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Using qualitative data, people's perceptions, and the science of decision making to inform policy and improve hepatitis C care for people who use drugs

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Jones et al. (2014) make an important contribution in their recent systematic review of qualitative research on how persons who inject drugs (PWID) perceive hepatitis C virus (HCV) screening and diagnosis. Systematic reviews are increasingly utilized to inform best practice guidelines and health policy (Lavis, Posada, Haines, & Osei, 2004; Sweet & Moynihan, 2007). Most syntheses of existing data focus on randomized controlled trials and quantitative data, and few make use of the equally important information to be derived from well-organized syntheses of high-quality qualitative research (Hayden, Côté, & Bombardier, 2006; Jack, 2006). The UK National Institute of Health and Clinical Excellence (NICE) efforts to inform evidence-based policy based on qualitative as well as quantitative data set a standard that should be more broadly disseminated.

HCV is a global public health problem, with over 170 million people infected (Aceijas & Rhodes, 2007). The development of highly efficacious HCV treatment affords the potential to cure HCV infections, and perhaps even eradicate HCV infection through improved primary prevention, screening, linkage to care, treatment, and treatment as prevention (Martin, Vickerman, Goldberg, & Hickman, 2014; Wiessing et al., 2014). Unfortunately dramatic gaps in the HCV care continuum significantly limit the population-level effectiveness of these efficacious therapies (Linas et al., 2014). Jones et al. highlight the significant variation in the availability, systems for, and uptake of HCV testing among PWID. In the US, significant attention has been focused on efforts to screen people in the 1945–1965 birth cohort (Ward, 2013) yet it is PWID who remain the core of the epidemic. Jones et al. highlight the importance of understanding the views and experiences of both current PWID, as well as former PWID, as former users may constitute an important proportion of those with undiagnosed HCV.

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Conflicts of interest

The authors have no conflicts of interest to disclose.

Extending the scope of interest in Jones et al. to include people who use drugs by non-injection, as well as injection routes, would be highly relevant as non-injection drug use itself been associated with HCV risk (Oliveira-Filho et al., 2014; Scheinmann et al., 2007). People who use drugs (PWUD) but who do not inject are linked through social and risk networks with PWID populations where HCV prevalence may be 50–90% (Grebely & Dore, 2011; Koram et al., 2011). PWUD who do not inject have a high risk for transitioning to injection drug use. Recent initiates to drug injection have the highest risk for HCV acquisition (Hagan, Pouget, Des Jarlais, & Lelutiu-Weinberger, 2008).

One dominant theme in Jones et al. was the lack of clarity PWID had regarding HCV test results which our qualitative study of both PWUD, found as well (Jordan et al., 2013). Reactions to positive diagnoses were also highly variable ranging from unconcern or denial to anxiety. Likely central to this lack of clarity and variability in responses is the lack of consistent and clear post-test counseling messages. One relevant issue is reliance on two-step HCV testing procedures, in which an anti-HCV test is performed, and if positive, HCV viral load (confirmatory) testing is conducted, frequently in a separate location. Since 20–25% of those found to be anti-HCV positive will not have active infection, a temporal separation of anti-HCV and confirmatory testing complicates the post-test message; this is a step where many people become disengaged from care, never receiving needed confirmatory testing. Real-time confirmatory tests are in development; currently, reflex testing in which rapid antibody tests are followed immediately by (non-real time) confirmatory testing (from the same specimen) is the best strategy to minimize losses at this step in the HCV care continuum.

A main inference to be drawn from the consistent theme in Jones et al. and other studies of PWUDs (Jordan et al., 2013) is the need for well-developed post-test counseling messages, at the time of antibody and confirmatory testing, that effectively promote linkage to care and behavior change. Clear post-test counseling messages should also be developed both for those who are found to be uninfected and for those who have cleared infection. The 20–25% who spontaneously clear HCV unequivocally engaged in HCV risk behaviors and would therefore benefit from being told they were exposed, very fortunately cleared HCV, and that they are not immune and could get re-infected and develop chronic infection. This should be communicated in ways that promote both understanding and relevant behavior change, and access to interventions to reduce risks should be provided.

