

Leveraging Non-Communicable Diseases for Rapid Community-Based HIV Testing Mechanism in Sri Lanka

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Abstract

Background Both Human Immunodeficiency Virus (HIV) infection and Non-Communicable Diseases (NCDs) have a significant component of undiagnosed cases in the community. This situation complicates prevention of these conditions at all levels. An integrated approach provides an opportunity to screen people with minimal cost to the health system as well as for the clients.

Objective To Leverage Non-Communicable Diseases for Rapid Community-Based HIV Testing Mechanism in Sri Lanka

Methods A three-day screening programme of combined screening for HIV and NCDs was piloted at the central fish market complex, Colombo, which was identified as a hot-spot for HIV and Sexually Transmitted Infections (STI) based on recent HIV case reporting data. Multidisciplinary group of Health Care Workers (HCW) from the National STD/AIDS Control Programme (NSACP) conducted screening for HIV, hypertension and diabetes, after raising the awareness for NCD and STI/HIV. HIV rapid testing, random blood glucose and blood pressure was measured. Condom use was demonstrated and condoms made freely available. Those who were found with high blood pressure and blood sugar levels were counselled and referred, accordingly.

Results Out of 900 workers in the complex, 310 (34%) participated in the screening. Out of which 91% (n=282) were males. It was observed that 37 (12%) had systolic blood pressure >140mmHg and 28 (9%) had diastolic blood pressure > 90mmHg. Further, 18% of females (n=5) and 10% of males (n=28) had Random Blood Sugar value > 140mg/dl. Three men were found to be positive for the HIV rapid test, and one subsequently with HIV.

Conclusion & Recommendation Integrated approach provides an opportunity to reach high risk individuals, particularly those missing out from routine healthcare system including middle-aged working men, and this benefit outweighs the cost of community

Key words: HIV, NCD, screening, integrated approach

Introduction

The high burden of undiagnosed HIV infection in the community limits preventive efforts (1). The asymptomatic nature of HIV infection contributes to the fact that infected people fail to reach diagnostic services. Stigma associated with HIV adds to their reluctance to seek medical care (2). As a result, not only HIV, but also many other sexually transmitted infections remain undiagnosed in the community.

The situation is the same with most common non-communicable diseases (NCDs) (3). As most of the common NCDs including diabetes and hypertension do not have symptoms in early stages, a significant proportion remain undiagnosed. As there is no felt-need by the client, these diseases pose a huge challenge for preventive healthcare staff to provide quality care.

Commonly, routine health care system provide services during normal working hours of weekdays. This contributes to poor health seeking behavior among men who involve in earning wages. This is particularly true among those who are daily paid and informal sector workers.

Community based screening, which is very user-friendly for those who cannot reach health facilities, is an ideal method of screening for the hidden diseases in the community. However, as it involves a vast amount of human and financial resources, its yield remains questionable.

Using integrated approach to screen high risk population groups for multiple disease conditions provide a rational, feasible yet cost-effective opportunity to identify the hidden burden of diseases in the community. Community-based HIV and NCD testing campaigns could address the challenges in reaching target groups and provide an untapped opportunity to identify infected individuals early and bring them down to the care. This paper describes a combined approach that tested the feasibility and diagnostic yield of integrating NCD screening into a rapid HIV testing and referral campaign for all workers in the central fish market complex, Colombo.

Objective

To Leverage Non-Communicable Diseases for Rapid Community-Based HIV Testing Mechanism in Sri Lanka.

Methods

This study selected the workers of Central Fish Market Complex to implement the integrated screening programme. Patient data in the National STD/AIDS Control programme for the past 6 months immediately before the screening revealed clustering of reported HIV cases in Peliyagoda area. It was observed that central fish market complex is a hot spot for HIV and STIs.

