Need based resource utilization: The key to successful syndromic management of sexually transmitted diseases in developing countries

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ABSTRACT

Syndromic management approach for treatment of Sexually Transmitted Diseases (STDs), although being an excellent tool, has been observed to have its own intrinsic limitations of scientific basis, applicability in the field level health care settings and thus derived ultimate benefits in terms of noticeable minimization of the STD events in the high risk groups including commercial sex workers, homosexuals, intravenous drug users and other vulnerable populations viz. migrant workers, truck drivers and casual laborers. The presence of widely scattered high risk population and their partners has a visible, although relatively delayed, impact on the prevalence and incidence of the STDs in the general population and therefore addressing the thus generated challenges is the need of the hour for existing health systems at the levels of government, semi government, private care providers and inter-sectoral partners. As a result, need based resource mobilization for appropriate, justified and correct use of trained manpower directed towards syndromic management based health care service delivery mechanisms linked with specialized resources is the key to achieving long desired dream of having a sexually transmitted disease free healthy society in developing countries. Such efforts shall reap rich dividends in the form of prevention and control of sexually transmitted infections as well as in non observance of related complications among the cases and their contacts thereby facilitating increased productivity among work force for ensuring achievement of the developmental targets of the country including socio-economic well being.

Key words: Acquired immunodeficiency syndrome (AIDS), behavior change communication (BCC), epidemic, human immunodeficiency virus (HIV), sexually transmitted disease (STD), sexually transmitted infections (STIs), syndromic management; targeted intervention.

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INTRODUCTION

Calls for increased investment in treatment of sexually transmitted infection (STI) across the developing world have been made to address the high burden of STIs and their association with HIV transmission [1]. The huge economic losses, due to work force being ill because of sexually transmitted diseases and associated challenges of family welfare, can be minimized through the sustained pro-active efforts for carefully considered and appropriately tailored strategically sound inputs related to the beneficiary focused initiatives through involvement of all possible stakeholders.

The importance of STIs has been more widely recognized since the advent of the HIV/AIDS epidemic, and there is good evidence that the control of sexually transmitted infections (STIs) can reduce HIV transmission. The main interventions which could reduce the incidence and prevalence of STIs include primary prevention (information, education and communication campaigns, condom promotion, use of safe microbicides, and vaccines), screening and case finding among vulnerable groups (for example, pregnant women), STI case management using the syndromic approach, targeted interventions for populations at high risk (for example, sex workers), and in some circumstances (targeted) periodic mass treatment [2].

Although syndromic management approach is feasible, adaptable and cost effective, frequent administrative and financial changes in priorities, Manpower, existing program management framework, targets and expected performance monitoring indicators induces stress among health care workers resulting in the undesirable consequences in terms of failure in full treatment of cases, their follow up and contact tracing for subsequent treatment.

Such a scenario poses challenges for identification, treatment and care of the patients suffering from Sexually Transmitted Diseases in the developing countries.

The existing research gaps include unaddressed issues of importance related to STD Control activities in targeted intervention programs, health care facility enhancement in quantitative and qualitative terms as well as sustained availability of the trained resourceful health care work force to ensure interruption of the chain of transmission for sexually transmitted infections. This study aims to identify the much-needed workable strategic support models for ongoing activities of STD Control in developing nations.

Objectives

The highly ambitious, extensive coverage centric, almost immediate, simplified, scientific and cost effective syndromic management approach towards STD treatment looks very interesting, promising and results oriented. However, the unaddressed challenges of such visionary provision leaves thus treated persons with repeat infections, increased vulnerabilities and therefore, subsequent need for repeat treatment. And hence the present study has the objective of identifying the spectrum of approaches required for developing replicable model of change directed towards STD control in developing countries.

MATERIAL AND METHODS

The study of global reviews and available literature was followed by unstructured thematic discussion with subject experts, and those involved in syndromic management of STDs. The salient issues of the discussion included in this study were as follows: (a) policy framework, (b) program management, (c) field-level implementation, (d) support mechanisms, (e) people's involvement, (f) supportive supervision, (g) monitoring mechanisms and (h) learning from the best examples. Being an unstructured discussion some areas of importance may have been left unaddressed due to resource constraints thereby limiting the study benefits.

Key findings of this study include (a) absence of treatment provisions for a large number of asymptomatic cases, (b) deficiencies in resource mobilization, especially for 'Public Private Partnership' model, (c) unproductive training, (d) high default rate, (e) need for focus on risk assessment, (f) lack of sustainable impact, (g) minimal focus on education for risk reduction, (h) condom provision, (i) counseling, (j) partner notification, (k) treatment and (l) follow-up of both the case and his/her or her partners. In addition, epidemiological research studies are required for filling up of gaps in syndromic approach based design, provisions and support mechanisms.

