collection, as an academic organization member mentioned, “[They] help us get the surveillance data, interpret the information, and help us engage with other people that we don't have connections [with].” In addition, receipt of funding from the academic organization has allowed community health workers to increase hepatitis prevention efforts during the COVID-19 pandemic, as an academic partnership member discussed:

“Several people got funded and other groups as well, through this grant during the pandemic. I think it's really helpful for them. And with this grant, more people are getting screened and vaccinated and linked to care. So that's substantial health benefits as well.”

On the other hand, there was a discussion of weaknesses in partnership, in terms of lack of communication regarding partnership goals and outcomes, “One challenge is that I think the whole partnership needs to be clear on what the overall goals are, and what the outcomes are. So that has not been as transparent as I think I would like.”

DISCUSSION

This study provides insight into the ACG partnership's hepatitis surveillance program's challenges and innovative adjustments during the COVID-19 pandemic. When working with immigrants at high risk for HCC, partnering with community-wide organizations such as health clinics as well as academic and government institutions, and building a sustainable CBPR model are crucial for continued hepatitis prevention efforts during a global pandemic.²⁷ The principles of CBPR set by Israel et al., which the ACG partnership complied with, include 1) recognizing community as a unit of identity (i.e., working with previously existing communities of Asian ethnicity within the WB metropolitan region), 2) building on strengths and resources within the community (i.e., partnering with nearby clinics to work together to provide hepatitis screening and vaccinations), 3) facilitating collaborative partnerships in all phases of the research, 4) integrating knowledge and action for mutual benefit of all partners, 5) promoting co-learning and empowering process that attends to social inequalities, 6) involving a cyclical and iterative process, 7) addressing health from both positive and ecological perspectives, and lastly, 8) disseminating findings and knowledge gained to all partners.¹⁵ The creation of the WB-HBV project was a shared decision among ACG partners, with the common aim of addressing

disparities and improving the HBV screening and vaccination infrastructure for at-risk communities.²⁶ The partnership was formed in July 2019, and the project lasted until June 2022. Worldwide, hepatitis screening programs have been disrupted by the COVID-19 pandemic, possibly causing negative consequences due to missed or delayed screening, diagnosis, or treatment.⁷ To mitigate challenges in hepatitis prevention efforts due to the COVID-19 pandemic, lessons learned from this ACG partnership included: identifying gaps in care, especially among high-risk groups who may need catch-up vaccinations, providing an environment that is safe for both patients and staff, supporting organizations with telemedicine and the EMR, advocating charitable work in hepatitis prevention and education, and developing national goals for HBV, in times like the COVID-19 pandemic.⁷ Many of the lessons learned from the COVID-19 pandemic corroborate the findings and recommendations shared by Pley et al., which include but are not limited to data collection (i.e., especially among high risk groups), service provision (i.e., improvements in telemedicine and EMR), political buy in (i.e., national goals around HBV), financial schemes (i.e., to provide support for those paying out of pocket), catch-up vaccination, public health interventions (i.e., review of interventions, support necessary supplies for prevention and/or treatment of HBV, distribution of harm reduction services), education and public health messaging, and advocacy (i.e., education).⁷ The next steps for the ACG partnership are to collaborate with the government to ensure that hepatitis B vaccines are readily available and accessible in various settings, including academic institutions, community centers, healthcare facilities, and potentially workplaces. The partnership also will continue to engage the community in vaccination efforts. Academic institutions can play a key role in conducting research on vaccine hesitancy and strategies to overcome it. Government and community organizations can use this information to implement effective public health

campaigns. Overall, the ACG partnership will make efforts to ensure that the vaccine is accessible to all communities, especially marginalized and underrepresented groups. This can be achieved by removing language and cultural barriers, providing transportation to vaccination sites, and addressing other factors that might prevent access.

When working within the ACG partnership, members discussed the importance of communication, not only to discuss progress and overall goals but also to brainstorm innovative approaches such as hybrid screening and building the capacity of the health information exchange, such as the EMR, for overall improved hepatitis surveillance in the WB metropolitan region. Despite COVID-19, there were prompt adjustments and accomplishments in hepatitis screening and vaccination that ACG members highlighted. McFarlane et al.²⁸ discuss the importance of regular and transparent communication, as well as shared decision-making when working with community organizations serving racial and ethnic minorities. Along with equal partnership between the researchers and community organizations, the community organizations serve a crucial role during intervention building and when addressing matters related to health disparities, as they are the key personnel who regularly engage with the community members.

