B Informed: Hepatitis B & Delta in the Harm Reduction Space

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Background

- People who inject drugs (PWID) are especially vulnerable to blood-borne viruses, including HIV and hepatitis B, C, and D.
- HIV & HCV have been well-documented & studied in this population.
- Acute HBV rates have been rising among PWID since 2009.
- Limited data about HDV exists for any population.
- Low awareness of hepatitis B and D among at-risk communities & providers who serve them
- There is an urgent need to increase awareness and accurate knowledge.

Phase One Objectives

- Despite existing guidelines recommending hepatitis B screening & vaccination among PWID (and now universally among all adults in the United States), diagnosis and prevention efforts for HBV and HDV remain sporadic.
- We wanted to assess some of the barriers and facilitators to identifying hepatitis B and delta cases and susceptibility in this population,
- Evaluate existing knowledge and awareness as well as educational needs and preferences

Phase One Methods

01

Provider-focused survey

02

Key informant interviews

03

Participant demographic survey

Phase One Data Analysis

01

Survey respondents categorized into three roles

02

Multiple outcome variables measured by survey

03

Interviews recorded & transcribed verbatim

04

Coding and qualitative analysis, thematic categories

05

Creation of educational campaign

Results of Provider Surveys

Table 1

Demographics of provider study participants

Category	Frequency	% of total (N = 56)
Role		
Public Health and Community Workers	20	35.71
Clinical Medicine	35	62.50
Research	1	1.79
Years in their Role		
0-5 years	25	44.64
6-10 years	11	19.64
11-15 years	5	8.93
16-20 years	3	5.36
More than 20 years	12	21.43
Location of Work		
Academic Institution	29	51.79
Federally Qualified Health Center	1	1.79
For-Profit Hospital	1	1.79
Non-Profit Hospital	7	12.50
Private Practice	3	5.36
Public Health Department	4	7.14
Public Hospital	2	3.57
Specialist Clinic	2	3.57
Other	12	21.43

Results of Provider Surveys

Table 2

Provider Barriers to Hepatitis B and D Care

Barriers	Frequency	% of total (N = 56)
HBV Screening Barriers	37	66.07
Insurance	15	26.79
Competing Priorities	14	25
Guideline Complexity	8	14.29
Assume Unable to Manage Infection	7	12.5
Difficult Risk Factor Discussion	7	12.5
HBV Vaccination Barriers	N/A	N/A
Patient Hesitancy	25	44.64
Competing Priorities	18	32.14
Insurance	11	19.64
Cost	9	16.07
Guideline Complexity	9	16.07
HDV Screening Barriers	46	82.14
Knowledge of Tests	12	21.43
Insurance	10	17.86
Guideline Complexity	10	17.86

Results of Provider Surveys

- Knowledge tests
  - Overall low awareness of HBV/HDV
- Services provided
  - Fewer than half conducted HDV screening regularly
- Explanatory and counseling confidence
  - CHW confidence was significantly lower than that of clinicians

Identified Themes from Interviews

Knowledge and Awareness of HBV/HDV

- Very low awareness
- Confusion about different types of hepatitis
- Very common myths are that hep B can be transmitted similarly to hep A, through fecal/oral contamination, or through casual contact or the air
- Lack of awareness among providers is common - many did not know about prevalence in PWID communities

"Honestly, I don't know much about it, and I would like to know more...it's a scary thing and it's real. The only thing I really know about is hep C. I don't know about any other hepatitis."

"So, for example, we were told at one point, you shouldn't screen everybody for hepatitis B. Now we should just vaccinate. We should revaccinate all adults...But how we should be thinking about it in our particular context, I don't think we have any guidance on that."

Stigma around HBV/HDV

- Lots of stigma in the harm reduction space in general
- Also related to wounds, which can impede testing

"People just feel like they're dirty or that they've made a mistake...And that can sometimes affect people's willingness to do treatment at that time... So I think the counseling that happens at diagnosis is really important."

"Yeah, I think the biggest stigma...is the lab draws. Oftentimes [PWID] also have wounds or abscesses on their arm, so they don't want to go to a commercial lab."

Identified Themes from Interviews

Trust in Healthcare Providers

- Concerns about confidentiality
- Feelings of not being listened to or taken seriously

"I've in the past tried to explain things to doctors and even ask questions and they seem like they don't want to be bothered. They don't care. It seems like just a job to them and that's it."

"I think people also have a lot of trauma around doctors and in the medical field oftentimes substance users are very much mistreated, they're right. So I think that trauma very much negates people wanting to engage in care."

Prevention

- Barriers with vaccine access and hesitancy
- Need for bodily autonomy contributes to this
- Cost is an issue

"The primary focus is a place to eat and a place to sleep. So, until we as a nation improve ways for people to maintain secure housing. I don't see vaccination being a priority for that population."

"PWID may sometimes choose not to vaccinate because they feel they get to exercise some type of agency over what they are putting in their body, which is taken away from them a lot of times in the drug supply they are given."

"It's really really really hard to get hep B vaccines at a low cost (...). Our patients frequently don't have outside primary care providers and they're not able to afford the copays for hepatitis B vaccines like at a pharmacy. Right now we're paying for all of our hep[atitis] B vaccines out of pocket at astronomical cost."