RESULTS

The syndromic management of sexually transmitted diseases has, despite its merits of being simple, scientific and cost effective approach, inherent limitations threatening the overall coverage of cases and their contacts for the desirable period of time with best possible efficiency. However, this approach provides enormous opportunities for the health care facilities to translate technical and managerial competence through cross sectional

involvement of service providers, while sustaining the existing network of health care functionaries, to provide syndromic management services through wider access to the community at large along with the provision of free and socially marketed condom availability. In addition, the remarkable aspect of this technique, illustrating clinical decision making through almost error-free results and immediate treatment availability to the remote rural, hard to reach and difficult area based population, makes it possible to strive for excellence and achievement oriented programmatic endeavors.

DISCUSSION

Although Desai et al. have noted that the prevalence of different STIs and HIV among the Female Sex Workers (FSWs) in the Surat, red light area is high despite high reported condom use with clients. They observed that syndromic case management was missing a large number of asymptomatic cases and even offering treatment in the absence of disease. Therefore, they concluded that it is necessary to explore alternative strategies for control of STIs in female sex workers and STI services need to be improved [3]. However, it has been commonly observed that having STD clinics with full technical competence for referral services, ensuring behavior change communication for minimizing the risks associated with hyperactive youth activities and smooth system in place for monitoring and follow up, has its impact on performance of the syndromic management method based interventional efforts.

The increased availability of facilities for treatment of STDs at peripheral centers might be a factor leading to a decline in the number of patients with STDs approaching higher centers like teaching hospital [4]. In another study, the knowledge of recent developments in STD syndromic management and effectiveness of prescribed drugs were poor, especially for genital ulcer and pelvic inflammatory disease, and less than half the prescriptions overall were judged as effective [5]. However, to have the thus gained experience replicated requires learning of the lessons at all the levels of professional, semi professional and volunteer inputs. The channels of condom distribution need to be ear marked, easily accessible and hassle free for appropriate, timely and designated use by both the streams of earlier and new entrant beneficiaries.

The developing countries also face challenges related to programmatic, administrative and financial issues as illustrated through lack of trained Manpower, questionability of its continuance to work in the designated area, ever changing priorities and interrupted fund management. These have been denting impressions even on the technically sound syndromic management program. Limited resourcefulness of the government sector and open economic policies has paved the way, in the developing countries, for the private health care set ups to boom. However, their unwillingness to work in relatively lesser paying areas requiring higher expenditures makes situations worse and critical.

In the absence of sensitive and affordable screening tests for STDs in women, periodic presumptive treatment coupled with prevention education is a feasible approach to providing STD services in this population [6]. Most of the population burden of RTIs is attributed to endogenous infections. Socioeconomic deprivation and gender disadvantage are associated with raised risk for 'Bacterial Vaginosis', while the risk factors for STIs indicated that disadvantaged women were likely to be infected by their husbands [7]. George et al. have concluded that treatment based on syndromic management would result in over-treatment of 90% of women with vaginal discharge [8]. But the general experience of mass campaigns related to the application of syndromic management for sexually transmitted diseases in developing countries have been conclusively and potentially highly beneficial for prevention of transmission of new infections in the society.

Vast numbers of people in India are severely disadvantaged in terms of income, education, power structures, and gender. Addressing these basic issues of human rights lies at the core of achieving better health outcomes [9]. A proper and useful public-private partnership initiative in geographically well distributed areas of developing world with due emphasis on equitable, accessible and affordable health care service provisions is the need of the hour. Technical inputs in terms of training and re-training of the pre identified health staff in batches, and adequate research provisions for the area specific requirements may help in the achievements of the objectives set for the prevention and control of sexually transmitted diseases. Demand generated supplies and fulfillment of the exhausted stores of condoms is one of the greatest challenges which, if addressed properly and scientifically, shall have a lasting impression on the achievement milestones of the sexually transmitted disease prevention and control program. Targeting the high risk groups and most vulnerable populations is the only alternative for breaking the chain of the transmission of dreaded infections.

The researchers of a China based study found that all patients with syphilis had been

correctly treated yielding 100% sensitivity through syndromic management method, but a large proportion of non-syphilitic patients were over-treated yielding 5% specificity [10]. However, a study conducted in Thailand inferred that using STI symptomatic screening and syndromic management alone might result in missed opportunities to detect STIs and to over treatment of STI-uninfected women [11].

The challenge of having large population cum area base and ensuring comprehensive coverage still remains unaddressed because of (a) non translation of the learning into action, (b) negligible coverage of the target population, (c) contact tracing of the symptomatic and asymptomatic infected persons in the population becoming difficult and (d) non usage of the condoms made usually freely available. The risky behavior itself makes one vulnerable to repeat infections and therefore, increasing burden of the patient base makes the sustenance of the activities more difficult and deficient. Dearth of expert advice and lack of trained counselors, in developing countries, makes the situation still worse with remote possibility of complete partner treatment and counseling.

The prevalence of STIs/RTIs among SWs in brothels in Bangladesh is high. An intervention strategy addressing both symptomatic and asymptomatic infections and periodic screening of high-risk groups (FSWs) for RTIs/STIs is essential for successful HIV and STIs prevention programs [12]. Both biomedical and cultural meanings of the symptom of vaginal discharge have relevance. Women who complain of vaginal discharge may well have reproductive tract infection; women who complain of burning hands and feet and weakness may well be anaemic and undernourished. It would be a grave mistake to interpret the complaint of vaginal discharge as purely related to social stressors. However, to focus only on the biomedical interpretation of these symptoms is to ignore the important cultural and metaphorical meanings of the symptom. When serious physical illness is not present, biomedical practitioners can still play an important role by promoting women's health in a broader sense, addressing key concerns such as women's workload, nutrition and social stress [13].