Limitations.

Study findings must be interpreted within the context of certain limitations. First, this study's approach involved engaging a limited number of active members, specifically focusing on key informant interviews within community organizations affiliated with the ACG partnership. In the current study, we define 'active members' as individuals serving as official representatives within the WB-HBV Taskforce, the key stakeholders instrumental in forming and steering the official task force under the demonstration grant. This delineation of 'active members' aims to emphasize the core decision-making and strategic body within the task force,

intending to provide a comprehensive understanding of the collaborative efforts involved. While our primary focus was on these pivotal figures representing each organization within the task force, it is essential to underscore that the project's success relied significantly on the substantial contributions of additional personnel and staff members from each organization. This includes, for instance, nurses and phlebotomists conducting necessary screening intake and clinical procedures, as well as peer navigators facilitating linkage-to-care efforts.

Additionally, despite efforts to recruit diverse members, a potential for self-selection bias exists, as those volunteering may hold skewed perspectives. These limitations highlight that the statements presented may not fully encapsulate the entirety of the ACG partnership, impacting the generalizability of the study's findings. It is crucial to recognize that while the study's outcomes illuminate essential insights within the ACG partnership, they may not comprehensively represent all partnership members due to the specific focus on the task force.

Finally, the reliance on self-reported experiences during the earlier stages of the pandemic, preceding widespread COVID-19 vaccinations, introduces the potential for recall bias.²⁹ Participants' recollections during this period might be influenced by social desirability and memory limitations. Although efforts were made to mitigate biases through early-phase interviews conducted by an external evaluation team and utilizing semi-structured interview methodologies, the retrospective nature of the study acknowledges potential limitations in the accuracy and completeness of reported experiences.

Despite the aforementioned limitations, the current study provides valuable insights into the adaptive measures undertaken by the ACG partnership to sustain HBV prevention during the pandemic's initial phases. These perspectives shed light on the challenges faced and innovative

adjustments made by the partnership, offering valuable context for understanding the context-specific responses during this critical period.

CONCLUSIONS

The current study provides anticipatory guidance for future CBPR with ACG partnerships on potential strengths and challenges in partnership and hepatitis-related screening and vaccination during a pandemic when working with an underserved population. Despite COVID-19, the ACG partnership remained agile and responsive to community needs. Future CBPR hepatitis surveillance programs will need to consider the possibility of unexpected circumstances such as the COVID-19 pandemic causing abruptions in communication between partnerships, as well as screening and vaccination programs. Preparation for such unprecedented events can include partnership members from different disciplines coming together to brainstorm ideas to best continue hepatitis prevention efforts. They also can collaborate on solutions for providing organizational staff with the appropriate training necessary to support continued access and linkage-to-care for patients who may be lost to care due to sudden changes such as the introduction of telemedicine. With financial support and improvements to public health policy, it will be possible to increase the capacity of systems for health information exchange, at the local, state, and national levels, and to make hepatitis screening and vaccination a part of routine care within the primary care clinics – changes essential to strengthening hepatitis surveillance program, especially during a global pandemic.

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Table 1. ACG Partners and their roles within the WB-HBV

Classification	Role within the WB-HBV
Community Partner	Screen individuals for HBV surface antibodies, HBV surface antigens, and HBV core antibodies. Also to confirm which HBV vaccine was administered if vaccinated.
Government Partner	Help recruit participants, interpret data collected, and support the partnership activities.
Academic Partner	Complete IRB application and protocol development as well as manage all community partner data collection, aggregation, and reporting to the federal funder.

Table 2. Challenges and Adjustments made by the ACG partnership during the COVID-19 pandemic

Domain of Response	Challenges/Barriers	Adjustments	Recommendations for Future ACG Partnership by the External Evaluation Team
<p>Innovations in hepatitis screening</p>	<p>The Coronavirus 2019 (COVID-19) has disrupted daily work routine in general; face-to-face screenings, as well as large community health fairs were temporarily paused to avoid transmission of COVID-19.</p> <ul style="list-style-type: none"> • “And but now that COVID has occurred, they aren't allowed to do the outreach events because it’s such a large gathering.” (<i>government partner</i>) • “I know for the first year... When COVID hit, community outreach was really impacted, though later on in the year when we're able to recover gradually. (<i>government partner</i>) <p>Lessons learned: Providing an environment that is safe for both patients and staff.</p>	<p>Promptly introducing an innovative hybrid screening model as an effort to combat reduced screening rates faced by the pandemic.</p> <ul style="list-style-type: none"> • “We were able to roll out a hybrid screening process where we did an online registration. And then we were able to connect people who wanted to get screened to lab locations near them [so] they could go and get tested. Once we got the results, we would call them and connect them to care, if needed.” (<i>community partner</i>) • “Many people come for testing now. And that gives us the opportunity to sign them up for virtual education sessions, and so we get the opportunity to have more people coming around. So, we can, during just that little test, tell them about what we do.” (<i>community partner</i>) 	<p>Providing patients with telehealth for hepatitis screening and virtual education sessions, as well as providing staff and in-coming patients with personal protective equipment for face-to-face encounters necessary for screening to minimize transmission.</p>

