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A Systematic Approach to the Design and Scale-Up of Targeted Interventions for HIV Prevention among Urban Female Sex Workers



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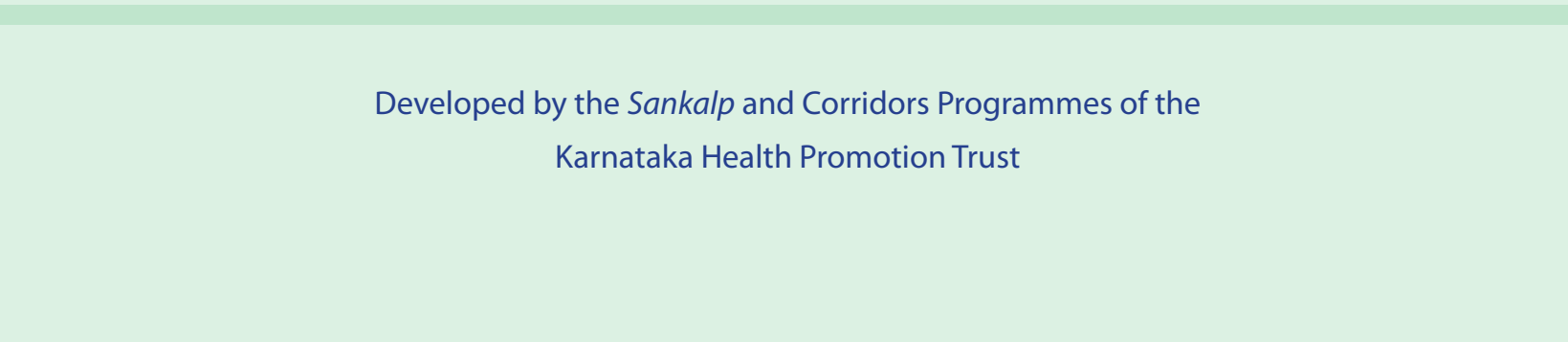
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Developed by the *Sankalp* and Corridors Programmes of the
Karnataka Health Promotion Trust





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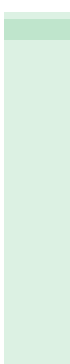
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FOREWORD

HIV transmission continues to be a significant global health challenge that requires targeted prevention activities implemented strategically and at scale for high-risk populations. The development and implementation of evidence-based HIV prevention programmes designed to reduce transmission in the context of female sex workers (FSWs) is a strategic priority for HIV prevention. This document describes a systematic approach developed by the Karnataka Health Promotion Trust (KHPT) for the design, implementation, and evaluation of strategic HIV prevention programmes targeted at urban FSWs.

This approach is unique in terms of its ability to rapidly map the local context of the epidemic, enumerate risk populations and apply this knowledge directly for programme development and implementation. It is also unique in its emphasis on monitoring and evaluation, which incorporates a feedback system and micro-planning to ensure dynamic programmes have the agility required to identify gaps and evolve quickly in response to changes in the populations, behaviours, and transmission dynamics.

The purpose of this document is to provide practical guidance for policymakers, programme managers, and implementing organizations in designing, implementing and scaling-up HIV prevention programmes targeting urban FSWs. This document outlines strategies to rapidly establish core programmes as part of macro-planning. As part of micro-planning, service delivery is refined through the use of problem solving tools and the establishment of routine monitoring and evaluation activities.

The approach described here to design and scale-up targeted interventions is appropriate for interventions targeting any vulnerable population and has been used in India, Sri Lanka, Pakistan, Bhutan, and China not only for urban FSWs, but also for injecting drug users, men who have sex with men, and male and transgender sex workers. This approach can be used without paper-based systems and can be implemented at a variety of geographic levels, including state and district level.

Several key messages are highlighted throughout this document. First is the underlying assumption of the strategic importance of HIV prevention interventions among FSWs. Second, populations of FSWs are not homogeneous, and mapping is essential to understand the local context and dynamics of HIV transmission. Third, HIV prevention programmes should be implemented at scale to ensure high population coverage. Fourth, in targeted HIV prevention programmes, micro-planning is needed to ensure that the intervention mix is right for the local context and that there is sufficient community involvement and ownership to ensure it is acceptable. Fifth, the vulnerabilities faced by FSWs need to be addressed through empowerment and community collectivization for comprehensive and effective HIV prevention programmes. Finally, monitoring and evaluation strategies can provide opportunities for continuous improvement in programme performance.

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RISKS AND VULNERABILITIES OF FSWs

Certain population groups are known to be at higher risk of HIV infection and transmission than others in a given location depending on the characteristics of the local HIV epidemic. These characteristics include the phase of the local epidemic, behaviours of infected individuals, socioeconomic and political factors that influence the context of the epidemic, and opportunities and support for the populations at highest risk.

