THE REVIEW ON EFFECTIVENESS OF NEEDLE EXCHANGE PROGRAMS
Anshul Saxena, Ankita Kakkar, Pooja Rastogi
Department of Medical, Sharda University, Greater Noida, Uttar Pradesh

ABSTRACT: This paper illustrates a critical issue about the continuing transmission of certain communicable diseases like human immunodeficiency virus (HIV), and the efficacy of needle exchange services in educating about these concerns among intravenous (IV) drug consumers. Except as explicitly mentioned, the word “other communicable diseases” will be used in the all-encompassing expression HIV. Throughout research on needle exchange services, many countries tended to have provided more of the results, although surveys have also been performed during the past few decades. Although most hypotheses accept the issue, some hypotheses do remain which assume needle exchange programs do not alleviate opioid addiction. The findings indicate that there is data suggesting that Needle Exchange Programs (NEPs) are an important solution to minimizing the transmission of HIV and other communicable diseases among drug consumers. This paper's underlying theory suggests that if available, IV opioid consumers would tend to use clean needles, thereby growing the risk of acquiring HIV and other communicable diseases. The latest research has been released since late due to the rising spread of HIV in suburban areas and the increased number of deaths among young people.

KEYWORDS: Communicable disease, Disease transmission, Needle exchange programs (NEP), Transmission of human immunodeficiency virus.

INTRODUCTION
NEP was first launched in Amsterdam in 1985. The system was set up by a substance addict organization known as Junkies’ Union, and was quickly implemented by the Public Health Department of Amsterdam. NEP has since turned into a foundation to deter HIV spread in IDUs. The NEP services were spreading internationally and touching emerging and industrialized nations. NEPs have been widely linked with the increase of social ills like HIV[1]. Although the public is cynical of the efficacy of these interventions or that it is a means of manipulating people, the government has consistently embraced NEPs, and also allows law enforcement authorities to enable these systems to run separately without supervision. Empathetic workers' jobs has also made needle exchange services an extremely critical factor in combating HIV spread. However, the image of the IV opioid patient has evolved over the last ten years or so, owing to the quick availability to pharmaceutical medications, many of today's IV opioid consumers are predominantly female or affluent and middle-income patients. The concerns about how to better represent this new group continue to be answered. Nevertheless, issues such as; will needle exchange services be extended to cover locations outside of major urban centers? Such societies would be receptive? Was there likely to be a boycott against current programmes? Because of these unanswered concerns, it is necessary to research the feasibility of needle exchange services from a viewpoint of seeing how it might possibly impact different population groups in Milwaukee County and other counties in Southeast Wisconsin. These questions are going to help in making sure not to get off the track[2]. The social, political, and legal arguments and debates about how to develop and sustain “needle exchange programs” (NEPs) in the United States or abroad tend to pursue. Many that condemn such services seek confirmation or verification of the services' efficacy. Moreover, several of these critics believe that the implementation and expanded promotion of NEPs would have the impact of growing opioid usage, discarding needles, crime and public safety risks. Nonetheless, the primary purpose of the NEP system is to provide IDUs clean needles, with certain programs differing based on the place and nature of a community. The social, political, and legal arguments and debates about how to develop and sustain needle exchange programs (NEPs) in the United States or abroad tend to pursue. Many that condemn such services seek confirmation or verification of the services' efficacy. Moreover, several of these
critics believe that the implementation and expanded promotion of NEPs would have the impact of growing opioid usage, discarding needles, crime and public safety risks. Nonetheless, the primary purpose of the NEP system is to provide IDUs clean needles, with certain programs differing based on the place and program structure[3]. These key programs include secure injecting supplies (ammonia, cookers, cotton, and sterile water), Aids and treatment therapy, and often direct health care. Forms of NEPs range from mobile to fixed NEP locations, city and state-sponsored projects, “community-based NEPs”, and “activist-organized NEPs”. Each of these initiatives seeks to lower rates of HIV accidents. Researchers in this research plan to examine the efficacy of the NEPs systems in combating the transmission of HIV infection rates. The recent CDC reports of new incidences of HIV infections in the US suggest significant safety problems, with an estimated 46,500 individuals freshly diagnosed with the virus. HIV infection rates among adults and teenagers in the US have risen dramatically between 2008 and 2011, according to the CDC study. Since the mid-1990s, HIV incidence levels have been fairly constant at about 40,000 diagnoses a year.

Such populations tend to be negatively impacted by HIV, including Latinos, African Americans, and homosexual and bisexual people of all races / ethnicities. More than half a million individuals in US have suffered from AIDS. An additional one million individuals are diagnosed with HIV to date, with HIV incidences rising at a consistent rate of 30,000 diagnoses each year. While not at all have access to medication, innovative medications and therapies have allowed people diagnosed with HIV to live longer. Owing to the decline in HIV-related deaths combined with the growing amount of new HIV infections, the incidence of HIV / AIDS is at its highest point ever, and tends to grow per year[4].