		<ul style="list-style-type: none"> • “I mean, every time we come out, we are always protected, we also pass a face shield, along with the mask...Right now, that's our way to actually go, that we can actually battle COVID-19.” <i>(community partner)</i> • “But they were very innovative...to take advantage of the telemedicine option that came about through COVID interactions and use that as a new platform to reach patients.” <i>(government member)</i> <p>And they've also been doing some telemedicine interactions with individuals where they advise them on where to go to get Hepatitis B testing, where it's being offered in their specific community.” <i>(government partner)</i></p>	
<p>Access and linkage-to-care</p>	<p>Patient attrition and out of care, as some patients did not know how to get in contact with providers for care with the start of COVID-19.</p> <ul style="list-style-type: none"> • “Some of [the patients] don't know how to use telehealth. Because their doctors are doing telehealth. Some of them we had referred them to [an institution]. 	<p>Staff to call to communicate with new patients and previously positive patients to provide linkage-to-care and retention of care.</p> <ul style="list-style-type: none"> • “We started calling our patients that we had already screened and tested and just 	<p>Appropriate staff training and organizational capacity building to communicate with patients (who may have trouble using technology, have barriers in language, or have experienced unemployment) to identify needs and provide access and continuity</p>

	<p>[The institution] was closed too, nobody answered the phone, and they're waiting for medication to be mailed to them.” <i>(community partner)</i></p> <p>Lessons learned: Identifying gaps in care, especially among high-risk groups who may need catch-up vaccinations.</p>	<p>call them to check up on them, make sure they were still contacting their doctors either for telemedicine or make sure they are still taking their medication. And on top of that also offer resources that they might need during the pandemic. We were able to help a lot of people with food assistance, some people with rental assistance and a lot of unemployment filing. <i>(community partner)</i></p> <ul style="list-style-type: none"> • “We started to call all our positive individuals who previously screened with us. Some of them don't know how to use telehealth. [...] We've helped a lot of people with retention of care. And also, medication refills, how to get on the telehealth to get in touch with their doctors.” <i>(community partner)</i> 	<p>in care (i.e., medicine, getting in contact with provider, screening results, helping with other basic needs such as employment, food, and COVID-19 testing).</p>
<p>Collaborative leadership</p>	<p>Difficulty reaching those at-risk for hepatitis due to a pause in large health fairs that provide community-wide hepatitis care.</p> <ul style="list-style-type: none"> • “Majority of their work was done at these large-scale outreach events where they will see hundreds of patients.” <i>(government member)</i> 	<p>Collaborating with partners (i.e., health clinics, academic and government organizations) to brainstorm ideas to increase hepatitis prevention efforts.</p> <ul style="list-style-type: none"> • “What they've been doing is they've been 	<p>Having community-wide partnerships with other organizations such as academics and government organizations to increase hepatitis prevention efforts, including expanding capacity around health</p>

	<ul style="list-style-type: none"> • “It was because of a pandemic. And I think the partnership needs to come together to think through best practices from other areas and implement to be able to show that we are advancing our intervention.” (<i>government partner</i>) <p>Lessons learned: Supporting organizations with telemedicine and the EMR. Advocating charitable work in hepatitis prevention and education, and developing national goals for HBV.</p>	<p>partnering with primary care settings, that's probably offering COVID testing. In addition, opt in hepatitis B or hepatitis C testing as well. (<i>government partner</i>)</p> <ul style="list-style-type: none"> • “As a clinic setting, we always make it can kind of a default to screen, our new patient. As long as they don't know what the status of the hepatitis B status is, we just add in the hepatitis screening tests, because our patient now or from high-risk area.” (<i>community partner</i>) 	<p>information exchange and electronic medical records.</p>
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