Qualitative data highlight that HCV-related beliefs and attitudes are influenced by situation, social context, and personal relationships (Munoz-Plaza et al., 2008). Numerous studies have shown that people make decisions, including healthcare decisions, using two distinct modes of decision-making – deliberative and experiential (Kahneman, 2003; Tversky & Kahneman, 1981). The cognitive frames and heuristic devices used in experiential thinking are often useful and may aide deliberative decision-making. However judgment heuristics may introduce cognitive biases, which may contradict deliberative decisions and lead to counterproductive decisions, potentially contributing to risk behaviors and poor healthcare engagement. Availability bias is one cognitive bias in which a single adverse example is given more emotional weight than the preponderance of data (Kahneman, 2003; Tversky & Kahneman, 1981). In our study, knowing others who experienced side effects from HCV

treatment was cited by many as a reason to avoid HCV testing or avoid acting on test results (Jordan et al., 2013).

Another important theme was the anxiety and confusion introduced when testing was conducted without explicit consent (Jones et al., 2014; Jordan et al., 2013). Similar concerns emerged when we interviewed PWUD about their perceptions of genetic testing (Perlman, Gelpi-Acosta, Friedman, Jordan, & Hagan, 2015). When reasons for genetic testing were provided, PWUD were generally agreeable to genetic testing; when testing was conducted without rationale or a priori consent, it raised concerns of both discrimination and experimentation. Concerns about preserving one's autonomy of decision-making are not unique to PWUD and in fact are the basis for the movement towards patient-centered care (Barry & Edgman-Levitan, 2012).

A useful lesson from decision science is the recognition of 'status quo bias' in which people more commonly chose a default option; a classic example is that significantly more people voluntarily chose to be organ donors when organ donation is the default than when the default is to not be a donor (Thaler & Sunstein, 2008). The thoughtful use of default choices is increasingly considered and employed to promote healthy decision choices (Kahneman, 2003). Given vast improvements in HCV treatment regimens and the clear individual and potential populational benefits of identifying infected persons, consideration should be given to making HCV testing the default, with the option of opting out, with appropriate pre-test and post-test counseling (Li, 2009).

Both the UK Institute for Government and the Cabinet Office and the US National Institutes of Health have published reports on how to more fully utilize advances in the scientific understanding of decision-making and behavior change to inform policy (Institute for Government and the Cabinet Office, 2010; NIH SOBC Workgroup, 2009). Well-organized qualitative data of people's understanding and perceptions of HCV testing and care, and thoughtful and respectful application of decision science are promising strategies to improve HCV care, and to advance efforts to eradicate HCV, among PWUD.

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References

- Aceijas C, Rhodes T. Global estimates of prevalence of HCV infection among injecting drug users. *International Journal of Drug Policy*. 2007; 18(5):352–358. <http://dx.doi.org/10.1016/j.drugpo.2007.04.004>, pii: S0955-3959(07)00091-6. [PubMed: 17854722]
- Barry MJ, Edgman-Levitan S. Shared decision making—The pinnacle of patient-centered care. *New England Journal of Medicine*. 2012; 366(9):780–781. [PubMed: 22375967]
- Grebely J, Dore GJ. Prevention of hepatitis C virus in injecting drug users: A narrow window of opportunity. *The Journal of Infectious Diseases*. 2011; 203(5):571–574. <http://dx.doi.org/10.1093/infdis/jiq111>. [PubMed: 21282190]
- Hagan H, Pouget ER, Des Jarlais DC, Lelutiu-Weinberger C. Meta-regression of hepatitis C virus infection in relation to time since onset of illicit drug injection: The influence of time and place.

