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Interrupting the social processes linked with initiation of injection drug use: Results from a pilot study

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ABSTRACT

Background: Injection drug use is a skill learned in social settings. Change the Cycle (CTC), a peer-delivered, one-session intervention, is designed to reduce among people who inject drugs (PIDs) injection initiation-related behaviours (i.e., speaking positively about injecting to non-injectors, injecting in front of non-injectors, explaining or showing a non-injector how to inject) and initiation of non-injectors. We hypothesized that participation in CTC would lead to reductions in initiation-related behaviours six months later.

Methods: Using respondent driven sampling (RDS), 98 PIDs were recruited in Toronto, Canada to participate in pilot testing of CTC. The baseline session consisted of a structured interview, the peer-delivered CTC intervention, instructions regarding RDS coupon distribution, and an invitation to return in six months for a follow-up interview. For the 84 PIDs completing the six-month interview, we compared initiation-related behaviours at baseline with six-month follow-up.

Results: The proportion of PIDs offering to initiate a non-injector was reduced from 8.4% (95% CI: 2.5, 15.9) at baseline to 1.59% (95% CI: 0.4, 3.7) at 6-month follow-up. The prevalence of speaking positively about injection to non-injectors also decreased significantly. The proportion of PIDs who helped a non-injector with a first injection at baseline was 6.2% (95% CI: 2.1, 11.3) and at follow-up was 3.5% (95% CI: 0.8, 7.1). Paired analyses of initiator baseline versus follow-up data showed a 72.7% reduction in initiation (95%CI: 47.7, 83.1).

Conclusions: While further refinements remain to be tested, pilot study results suggest that CTC holds promise as a prevention intervention.

1. Introduction

Evidence suggests that human immunodeficiency virus (HIV) prevention programmes may have reached a plateau, and are not as effective to reduce transmission of hepatitis C (HCV; Kwon et al., 2009; Palmateer et al., 2010; Vlahov et al., 2004). Further, estimates of the median time to HCV infection point to a narrow window of opportunity to prevent new infections (Hagan et al., 2004; Roy et al., 2009). Scale-up of existing programmes may address these issues; however, new prevention strategies are also necessary (Degenhardt et al., 2010; Strathdee et al., 2010). Preventing the initiation of injection drug use holds promise to reduce transmission of both HIV and HCV (Day et al., 2005; Hunt et al., 1999).

1.1. Social learning theory and the initiation of injection drug use

Social learning theory (Bandura, 1977, 1986) offers insight into the initiation of injection drug use and the potential to interrupt this process. This theory hypothesizes that people learn and modify their behaviours through interaction, observation, behavioural experimentation, and reinforcement with others in their environments (Bandura, 1977, 1986). Repeated exposure, either through verbal or visual modelling of a marginal or even feared behaviour can make the behaviour seem normal, acceptable,

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and even desirable by desensitizing the observer to the possible risks of the behaviour (Bandura, 1977, 1986). Existing research supports this hypothesis with evidence showing that the vast majority of injectors report that prior to their first injection, they were exposed to injecting within in their social groups (i.e., family and friends), had observed others injecting and also heard about the positive effects of consuming drugs by injection (Abelson et al., 2006; Atlani et al., 2000; Bauman and Ennett, 1996; Crofts et al., 1996; Doherty et al., 2000; Durrant and Thakker, 2003; Frajzyngier et al., 2007; Harocopos et al., 2009; Khobzi et al., 2008; Kolla et al., 2009; McElrath and Harris, 2013; Neaigus et al., 2006; Roy et al., 2006; Sherman et al., 2002; Small et al., 2009; Stillwell et al., 2006; Strike et al., 2009; Witteveen et al., 2006). Moreover, most current injectors report that the decision to inject for the first time was their own and they actively sought out their first injection (Bryant and Treloar, 2007; Crofts et al., 1996; McElrath and Harris, 2013; Witteveen et al., 2006). The most common motives to begin injecting include: desire to consume drugs using a more efficient and economical method, to get a more intense 'high' to experiment, and/or to emulate injection drug using friends (Crofts et al., 1996; Small et al., 2009; Stillwell et al., 2006; Witteveen et al., 2006).

Non-injecting drug users typically require the help of an experienced injector with their first injection (Bryant and Treloar, 2007; Frajzyngier et al., 2007; Harocopos et al., 2009; McElrath and Harris, 2013). The percentages of current injectors who have ever helped someone with a first injection range from 17% to 47% (Bryant and Treloar, 2008; Crofts et al., 1996; Hunt et al., 1998; Strike et al., 2009). Among those who report having helped someone with a first injection, many are ambivalent and/or regretful about helping non-injectors with their first injection (McElrath and Harris, 2013; Shelley et al., 1993; Sherman et al., 2002; Small et al., 2009). Small et al. (2009) note that the initiation of non-injectors is perceived as a moral boundary that is not to be, but is routinely, crossed by current injectors. While not all current injectors will cross this boundary, the majority of current injectors, including those who have not initiated someone, report engaging in initiation-related behaviours such as speaking positively about injecting to non-injectors, injecting in front of non-injectors, and explaining or showing a non-injector how to inject (Hunt et al., 1999).