Men having sex with men (MSM) tend to be the most predisposed to HIV group. In this group, however, HIV transmission has dropped from 65 per cent of total cases in 1986 to 43 per cent in 2005. Successful HIV preventive initiatives for MSM should credit this decrease in infection risk.

The number of cases related to substance use rises, by contrast (AIDs Details, 2017). An approximate 1.5 million consumers of injection medications (IDUs) are found in North America. Although the usage of drug injection is specifically linked to HIV infection, IDU sexual activities and others who have contact with IDUs lead indirectly to high levels of HIV incidence. HIV communication between IDUs may occur when injection apparatus is shared. HIV infection occurs among IDUs via unprotected intercourse, in addition to sharing injection equipment. High-risk opioid usage habits and high-risk sexual activities are also correlated with growing HIV-infection threats. HIV has been present for over 34 years and has been linked predominantly with homosexual activity and opioid consumers in the IV. IV opioid usage and HIV have significant consequences for public health; these have been approached through a number of strategies to harm reduction. When underground trade systems for syringe started to crop up in the late 1990s, distrust became the norm. The AIDS epidemic has become out of reach, as has the controversy over how to combat it in a culture of opioid abuse[5].

On the opposite extreme of the continuum were the faith figures, policymakers and certain critics in the areas of medicine and social science who supported the current recovery and prison approaches to cope with drug usage. The prevalence of IV drug usage has risen over the last 34 years, while the occurrence of new HIV infections has decreased owing to the introduction of antiviral medicines. Continuing work into the efficacy of different solutions to harm prevention, including needle exchange services, is meant to show that such interventions decrease the risk of being diagnosed with HIV among the population-using IV medication.

Problem Statement:
Among the problems discussed in this research paper would be the following questions: Since those with HIV and IV opioid problems are still viewed as oppressed parts of community, starting up NEPs is always a challenge and maintaining them going without intervention from law enforcement or cutting them off through lack of funds or social stresses. Is a needle exchange
system a successful solution to increasing HIV spread? Could the advancements of HIV care raising the incentive of abusers to utilize risk prevention services like the needle exchange program? And eventually, will the support for needle exchange services be impacted, possibly improved and less stigmatized now that drug usage for HIV and IV has extended to the suburbs? The most dangerous step of HIV infection is AIDS. People with AIDS have immune systems that are so severely weakened that they are having a growing amount of severe illnesses, called “opportunistic infections”. Reduction of damage (or minimization of hurt) - is a set of public policy strategies intended to mitigate the adverse social and physical effects of different human activities, both lawful and unlawful. HIV-Human Immunodeficiency Virus, generally referred to as HIV, is a virus that attacks the immune system by the disruption of white blood cells known as CD4. Such cells are in need of combating illness. Reducing CD4 cells can discourage an individual's body from battling infections[6].

HIV is a chronic illness that is not treated for at all. And with adequate medical attention, the virus may be managed. Methadone is a drug found in treatment-assisted therapy (MAT) to aid patients minimizing or avoid using opioids or other opiates. Methadone functions by improving how pain is treated by the brain and nervous system. This diminishes the debilitating signs of opiate withdrawal and prevents the euphoric impact of opiate medications including morphine, cocaine, codeine and semi-synthetic opioids like hydrocodone and oxycodone.

This research aims to provide information through the needs of IDUs for HIV prevention. The efficiency and affordability of HIV preventive resources can increase the quality of life by recognizing the needs of this community, and eventually decrease and/or avoid the transmission of HIV infection induced by injection drug usage. Needle exchange schemes, including but not restricted to HIV, have historically been associated with an increase in social ills. While the budget remains hollow, finding it financially impossible to finance them sufficiently, law enforcement has enabled them to operate effectively, without oversight, as long as there are no issues impacting the communities where the services are housed[7].

As a consequence, hiring empathetic staff has allowed needle exchange services to be a very valuable tool in preventing HIV spread. Nevertheless, the image of the IV opioid patient has evolved over the last ten years or so, due primarily to the convenient availability to prescription drugs, many of today’s IV opioid patients are predominantly female, and even white and middle-income abusers. Where is the new community going to be supported best? Can needle exchange services be expanded to cover regions beyond core urban centers? Such societies would be receptive? Was there likely to be a boycott against current programmes? Because of such unanswered issues, it is important to research the feasibility of needle exchange services from a viewpoint of examining how various population groups would be impacted.