Identified Themes from Interviews

Current Landscape of Screening Practices

- Lack of HDV screening available at commercial labs
- Challenges with external referrals
- Provider time/capacity

"...getting people, specifically our patients, to like another hospital system and getting them in and having them make the appointment is a challenge. Then sometimes it's hard for people to keep appointments if they're unhoused and have other priorities to take care of."

"Hepatitis delta testing is insane, it's a lot of leg work that a lot of times providers don't have time for."

Recommendations and Needs from Community

- Enthusiasm for a targeted and culturally competent campaign
- Clear info about transmission, risk factors, viable testing practices, and behaviors that can and cannot prevent transmission of hepatitis B and delta.
- Also clearly outline the different types of hepatitis.
- Present risk factors in a non-stigmatizing way

"...factual information for sure, how people can be infected, how it can impact their lives if they're not treated...written literature to probably feel empowered to have conversations."

"Don't put it out like that, like call me out in a different way... We already know, we know and we don't want to be told again. We know."

Phase One Main Takeaways

- Significant lack of awareness and stigma
- Major barriers to accessing services
- Tailored and thoughtful education and awareness efforts are crucial.
- Provider training, especially at the primary care and community health level
- Clearer, more consistent screening/management guidelines (reflex testing would be ideal)
- Consistent political and financial support of HROs
- One-stop shop model with the first dose of vaccine administered simultaneously with screening would be helpful
- A POC test is much needed.
- Partnerships with health departments for vaccine is important.
- USPSTF recommendations
- Wider availability of HDV testing
- More supportive and comprehensive social services for PWID

Phase Two Objectives

- Improve HBV and HDV awareness
- Accurately assess prevalence of HBV and HDV in this population
- Facilitate connection to HBV vaccination or to HBV or HDV management and care as appropriate
- Pilot program for hepatitis B and delta outreach, education, and screening within a harm reduction setting in the United States
  - Provide a model for integration of HBV and HDV screening in this population

Phase Two Methods

01

Daily Recruitment

02

Informed Consent and Demographic Survey

General demographics
High-risk behaviors

03

Blood Test

3mL
Triple Panel
- HBsAg
- HBsAb
- HBcAb
- anti-HDV

04

Return for Results and Next Steps

Phase Two Data Analysis

In Progress

01

ODK Data Extraction and Cleaning

02

Fisher's Exact Test:

Odds ratios and significance of variables for HBV blood markers and behavioral risks

03

Backward Stepwise Logistic Regression:

Identify possible predictors of the outcome for HBsAg and HBcAb tests

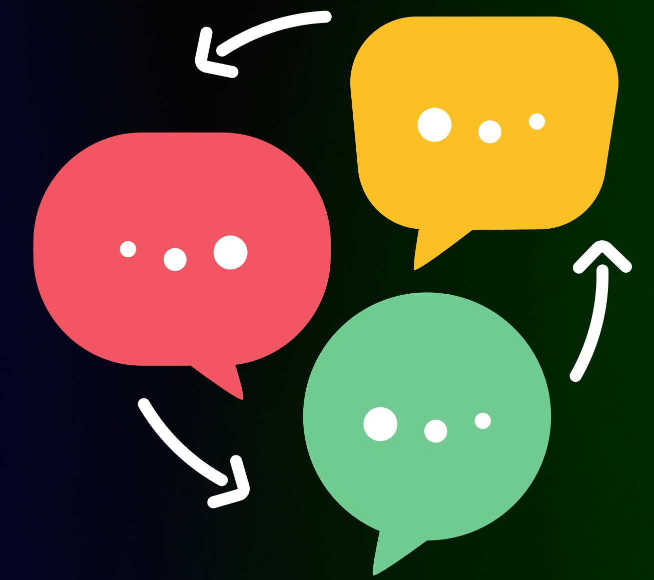
Screening Results

Table 1

Results of Hepatitis B and D Screening

Results	N		%	
HBsAg+	10		1.9	
Isolated Core	10		1.9	
anti-HDV	1		0.19	
Protected	362		70.5	
Past Infection		92		25.4 (17.9)
Vaccinated		270		74.5 (52.6)
Not Protected	130		25.3	
First Dose		10		7.6 (1.9)
Returned	456		88.8	

Phase Two Discussion



- Increase in vaccine protection and decrease in virus susceptibility
- Similar findings for prevalence of HBV and HDV for this population
- Previous incarceration most correlative factor for current infection
- Experience with housing instability or with transactional sex most correlative factor for core antibody positive

Phase Two Lessons Learned

01

Skilled phlebotomist or Point of Care test needed

02

Loss to follow up

03

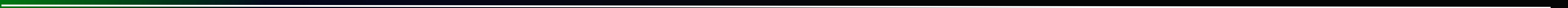
Incentive pros and cons

04

Linkage to care availability in harm reduction space

Recommendations & Calls to Action

- Approval of Point of Care testing in the US
- Expanding capacity of harm reduction organizations and syringe service programs
- Establishing and maintaining connections between local health departments and these organizations



Thank you! Questions?