UPDATE

Addressing Viral Hepatitis in People With Substance Use Disorders: A Review of the Literature*

Reviews Literature From November 1, 2011, Through April 30, 2012

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TREATMENT IMPROVEMENT PROTOCOL (TIP) SERIES 53

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UPDATED FINDINGS FROM THE LITERATURE, MAY 2012

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Updated Findings From the Literature, May 2012

This Treatment Improvement Protocol (TIP) Literature Review Update includes findings published between November 1, 2011, and April 30, 2012. Articles that met the selection criteria for this update fall into the categories of general findings and hepatitis screening. For several categories of information covered in the TIP (chronic hepatitis evaluation, treatment, counseling for people with viral hepatitis, and adding or improving hepatitis services), no articles were published during this update period that met the selection criteria.

General Findings

Korthuis et al. (2012) surveyed 1,281 participants in the National Drug Abuse Treatment Clinical Trials Network. Researchers asked these individuals to self-report on numerous characteristics including sociodemographic status, substance use, risk behaviors, and hepatitis C virus (HCV) infection status. The investigators then used multivariable logistic regression to compare risky behaviors among those who reported being positive for HCV with those who reported being negative for HCV or who did not know their HCV status. The authors also wanted to determine if any of the characteristics related to HCV status awareness were associated with increased or decreased sharing of syringes or needles.

Of the 1,281 participants, 244 (19.0 percent) reported at baseline that they had used injection drugs in the past 6 months. Fewer than half (46.9 percent) of this subset reported that they always used a sterile syringe. In fact, 38.5 percent said they had shared syringes or needles with another person in the past 6 months.

Self-reported HCV status awareness was the independent variable of the analysis. Researchers asked participants the following question: “Have you ever been diagnosed with hepatitis C (yes, no, don’t know)?” Of the 244 individuals who reported that they had used injection drugs in the past 6 months, 37.7 percent indicated they were positive for HCV. The multivariable analysis for this subset of participants revealed that those who knew they were positive for HCV more frequently practiced harm reduction behaviors such as obtaining sterile needles, cleaning needles with bleach, and avoiding alcohol intoxication compared to those who were negative for HCV or did not know their status. However, awareness of HCV positive status also was associated with increased recent sharing of syringes or needles compared to those who were negative for HCV or did not know their HCV status. The authors indicated that the latter finding has important implications for treatment programs and underscored the need for new approaches to implementing hepatitis C prevention efforts for those who use injection drugs and are seeking substance abuse treatment.

The study has some limitations. First, because all study participants were seeking or actively engaged in treatment at community-based treatment programs, these findings may not apply to the broader population of individuals who use injection drugs or those receiving treatment in other settings. Second, participants self-reported their HCV status. It is likely that more participants were positive for HCV and did not know it; however, the authors stated that a person’s belief about their HCV status is, theoretically, more closely tied to injection behaviors than biologically confirmed HCV status. Third, researchers were unable to assess sero-sorting in this study. Finally, it is possible that the study’s cross-sectional design limited the authors’ ability

to infer causality. They admit it is possible that addiction severity rather than knowledge of HCV status may be related to increased sharing of syringes or needles; however, the authors stated that hepatitis C awareness remains an important marker for targeting harm reduction interventions.

Findings on Viral Hepatitis Screening

Between April and September 2009 Drobnik et al. (2011) recruited 503 participants from six community-based organizations in New York City to be tested with the OraQuick HCV rapid antibody test, which uses an oral swab and produces results in 20 to 40 minutes. Participants were also tested for HCV antibodies via enzyme immunoassay (EIA), the most common means of HCV screening. EIA requires a blood sample, the results take longer to obtain, and the process often poses a number of financial and logistical challenges for patients in high-risk populations. The authors also sought to assess whether using the rapid test in place of EIA would be feasible for community-based organizations that serve populations at high risk for HCV infection.