Though the syndromic approach has been a major step forward in rationalizing and improving the management of STIs, but syndromic algorithms have some shortcomings, and they need to be periodically reviewed and adapted to the epidemiological patterns of STIs in a given setting [14], as is evidenced from a South Africa based study inferring that Syndromic management of STIs can be expected to decrease the prevalence of curable STIs that tend to become symptomatic, but has the little effect on the prevalence of STIs that are mostly asymptomatic. [15]. It **i**s evident from the experiences of program managers that development of specific need based models of varied geographical, socio-economic, cultural and administrative settings shall be the best policy for achieving the maximum benefits out of the evidence-based syndromic management strategy for STD Control.

Recommendations

It is recommended to ensure evidence based policy formulation on the provision of effective sexual health services, conduct operational research, expand the scope of interventions and use inferences of applied research directed at improving sexual health [16]. The observed phenomenon, learning and expert inputs infer towards the need for reviewed efforts by policy makers and health care providers through adequate utilization of available support infrastructure in developing countries as per following details:

1. Approaching large young sexually active population for information, education and communication, so as to ensure their informed choices of contraceptives, safe sexual behavior and social interactions;
2. Reaching the urban migrant population through local health-care workers, motivators, non-government organizations and volunteers for on-site counseling, treatment and follow up;
3. The persons affected by displacements, due to natural disasters or compelling circumstances beyond one's control, need to be approached in view of their renewed environmental, habitation and circumstantial conditions through health education sessions, personalized attention, availability of condoms and long-term plans of re-settlement;
4. Addressing economic hardship related issues and social determinants of health, including poverty, ignorance, illiteracy and poor housing for ensuring sustainable development resulting in long-term benefits in terms of existing facilities and behavior change;
5. Difficult scenarios of human exploitation such as commercial sex work need careful considered interventions through aggressively planned and implemented health care policies, organized community efforts and human development directed towards millennium developmental goals;
6. Targeting those, who adventure beyond the limits of married life set by human society through multiple and unsafe sexual relationships, requires

family friendly 'reaching out' strategy for the much desirable change;

7. Stressing up on the availability of quality STD care services through organized health care settings in the peripheral primary and secondary health care facilities for the difficult, non-responding or complicated cases requiring personalized attention. The load of tertiary health care facilities, in this way, may be minimized for making available time, resources and manpower for critical medical care and necessary support;
8. Referral laboratories need to be strengthened for the purpose of catering to the requirements of services related to the microbial resistance, drug resistance and testing of new drugs;
9. Asymptomatic sexually transmitted infections, consisting of a large female population, require focus on the safe practiced behavior on the part of the individual and a rethinking of the programmatic interventional strategic inputs on the part of the program planners;
10. Empowerment of the women is the answer to many questions related to human development. Therefore, overall health promotion, peer assisted program formulations and delayed onset of sexual activity shall help in decreasing the vulnerability of the women for acquiring sexually transmitted infections;
11. Ignorant innocent adolescent women require careful intervention since they are unaware of preventive methods and usually seek services of locally serving unqualified health care service providers;
12. There is continuous conflict among the socio-economic factors of disease progression, disease control mechanisms and the vulnerabilities of women for exploitation, and hence, this conflict needs to be resolved with justified reasonable and acceptable solutions, which are envisioned in the ideal societal fabric;
13. No denial can be made for the essentiality of multi pronged approach including individual, community, targeted intervention and structural reform centric decision making and subsequent necessary actions;
14. Creation of enabling environment should be a prime area of targeted intervention for assessing the real requirements, fulfilling the needs and demands and saturation of the system through administrative, social and economic reforms;
15. Independent facility provision for sexually transmitted disease control may not be necessary and its judicious amalgamation with the existing health care programs like National AIDS Control Program may bear fruitful results.

CONCLUSIONS

Syndromic management of STD can break the chain of transmission for STI and HIV. It can best be achieved by a combination of suitable interventions backed by strong political, social, administrative, reformist, behavioral and financial commitments. Tracing of source contact(s) along with secondary contact(s) followed by their treatment after obtaining due consent is still a distant dream. Essential steps for syndromic management principles need to be thoroughly practiced for contact tracing, drug compliance, confidentiality, condom availability cum use and counseling.

The need of the hour is (a) to have vigilant, result oriented and trained program managers, (b) ensure people's participation, (c) conduct quality operational research, (d) develop innovative approaches, (e) show the willingness to make a difference and (f) performing simultaneous actions through honest trained health care functionaries for realizing the much sought after sexually transmitted disease free scenario in developing countries.

The day is not far away when the dream thus envisioned for control of sexually transmitted diseases in developing countries shall come true through system based organized reforms and continuing action cum support mechanism in place.

Conflicts of interest

The authors have declared no conflicts of interest.

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