HIV incidence levels are rising, drawing attention to reports about how the opioid addiction becomes widespread. Today’s IV drug consumer is very distinct from the past’s IV drug user— not exclusively the realm of rural, central people. The purpose of this report is to demonstrate that opioid addiction and associated illnesses have now expanded to the suburbs, and to establish studies on potential approaches that have caused this crisis. It assumes one can no longer presume what has been observed in prior work at certain sites and whether it is relevant. As the evolution of the IV opioid patient evolves, needle sharing services begin to evolve and HIV transmission persists. Therefore, it is important to figure out whether the lessons learnt are still relevant, and whether any recent results are helpful in combating the dissemination of HIV among drug consumers. However, when it comes to doing this work there are other difficulties. Understanding the shortcomings of this work is a positive start towards understanding where changes are expected[1].

Historically it was impossible to meet all IV opioid addicts and individuals with HIV as well as supplying them with supportive support resources. The shame that goes with these classes causes them hesitant to describe themselves. This makes it challenging to target them for attempts to
minimize damage, and implies a multi-faceted strategy. Not many trials have been performed that rely mainly on those commonly considered to be at reduced risk for both IV and HIV substance usage.

A methodological approach to the case study was employed. Approaches for gathering evidence included: compilation of documents and retrieval of archival information combined with analysis approaches utilizing different sources and publications peer reviewed. IDUs reflected a wide spectrum of demographic factors, including: individuals of both sexes, ethnicities, a number of sexual orientations, educational rates, wealth and working status, none of which tended to be a clear indication of heightened risk for HIV infection. Higher risk factors for professions of sex workers with diseases and low-income environments, the style and extent of usage, and the form of substance used[8].

Barriers to obtaining and providing programs involved lack of funding; restriction or discouragement of state and federal government facilities; stigma and discrimination; and lack of networking organizations. Recommendations to bridge the differences between demands and resources included: improved coordination between organizations and HIV preventive programs; exploring solutions and drawing up strategies to achieve access to safe syringes for all populations in need; formulating a financing strategy for drug abuse care and Hepatitis C facilities; ensuring continuous dissemination of HIV preventive knowledge across the campaigns of the media.

Injection equipment sharing among injecting drug users (IDU) is a big global mode of HIV transmission, particularly in Southeast Asia, the Middle East and Eastern Europe. During the last two decades, injection sharing has controlled HIV transmission in China. According to the National Drugs Control Commission's most recent survey, the number of identified opioid users in China is growing steadily each year. Registered opioid consumers numbered up to 2.34 million, of which 55.5 percent were IDUs. HIV incidence among IDUs in 2012 was 8.1 per cent, and about 37.5 per cent of people infected with HIV in China were injectors.

Interventions in the reduction of damage, especially “needles / syringes programs” (NSPs) and “Opioid Substitution therapy” (OST), have been shown to be highly effective in reducing drug-related HIV transmission. Such systems will dramatically reduce the occurrence of HIV in conjunction with antiretroviral therapy (ART). Implementation of harm reduction initiatives in many parts of the world remains controversial however. The Chinese government has declared 'People's War on Drugs' aimed at increasing narcotic regulation even though drug users are pressured into detoxification and detention, and re-education by labour camps.

Policy encouragement for harm prevention comes from a conceptual change in the Chinese government's thought through which regulation of drugs needs stronger participation from the public health community and disincentives for coercive steps, such as compulsory detoxification. There has been a shift in public views, from the stigmatization of opioid users to the acceptance of needle / syringe supply and methadone treatment, as well as focus on increasing awareness of HIV and effective usage of contraceptives for drug users.

Providing drug users with sterile needles and syringes does not raise the injecting duration, high-risk substance-related activity and crime rates among drug users. In China, NSPs have repeatedly been shown to be highly successful in minimizing HIV spread, drug-related damage and at the same time incredibly cost-effective. Nonetheless, NSP production fell well behind OST (mainly “methadone maintenance therapy” [MMT]). MMT, which is mistaken by others as a curative opioid treatment, is also granted more mainstream attention than NSP, which is often interpreted to promote substance usage.

An effective implementation of harm reduction initiatives also involves strong coordination across multiple government departments, especially in the health and public safety sectors. Although a previous study concluded that there was a lack of agreement among members in public protection and proposed improved coordination between police, administration, and public health officials,
minimal work examines the acceptability in policy execution and reasons to promote collaboration
between legislative policing and public health officials.

Benefits of Needle exchange programs:
Several proponents used empirical results to advocate for NEPs to be extended. As observed in a
research analysis by analysts, NEPs can in the future be a reliable point for certain abusers who
come to receive care and are associated with consumers minimizing unhealthy sexual activities by
condom distribution. Studies suggest that needle sharing services at a wide level have minimized
multiple harmful activities in the social sense. When the study demonstrated the social benefits of
testing initiatives, popular sentiment was less critical but still hostile, impeding investment and
further adoption. However, NEPs have the advantage of preventing the public from the
transmission of HIV and other diseases that may therefore be transmitted. The services also have
a way of disposing of unclean syringes and preventing the threats of hygiene if they were to be
thought of in streets.

