

Georgia Syringe Vending Machine Trial

Eastern Europe and Central Asia (EECA) have a very high prevalence rate of injection drug use (IDU) and a related severe HIV epidemic; prevalence of IDU in the Republic of Georgia is the third highest in the world. IDU population prevalence rates are 1-2% in Ukraine, 1.6% in Kazakhstan, and >2% in Russia compared with a global rate of 0.27%.[1, 2] IDU is a driving force behind the growing HIV epidemic in EECA, with 1.7 million people living with HIV [3, 4]. With an estimated 50,000 [5] IDUs the prevalence of IDU in Georgia ranks third highest in the world [2]. Although HIV prevalence among PWID in Georgia is relatively low (1-4%)[6] at present, the consequences of IDU are high, and include high rates of HCV (61-92%) [7], as well as myriad social and health problems [6].

Needle and Syringe Programs (NSP) are effective in reducing HIV and HCV transmission risk among people who inject drugs, but the coverage in EECA is far from the level that could impact the epidemics. NSP is an effective evidence-based intervention to reduce transmission of HIV/HCV via unsafe injection among IDUs. A systematic review (n=12 studies) concluded that the risk of transmission of HIV among NSP participants is approximately half of the risk among those who are not engaged in NSP [8]. A systematic review concluded that in case of sufficient coverage NSPs are effective in reducing both HIV and HCV infection among PWID [9]. A study commissioned by UNAIDS in eight countries of the Eastern Europe and Central Asia (Armenia, Belarus, Estonia, Georgia, Kazakhstan, Moldova, Tajikistan and Ukraine) concluded that over the period of 2000-2010, NSPs were estimated to have averted 10-40% of HIV infections in these countries; a lower percentage of HCV infections were averted (~5-25%) [10]. However, in the EECA region the major problem with NSP implementation is low coverage. In no country have recommended coverage targets for HIV prevention among PWID (60% for NSP and 40% for OST) been achieved [11, 12].

Transition from Global Fund funding poses significant challenges to sustainability of NSP. Many countries in the EECA region, including Georgia, are in the process of transition from Global Fund funding to national funding. Funding for harm reduction programs, in particular for needle and syringe programs in many cases, comes from GF exclusively [12]. Experience accumulated in relation to sustainability of donor funded programs (PEPFAR, GAVI, AVAHAN cases), and the results of Global Fund withdrawal from Albania, Romania, Bulgaria, Estonia and Serbia suggests that this will be a very challenging process and there are considerable risks to the sustainability of HIV programs in the region. Programs focusing on HIV prevention among PWID were affected in the first place in countries from which GF has withdrawn (partially or fully). Where national strategies and NFM proposals are being developed and include transition related strategies, harm reduction programs, in particular needle and syringe programs are the only programs with very low or no projected domestic contributions [12]. There is a critical need to adopt innovative approaches to HIV/HCV prevention in order to optimize resource allocation and sustain programs currently supported by the GF.

Syringe Vending Machines (SVM) are effective and cost-effective intervention to supplement the standard NSP, to reach hard to reach groups such as young injectors and women, and to cover geographical areas, where fixed or mobile NSPs do not operate. The rationale for installing syringe vending machines is to make sterile injecting equipment available to people who, for a variety of reasons, cannot obtain it from other outlets, or prefer not to do so. The intention is that the vending machines supplement, not replace, the services provided by the existing NSP outlets. Evidence from Switzerland, Germany, France, Italy, the Netherlands, Austria, Australia and New Zealand suggests that in addition to increasing after hours access for regular NSP service users, SVMs are successful in reaching IDUs that do not normally attend fixed site NSPs, such as younger PWIDs and women [13-

15]. SVMs are effective approach to provide service to beneficiaries in geographical areas that are not covered by traditional (fixed or mobile) NSP services.

We propose to conduct an operational trial to implement syringe vending machines in Georgia. Our specific aims are:

Aim 1: Set the precondition for SVM implementation by establishing a community advisory board, assessing needs and barriers, and tailoring the SVM to meet stakeholder needs.

Aim 2: Conduct a stepped-wedge trial to measure effectiveness and adoption of the SVM.

Aim 3: Describe the implementation process, assess barriers and facilitators and measure cost of implementation and sustainability.

We hypothesize that implementation of SVM will result in: (a) improved 24/7 access to sterile equipment for regular NSP service users; (b) improved access to sterile equipment for those PWIDs, including young PWIDs and women, who are not in contact with HIV prevention services and NSPs; (c) reduced transmission of HIV and HCV due to adoption of safer behavior by wide groups of PWIDs. The proposed work is significant because it addresses critical need to sustain HIV prevention programs in Georgia and EECA and to reach hard to reach unserved groups of PWIDs.

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