A situational analysis was then performed and it was found that there were around 900 people working in the central fish market complex on daily basis from 2 a.m. to 10 a.m. They usually take off only on Poya days. Their nature of work is such that they do not wish to dedicate time to attend routine health services. This workforce comprised of high risk people for HIV such as Nattamis (300 in number) and labourers. Large and small scale fish sellers are also in a sizable number. Their recreation measures include visiting Bangkok, a high HIV prevalent city in the world. They generally give minimal priority for health. Therefore, this setting was selected to do an integrated HIV and NCD screening of the workers in combination with HIV awareness campaign.

Initial discussions with the premises manager and the chair of traders' union was very conducive. Their acceptance for a combined NCD and HIV screening was quite high, as a substantial proportion of the workers were already suffering from Diabetes and Hypertension. They suggested a suitable from 10 a.m. to 1 p.m., as that is the time they finish their daily routine.

Accordingly, a three-day, integrated screening campaign offering health education, diagnostic, preventive, treatment and referral services, was performed in May 2015. Multidisciplinary group of Health care workers from the NSACP participated in this programme. Awareness of NCD and STI/HIV was given to the participants as the first step. Services included point-of-care screening for HIV, hypertension and diabetes. HIV-infected adults met clinic staff and peer counselors on-site. Following intensive counseling, rapid referral for services were done. Further, screening for random blood glucose and blood pressure were performed. HIV rapid testing was performed followed by post-test counseling. Condom use was demonstrated and made freely available on site. Those who were found with high blood pressure and high blood sugar levels were counseled and referred for care.

Written consent was obtained for participation as there was a testing component involving phlebotomy. Personal data of the participants were kept with the public health consultant. A code was used to record laboratory results of the participants. Post-test counseling was provided to all the participants who underwent HIV testing.

Results

A total of 310 participants were enrolled for the 3-day screening programme. This was 34.4% of the total number of people work in the central fish market. The age of the participants was between 17-72 years and the mean age was 41 years. Out of those who participated in screening, 9% (n=28) were females and 91% (n=282) were males.

Participants involved in different types of occupations within the central fish market (Figure 1). Labourers (n=130) comprised 42% of participants followed by businessmen which

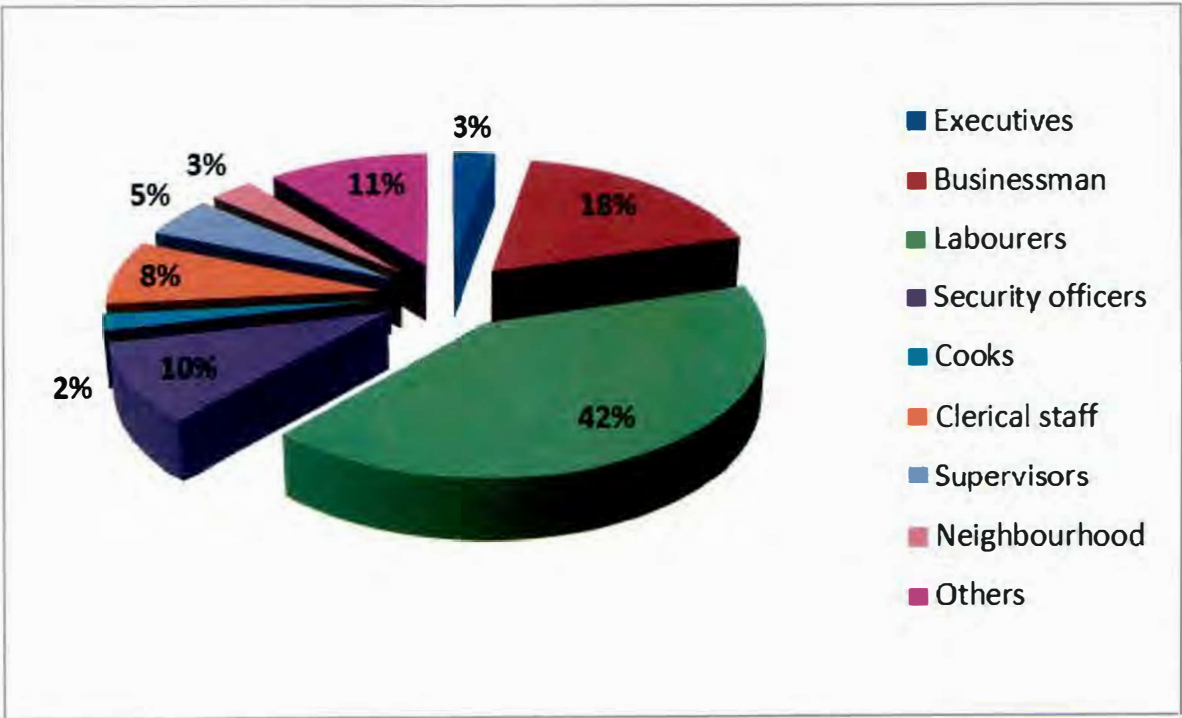
were 18% (n=56) and security officers which was 10% (n=31).