Problems of Community and Effect on Social Disease:
While these findings show that the profile of IV drug users has dramatically shifted in the past
decade, there is no clear data on HIV levels or how measures to reduce HIV, like the needle
exchange system, impact this emerging community of IV drug users. HIV has been active for
around 34 years, and since then has been synonymous with IV consumers of narcotics. Because
both IV substance usage and Aids have significant public health consequences, a number of
strategies like harm reduction have been undertaken to tackle them. The prevalence of IV opioid
usage has risen over the past 34 years while the number of new HIV infections has dropped.

If law enforcement authorities interact with public policy concerns and help-seeking actions and
treatment programs, a significant action is made. Partly because of their lifestyle and the perception
of both HIV and becoming an IV drug consumer, there is a lot of difficulties in meeting HIV+
IV drug consumers. The co-morbidity of both substance usage and mental disease, and the
challenges that they present in meeting such future customers, must also be understood. This
paper may help to look at the obstacles involved with bringing IV opioid consumers to use
preventive services and needle exchange services with general.

**DISCUSSION**
The main solution for IV substance consumers in the 1930s was a civil enforcement system that
punished traffickers, distributors and customers. The prevalence of IV drug usage increased
throughout the 1960's and the response to criminal enforcement was perceived as providing
marginal efficacy when IV substance usage entered Middle America, prompting others to advocate
for a less restrictive solution that involved methadone treatment. While contentious, the reported
results of methadone treatment services prompted others to advocate for improved measures of
damage prevention in minimizing the IV opioid use-related social issues[9].

Implementing accelerated HIV treatment in urban and service environments has led to a
progressing HIV screening pilot effort being carried out in seven US communities. This article is
about having those participating with high-risk activities screened for HIV to minimize their
spread. The study is conducted at various locations like needle sharing programmes. This role of
the writers is to prove that the needle exchange system decreases HIV transmission not just by
providing clean needles but also by allowing those ignorant of being HIV+ know that they can
theoretically spread it to others[10].

The research further indicates that needle exchange services may be a means of referral to
healthcare facilities which thus decreases the risk of HIV infection. The paper discusses various
attempts to mitigate damage, and explores their comparative effectiveness. While introducing the
needle exchange system, it also discusses common practices. The author's aim is to demonstrate
us the beneficial effects of the needle exchange system where various approaches are used to
provide sterile needles to IV drug users. Such approaches are considered to be more effective in
hitting HIV users than other IV approaches[11].
Obstacles include popular sentiment, shortage of resources and a willingness to sustain an attitude to law and order. Such work centred on determining the shifts in the popular perception and whether there will be appetite for extending current initiatives or introducing services when none existed before. The Federal Government aims to investigate emerging patterns of opioid usage including different substances, forms of use and who is consuming them. This is therefore necessary to examine the activities leading to the creation of NEPs[12].

**CONCLUSION**

Needle exchange services may help to keep HIV from spreading. Providing an option to safely dispose of discarded needles or syringes. This also offers a forum to educate and remind IDUs regarding the effects of taking medications and becoming vulnerable to infections such as HIV. However, there is clear and significant proof that the usage and quality of sterile injection equipment for IDUs is hedging the spread of HIV. Although the public is wary about their plan to prosecute them, there are many advantages of these centres.

“The Federal Government” agreed to fund the services without intervention of drug enforcement to deter the transmission of Aids out of concern and not having to come forward and clean the needles. Therefore, community funding plus the usage of endogenous staff has rendered needle exchange services a very effective method in preventing the transmission of HIV. Nevertheless, the profile of the IV drug patient has evolved over the last ten years or so owing to easier access to pharmaceutical drugs, many IV drug patients are female from both the white and middle-income groups.

The elements of epidemiology and research that cover this topic are important for certain reasons. There is an immediate need to discuss the epidemiological essence of HIV and the communities it primarily impacts, as well as the causes for the significant incidences that impact the group. Many experiments have been done to seek to discover effective approaches to avoid HIV transmission. Part of the preventive initiatives was the creation and the setting up of the needle exchange scheme. A few US states endorsed this initiative in its early stages of implementation while the rest opposed it as having culminated in increased IDUs. However, despite a strong scrutiny and cynicism about the plan, epidemiologists chipped in and formulated public discussions over the system's usefulness in combating the outbreak. The evidence these epidemiologists planned and gave changed public and political views about the program's success in combating the spread of HIV.

**REFERENCES**