1.2. Social learning theory and Change the Cycle Intervention

Based on social learning theory, Change the Cycle (CTC) is an adaption of an intervention developed in the United Kingdom (Hunt et al., 1998) to reduce the occurrence of initiation-related behaviours. CTC integrates social learning theory by considering that if non-injectors are exposed to less injection-related talk (e.g., comments about the efficiency and intensity of the high to be gained from injecting versus other methods of consumption) and modelling of injection behaviours, the risk that they will develop an interest and motivation to inject drugs will be reduced. CTC operationalizes the idea that reducing initiation will require interrupting some of the social behaviours that influence initiation. Using preliminary research, we modified the UK intervention and instead of professional staff members we hired peer workers (i.e., people who currently injected drugs, lived in the community, with no training in social work or case management) trained in active listening methods to deliver the intervention. Active listening is a technique used within counselling, conflict resolution and training that requires the listener to verbally reflect back what a speaker has said (Helgesen and Brown, 1995). Built around a guided conversation, CTC incorporated this technique to help peer workers avoid introducing their own views or solutions. Active listening helps the peer workers assist intervention participants to think through and discuss ways in which they engage (or not) in initiation-related behaviours and to consider if and how they might avoid these behaviours in the future. Using an intervention manual, the peer workers deliver CTC in one session encompassing seven modules to guide the conversation: the participant's injection initiation event; their experiences, if any, of initiating others; the health, legal, and social risks of initiation for themselves and the non-injector; identification of aspects of their own behaviour that may inadvertently promote injecting to non-injectors (e.g., speaking positively about or modelling injection); and the generation and rehearsal of responses to a series of vignettes describing common initiation scenarios (see Table 1). CTC added a seventh new module about safer injection education to acknowledge that there are situations where initiation might happen anyway and also to target injection risks among current injectors. As Hunt et al. (1999) note, many current injectors engage in injection initiation-related behaviours. As such, we designed CTC for all current injectors in the hopes of reducing these behaviours, as well as initiation among those who have or might help someone with a first injection in the future.

The objective of this paper is to assess among current PIDs changes to initiation-related behaviours (i.e., speaking positively about injecting, injecting in front of non-injectors, explaining or showing a non-injector how to inject) and initiation of non-injectors, following a peer-based intervention.

2. Methods

2.1. Recruitment and eligibility criteria

We pilot tested CTC using a longitudinal study design and report data collected at baseline and six-month follow-up. Eligibility criteria included: aged 16 years and over; injected drugs in the past 30 days; lived in Toronto, Canada; spoke English; and able to provide informed consent. Since a sampling frame is not available for this population, we used respondent driven sampling (RDS) to recruit participants (Heckathorn et al., 2002; Heckathorn, 2002). RDS is similar to snowball sampling in its use of chain referral and peer recruitment. However, using Markov chain theory, Heckathorn (1997, 2002) showed that proportions (i.e., prevalence of a specific trait) in the sample will reach an equilibrium whereby they are no longer influenced by the choice of initial participants. For the initial participants (commonly referred to as "seeds"), we selected 10 people who: met the recruitment criteria; were connected with the study locale, a peer-based harm reduction programme at a community health centre; and, who were well known among other PIDs. After completing the baseline interview, participants were provided with three uniquely numbered RDS coupons, instructions about who and how to recruit, and invited to come back in six months for a follow-up interview. Participants received $25 CAD for the baseline interview and $5 CAD for each eligible participant that they recruited into the study (up to a maximum of six). Participants who completed the six-month follow-up interview were paid $25.

2.2. Measures

All study procedures and data were collected by an interviewer, with research and frontline service delivery experience. The interviewer verified eligibility, administered pen-and-paper questionnaires and reminded participants of follow-up interview dates. Peer intervention workers delivered the CTC intervention, but did not collect any data. At baseline, recruitment seeds and potential participants presenting with a valid RDS coupon were asked questions to confirm eligibility. After providing written consent, each participant completed the baseline interviewer-administered questionnaire asking in reference to the past six months questions about: demographic characteristics, drug use, injection risk behaviours, Severity of Dependence Scale (Ferri et al., 2000; Gossop et al., 1995, 1997), and initiation-related behaviours. For RDS weighting procedures each participant was also asked, 'How many people do you know who inject drugs, who also know you, and who you've spoken to in the past 6 months?' After the baseline interview, each participant completed the peer-delivered intervention session (see Table 1) and then a short interviewer-administered, post-intervention questionnaire. At the six-month follow-up interview, participants reconfirmed consent and completed a shortened version of the baseline interview with questions about changes to employment, income, housing, drug use, initiation-related behaviours and attitudes in the six months since the baseline interview.

All study procedures took place at the study office. Baseline data were collected from June to September 2011 and six-month follow-up data from November, 2011 to February, 2012. Data from questionnaires were entered into Microsoft Access (Microsoft Office, 2010) by a research assistant and verified by another. All electronic data were stored on a secure server using a password-protected system.