- American Journal of Epidemiology. 2008; 168(10):1099–1109. <http://dx.doi.org/10.1093/aje/kwn237>. [PubMed: 18849303]
- Hayden JA, Côté P, Bombardier C. Evaluation of the quality of prognosis studies in systematic reviews. *Annals of Internal Medicine*. 2006; 144(6):427–437. [PubMed: 16549855]
- Institute for Government and the Cabinet Office. MINDSPACE: Influencing behaviour through public policy.. 2010. Retrieved from <http://www.instituteforgovernment.org.uk/sites/default/files/publications/MINDSPACE.pdf>
- Jack SM. Utility of qualitative research findings in evidence-based public health practice. *Public Health Nursing (Boston, MA)*. 2006; 23(3):277–283. <http://dx.doi.org/10.1111/j.1525-1446.2006.230311.x>.
- Jones L, Atkinson A, Bates G, McCoy E, Porcellato L, Beynon C, et al. Views and experiences of hepatitis C testing and diagnosis among people who inject drugs: Systematic review of qualitative research. *International Journal of Drug Policy*. 2014; 25(2):204–211. <http://dx.doi.org/10.1016/j.drugpo.2013.11.004>. [PubMed: 24332457]
- Jordan AE, Masson CL, Mateu-Gelabert P, McKnight C, Pepper N, Bouche K, et al. Perceptions of drug users regarding hepatitis C screening and care: A qualitative study. *Harm Reduction Journal*. 2013; 10(10) <http://dx.doi.org/10.1186/1477-7517-10-10>, pii: 1477-7517-10-10.
- Kahneman D. A perspective on judgment and choice: Mapping bounded rationality. *The American Psychologist*. 2003; 58(9):697–720. <http://dx.doi.org/10.1037/0003-066x.58.9.697>. [PubMed: 14584987]
- Koram N, Liu H, Li J, Li J, Luo J, Nield J. Role of social network dimensions in the transition to injection drug use: Actions speak louder than words. *AIDS and Behavior*. 2011; 15(7):1579–1588. <http://dx.doi.org/10.1007/s10461-011-9930-1>. [PubMed: 21431412]
- Lavis JN, Posada FB, Haines A, Osei E. Use of research to inform public policymaking. *Lancet*. 2004; 364(9445):1615–1621. [http://dx.doi.org/10.1016/s0140-6736\(04\)17317-0](http://dx.doi.org/10.1016/s0140-6736(04)17317-0). [PubMed: 15519634]
- Li, R. NIH science of behavior change: Meeting summary National Institutes of Health. Bethesda, Maryland: Jun 15–16. 2009 2009
- Linás BP, Barter DM, Leff JA, Assoumou SA, Salomon JA, Weinstein MC, et al. The hepatitis C cascade of care: Identifying priorities to improve clinical outcomes. *PLoS One*. 2014; 9(5):e97317. <http://dx.doi.org/10.1371/journal.pone.0097317>. [PubMed: 24842841]
- Martin, NK.; Vickerman, P.; Goldberg, D.; Hickman, M. HCV treatment as prevention in prison: Key issues.. *Hepatology (Baltimore, MD)*. 2014. <http://dx.doi.org/10.1002/hep.27194>
- Munoz-Plaza CE, Strauss S, Astone-Twerell J, Jarlais DD, Gwadz M, Hagan H, et al. Exploring drug users' attitudes and decisions regarding hepatitis C (HCV) treatment in the U.S. *International Journal of Drug Policy*. 2008; 19(1):71–78. <http://dx.doi.org/10.1016/j.drugpo.2007.02.003>. [PubMed: 18312822]
- NIH SOBC Workgroup. NIH Science of Behavior Change meeting report. 2009. Retrieved from <http://commonfund.nih.gov/behaviorchange/meetings/sobc061509/report>
- Oliveira-Filho AB, Sawada L, Pinto LC, Locks D, Bahia SL, Castro JA, et al. Epidemiological aspects of HCV infection in non-injecting drug users in the Brazilian state of Pará, eastern Amazon. *Virology Journal*. 2014; 11(1):38. [PubMed: 24564954]
- Perlman DC, Gelpi-Acosta C, Friedman SR, Jordan AE, Hagan H. Perceptions of genetic testing and genomic medicine among drug users. *International Journal of Drug Policy*. 2015; 26(1):100–106. [PubMed: 25037119]
- Scheinmann R, Hagan H, Lelutiu-Weinberger C, Stern R, Des Jarlais DC, Flom PL, et al. Non-injection drug use and hepatitis C virus: A systematic review. *Drug and Alcohol Dependence*. 2007; 89(1):1–12. <http://dx.doi.org/10.1016/j.drugalcdep.2006.11.014>. [PubMed: 17174481]
- Sweet, M.; Moynihan, R. Improving population health: The uses of systematic reviews. *Milbank Memorial Fund/Centers for Disease Control and Prevention; New York*: 2007.
- Thaler, RH.; Sunstein, CR. *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press; New Haven, Connecticut, USA: 2008.
- Tversky A, Kahneman D. The framing of decisions and the psychology of choice. *Science (New York, NY)*. 1981; 211(4481):453–458.

- Ward JW. The epidemiology of chronic hepatitis C and one-time hepatitis C virus testing of persons born during 1945 to 1965 in the United States. *Clinics in Liver Disease*. 2013; 17(1):1–11. <http://dx.doi.org/10.1016/j.cld.2012.09.011>. [PubMed: 23177279]
- Wiessing L, Ferri M, Grady B, Kantzanou M, Sperle I, Cullen K, et al. Hepatitis C virus infection epidemiology among people who inject drugs in Europe: A systematic review of data for scaling up treatment and prevention. *PLoS One*. 2014; 9(7):e103345. <http://dx.doi.org/10.1371/journal.pone.0103345>. [PubMed: 25068274]

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