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## Commentary on Fraser *et al.* (2018): Evidence base for harm reduction services—the urban-rural divide

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### Abstract

The evidence base for scaling-up hepatitis C virus (HCV) treatment and harm reduction services within rural communities is limited, and requires a better understanding of the socio-cultural context and operational issues for these distinct settings. Best practices from US urban centers, where most implementation research has been focused, do not necessarily translate to sparsely populated rural areas, where HCV and harm reduction services are limited and fragmented.

### Keywords

harm reduction; hepatitis C virus; medication-assisted treatment; opioid use; people who inject drugs; syringe service programs

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Fraser *et al.* show that scaling-up hepatitis C virus (HCV) treatment, along with HCV prevention [syringe service programs (SSPs) and medication-assisted treatment (MAT)], has the potential to reduce HCV burden dramatically among people who inject drugs (PWID) in rural US settings [1]. These results are encouraging, and highlight the potential opportunities for improving HCV prevention and treatment within rural settings. The scale-up recommended by Fraser *et al.*, however, remains challenging, as the evidence base for implementing scale-up of these services within sparsely populated US rural communities is limited. Understanding best practices for implementation will require a better understanding of the socio-cultural context and operational issues for these distinct settings.

The contextual evidence on substance use and HCV from the past several decades has focused upon US urban centers rather than rural areas, where the opioid epidemic is growing [2]. This focus leaves several unanswered questions regarding how to guide the design and

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Declaration of interests

None.

effectiveness of the HCV response for rural settings: what are the health-seeking behaviors among PWID? How do social and structural level barriers and facilitators influence the use of harm reduction services and HCV testing and treatment? Who engages most frequently in HCV transmission behaviors? Where are the ‘hotspots’ of HCV transmission behavior, such as frequent needle sharing?

Ohio Appalachia is an area with a history of health disparities and a unique socio-economic context. Family support systems and social ties are strong, but are coupled with social disadvantage and limited educational attainment and employment opportunities [3–7]. It is necessary to elucidate the extent to which the positive attributes of this area, such as social support, can affect the expansion of HCV prevention and treatment services to Ohio Appalachia and other rural areas.

Operational and structural barriers exacerbate the unmet HCV prevention needs in rural areas. Harm reduction services, such as SSPs and MAT, are either limited or non-existent for PWID in most rural areas. While many SSPs in rural areas offer HCV testing, only one-third have HCV care and treatment referral tracking systems [8]. In Ohio, where acute HCV has increased 400% from 2009 to 2013 [9], seven SSPs exist, with only one situated within rural Ohio [10]. Created in 2011, this SSP operates for only 3 hours a week, running on donations and unable to meet demand. HCV testing is unavailable due to limited funding [10]. Similarly, MAT is largely unavailable, with only a few drug treatment centers and two detoxification centers within rural Scioto County, where the HCV rate is eight times higher than the state average [11]. Private physicians prescribe buprenorphine, but methadone is not available within the county. Increased funding is critical to expand harm reduction services, including SSPs and MAT, to meet the needs of the growing HCV epidemics in rural settings.

More broadly, HCV testing and treatment services are inadequate in rural settings. Many PWID are unaware of their HCV status until complications of their injection drug use, such as bloodstream infections or MAT, bring them into the health-care system [12,13]. This delay in HCV infection awareness is particularly prevalent among young and otherwise healthy PWID, given that their infection can remain asymptomatic for years [13,14]. Once diagnosed, treatment often requires transportation to major urban medical centers. Although effective treatment regimens are well tolerated for most patients and can be managed successfully by primary-care providers [12], many managed-care organizations require referral and prescriptions by hepatologists or infectious diseases specialists. These specialists are scarce within rural areas [15]. Furthermore, the requirements for treatment approval, including moderate liver fibrosis or cirrhosis, specialized radiological imaging, multiple negative drug tests and a minimum of 6 months since last use of drugs, are often onerous and time-consuming. Most importantly, these requirements are not consistent with the current the American Association for the Study of Liver Diseases (AASLD) and Infectious Diseases Society of America (IDSA) HCV treatment guidelines [16]. If providers’ HCV experience could be expanded and qualifying criteria for treatment coverage alleviated, then the availability of HCV treatment could be greatly increased.

The evidence base from urban communities, where the bulk of research has been focused, does not necessarily translate to rural areas where HCV and harm reduction services are

limited and fragmented. Indeed, further examination of the interplay of the socio-cultural context and economic disparities in settings with constrained choices or availability of harm reduction services and HCV testing and treatment can lead ultimately to the prevention of ongoing HCV transmission.

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