There were 37 participants (12%) who had systolic blood preasure over 140 mmHg. The percentage with high diastolic BP was 9% (n=28). Examining random blood glucose showed that 18% of females (n=5) and 10% of males (n=28) has RBS greater than 140mg/dl. Three men were found to be positive for the HIV rapid diagnostic test, out of which one person showed positive results for the confirmatory test. This patient was linked with the NSACP clinic for further care.

Seropositive rate of HIV infection in this population was 0.3%.

In addition, certain other health related issues including obesity, thyroid disease, sexually transmitted infections and chronic respiratory problems were identified and appropriate referrals were made.

Figure 1: Occupational categories of the participants



Discussion

The undiagnosed component of HIV infection is high in the developing world, posing a huge challenge to provide comprehensive care to the community. Asymptomatic nature of infection, stigma associated with the diagnosis, unawareness of risk factors, time schedules of routine health care system functioning which falls during working hours of people are few among many factors which prevent people from coming to health care facilities for medical examinations and related services. Providing services to their door-step is a feasible alternative, provided it is used in a cost-effective manner, so that the correct target groups are effectively screened. This necessitates innovative approaches, such as combining HIV screening with NCD screening, ensuring the clients would make use of the given opportunity while good yield is gained.

Discussing with the relevant group and fixing a suitable time ensured high participation. Providing services at their workplace enabled them to take part in health checks and health education without facing any financial losses. Poor male participation in health promotion and primary preventive activities is a barrier to reach high-risk groups for HIV and NCD in our country ⁽⁴⁾. The approach used in this study effectively addressed this issue, and 91% of the participants were males.

Stigma related to HIV prevails in our region and it limits the efforts taken by the NSACP to scale-up HIV screening among people ⁽⁵⁾. Combining common NCD screening to HIV screening helped to mask the stigma associated with HIV, and the participants could get themselves screened without any fear. The programme covered 34% of the people in the central fish market in 3 days, which could be considered as a very good coverage. This integrated approach, therefore, could be recommended to use in screening for diseases in which stigma affects participation.

Out-reached screening, or active case detection, which involves testing apparently healthy people in the community involves very high cost when compared to passive screening where people who present to health care facilities are tested ⁽⁶⁾. In addition to the routine functions, financial resources including transportation and dedication of additional human resources adds to their cost. If different programmes attempt to reach the community separately to achieve their objectives, not only the individual programmes will spend a lot on case detection, but also, the clients may affect

as they have to repeatedly dedicate time for the programmes. However, conducting integrated screening programmes to cover multiple diseases in an identified high-risk population gives a very high yield, while reducing the cost for both health care system as well as the clients. This approach is particularly beneficial in resource-scarce settings in the developing world.

Conclusions

A high burden of hypertension and diabetes together with risk behaviors for contracting HIV infection was identified in 34% of adult fish market workers. Improving male attendance and optimizing linkage to care require new approaches. The study demonstrates the feasibility of integrating hypertension, diabetes and HIV into HIV case detection initiatives.

Recommendations

Integrated approach to screen for HIV and NCDs used in this study could be used by the NSACP and by other disease programmes to conduct active screening in the community. This would provide high yield in identified high-risk and vulnerable populations who are difficult to approach otherwise.

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