Research staff from the six community-based organizations who possessed training and experience in phlebotomy, HIV rapid testing, test counseling, and confidentiality administered the EIA tests. Study participants self-administered the oral swab rapid test after receiving pretest counseling and providing informed consent. After performing each set of tests, research personnel evaluated, via a 10-question survey, the ease of explaining the tests, administering the tests, and counseling participants for each type of test. Three weeks after specimen collection concluded, at least one research staff member from each of the six study sites participated in a focus group that was led by a city government official who had no previous involvement in the study. The focus group's discussion guide consisted of eight open-ended questions addressing:

- Their agency's HCV testing program components and resources.
- How the introduction of oral swab rapid testing might change program operations.
- The impact of rapid testing on clients.
- The types of clients for whom rapid (oral swab) testing or blood-based testing might be most appropriate.
- How the introduction of oral swab testing might create or eliminate barriers for clients, staff, and agencies.

Researchers found that OraQuick's accuracy was comparable to the EIA test. In 97.5 percent of cases, OraQuick and EIA results matched, and when the results of the two tests did not match, ribonucleic acid polymerase chain reaction (PCR) testing showed that the oral swab rapid test was more likely to yield a correct diagnosis than the EIA test.

Based on the surveys completed after the two tests were administered, research personnel preferred the rapid test over the EIA test for use in 98.5 percent of client visits over the course of the study. They found it easier to use and would be more likely to recommend rapid testing rather than EIA to clients in the future. Further, they indicated that the rapid test would be more appropriate for most clients compared to the EIA test. Focus group analysis revealed the following themes and experiences from research personnel:

- Phlebotomy constitutes a serious challenge for programs with limited resources. Such programs typically experience high staff turnover rates and a shortage of experienced

phlebotomists. In addition, many clients do not like having their blood drawn, are worried that the sample may be used for unauthorized testing, or object to phlebotomy for cultural reasons.

- Many clients do not return to get phlebotomy test results. In fact, in this study only 52.4 percent of participants returned to get the results of their EIA test. (Staff did not share the results of the rapid test with clients because at the time of administration the rapid test had not yet received Food and Drug Administration approval.) Research personnel reported that they expend a great deal of time and effort to get clients to come back for test results. This challenge could be eliminated or significantly reduced by administering the test, sharing results with the client, and coordinating any necessary referrals in a single appointment.
- More clients would agree to allow rapid (oral swab) testing because they perceive it as less risky than a blood draw. Rapid testing also would make it possible to administer the test in nonclinical settings such as mobile vans and to reach more people who do not know their HCV status.
- Given that there is a 20- to 40-minute waiting period for results, the rapid test provides additional time for education and counseling, which research personnel indicated was as important as the test itself.
- The oral swab test eliminates the risk of staff exposure to blood-borne pathogens.
- It would be possible to administer HIV and HCV tests concurrently and get the results for both tests during the same client encounter.
- For some clients, the EIA test may be more appropriate, such as for immigrant populations with high rates of hepatitis B (identified through a blood test) or for clients who are convinced that the blood test is more accurate.

The authors concluded that both community-based organizations and the people they serve could benefit from the oral swab rapid test. HCV screening programs would be able to reach more individuals who are unaware of their HCV status, expand their outreach and screening efforts to other nonclinical settings such as mobile units, and facilitate client entry into mental health services, substance abuse treatment, or medical care. However, though the oral swab rapid test may allow more people to know their HCV antibody screening results more quickly than the EIA test, it will not eliminate the need for those who test positive to have followup PCR testing or medical care.

The study has some limitations. First, potential client benefits mentioned in the analysis reflect the perceptions of research staff—not the clients. Second, the experiences of participating research staff who work in New York City with a large population of individuals who use injection drugs may not be relevant to programs operating in less populated areas, to communities that have a smaller prevalence of injection drug use, or to other settings such as clinics or hospitals. Third, the authors were not able to precisely determine sensitivity of the oral swab rapid test. Finally, the study did not examine the costs of the two types of tests or the cost implications for programs that may choose to switch testing methods.

Methodology

The same methodology used in developing the literature review for TIP 53 was used for this update.

References

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