HCV Infection and Syringe Sharing Among People Who Inject Drugs in Rural New England:
The DISCERNNE Study

We interviewed Peter Friedmann, MD, MPH, IDHPS Fellow, Associate Dean for Research and Professor of Medicine at UMMS-Baystate about findings from the first two years of his NIDA-funded grant Drug Injector Surveillance and Care Enhancement for Rural Northern New England (DISCERNNE), and plans for the next phase of the study.

What was the motivation for the project?
As the opioid epidemic has shifted from a crisis of prescription opioids to one of heroin use, we have seen a rise in injection drug use (IDU). IDU is concerning because it increases the risk of bloodborne pathogens. Risky injection behavior, especially sharing syringes or injection equipment, exposes individuals to serious infections such as HIV and hepatitis C (HCV). Most research on risky injection behavior has been done with urban populations, but recent national surveillance data have shown the fastest rise in HCV incidence has been in rural areas. Rural persons who inject drugs are known to have less access to treatment and effective harm reduction measures, like syringe services programs. The fear is if HIV enters these networks, transmission rates will be high and costly to quell, like what happened in Scott County, Indiana from 2011 to 2015 in which a small rural county saw 215 new IDU-related HIV cases, almost all co-infected with HCV. Understanding injection behavior and service use is important to design interventions to reduce the risk for HCV and HIV among rural persons who inject drugs.

What are the goals of the project?
The 5-year project was funded in two phases. The first phase, which ended this past fall, examined the epidemiology of IDU, its infectious consequences, and service availability in 11 rural counties along the Interstate-91 corridor from Franklin County, MA, up to the Canadian border. The goals were to characterize the dynamics of risk behaviors, social networks, service use, and needs of rural opioid users. The second phase, which will run for the next 3 years, will test a response to the initial findings using a mobile van to provide syringe services and telemedicine treatment for HCV.

What did you learn in the first phase?
Of these rural persons who injected drugs, 67% tested positive for HCV antibodies. Of those who were HCV positive, 75% had shared syringes in the past 30 days, but only 18% reported any HCV medical care in the prior 6 months and 8% ever received HCV medication. The findings are concerning given that several of these counties, especially in Vermont and New Hampshire, are at high risk for a Scott County-like HIV outbreak - HCV is highly prevalent and untreated and syringe sharing is the norm, while access to clean syringes, phlebotomy services, and HCV testing and treatment are very limited.
What are the next steps for this project?

The next phase has two goals. First, we will perform a randomized trial in several hard-hit counties in Vermont and New Hampshire to examine the effectiveness of a telemedicine treatment for HCV integrated with syringe services programming on a mobile van, compared to usual referral to a local provider enhanced with care navigation. We expect that the mobile tele-HCV care will be associated with higher rates of starting HCV treatment, but also that those who receive HCV care will be more likely to reduce their syringe sharing. This latter hypothesis, based on findings from urban studies, is key to changing the norm of syringe sharing and thus reducing the risk of future HIV transmission. Second, a major barrier to HCV treatment is that persons with IDU are difficult to draw blood from, and phlebotomy services were so difficult to access during the grant’s first phase. So we are testing the accuracy of fingerstick dried blood spot testing to get HCV viral testing, which is essential for treatment.

Who are your partners in this research?

We are fortunate to have large, diverse, and experienced investigative group to steward this complex project forward. In addition to Project Director Randy Hoskinson, Lizbeth Del Toro-Mejas, Ely Bianchet, and Patrick Dowd, our team includes multi-PI Tom Stopka at Tufts and investigators from Dartmouth-Hitchcock, University of New Hampshire, and University of Vermont, as well as collaborators from harm reduction, public health, and human services agencies in Vermont and New Hampshire. Rural field research is definitely a team sport!


We interviewed Elizabeth Schoenfeld, MD, MS, Assistant Professor of Emergency Medicine at UMMS-Baystate and Fellow in the Institute for Healthcare Delivery and Population Science (IHDDS), about her recent paper, which appeared in Academic Emergency Medicine.

What were the main findings?

In this paper, we describe the process of creating a decision aid for Emergency Department patients and doctors to use when deciding whether to obtain a CT scan when a patient appears to be suffering from a kidney stone. We spent about 18 months working on this study, and over a 100 “stakeholders” were involved, including patients, community members, and doctors from all over North America.

What does this study mean for patients?

We have developed a short pamphlet that patients will receive when they are facing this question. It explains to them that they have a choice, gives them enough background information to be educated, and walks them through the options. It helps the doctors by providing a lot of background information, giving them more time to actually talk about the options with the patient.

What does this study mean for you as a researcher?

This decision aid creation has been a labor of love – and although the project time period was about 18 months, I started planning this particular project 7 years ago. It’s the reason I went back to school for my Masters in Clinical Research after my fellowship.
What makes it so special?

Physicians face hundreds of decisions every day. Sometimes what makes sense for the health of the patient is clear, but often decisions are influenced by various pressures – the pressure not to miss anything, the pressure to do more testing because “more is better.” When you ask physicians about what they would do if they were the patient, the choices are different. Shared Decision-Making – getting the patient involved in decisions – just makes sense. In this scenario, the CT can be avoided about half the time – and this tool will help physicians and patients have conversations that change management.

That sounds great, is the decision aid publicly available?

Once published, it will be available online. There will be a link to a form to give us further feedback. At this time, it is a communication tool – but it has not been tested, just created and refined. It is currently being studied at BMC in a randomized controlled trial. Our hope is that after this trial, we will be able to say that it is effective in encouraging a conversation, educating patients, and decreasing radiation to our population.

What else should we at BMC know about this study?

This publication also utilizes BMC’s second-ever “graphic abstract.” Thanks to our resident cartoonist, Allison Litera, we have used a cartoon style to demonstrate what the paper is about. You’ll find it below.

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**Do I need a CT scan for my kidney stone right now?**

They think the pain is from a kidney stone. Do I need a CT scan to know for sure?

Factors to consider when thinking about a CT scan:

- Uncertainty
- Invasive exposure
- Time in ER
- Cost
- Just says

Then we can discuss it together.

My opinion matters!

We have a decision to make. Together.

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