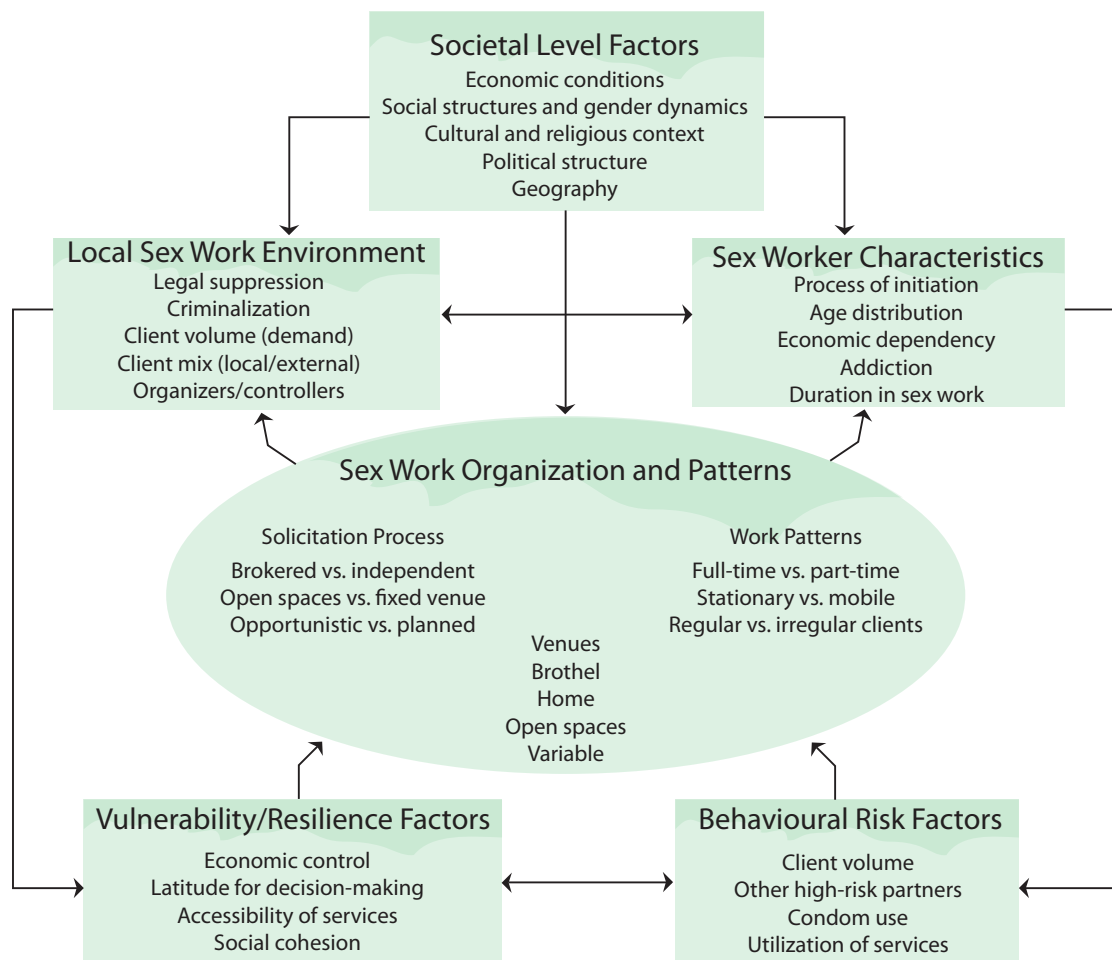
High rates of HIV infection have been documented, particularly among FSWs [1-9], men who have sex with men (MSM) [10-12], injecting drug users (IDUs) [13-15], and in some contexts, the general population, particularly in sub-Saharan Africa [16]. Migrant workers, including truckers, are also considered to be at high risk of HIV infection and transmission in some contexts [17,18]. Due to bisexuality and marriage expectations, particularly in places such as India, many MSM also report sex with females [19]. Inconsistent condom use with male partners and/or injection drug use, combined with high rates of unprotected sex with wives, represent a potential bridging opportunity for MSM to transmit HIV transmission to the general population [14, 19].

While interventions targeting all of these high-risk groups are valuable, the focus of this document is on the risks and vulnerabilities of urban FSWs. HIV transmission risks faced by urban FSWs include low risk perception, a high volume of high-risk partners, low condom and lubricant use, a high sexually transmitted infection (STI) prevalence, and HIV positivity [20-25]. Specific vulnerabilities faced by many urban FSWs are related to the larger social, legal, political, and economic context of sex work [26]. Poverty, stigma and harassment, violence, and social and gender inequities can create and exacerbate specific vulnerabilities faced by many urban FSWs, influencing their behaviours, opportunities to increase resilience, and health outcomes [27-40]. These factors reduce the agency of FSWs to avoid exploitative working environments, negotiate condom use, refuse sex with particular clients, and access health, social, and legal services that could address particular vulnerabilities and provide opportunities to access sexual health education and treatment of STIs [6, 41-44]. Counter-productive legislation and policies often hinder the provision of programmes and services and drive sex work underground, often into unsafe locations, beyond the reach of health and social service providers and social protection, reducing the capacity of law enforcement officers to protect sex workers from violence and trafficking and introducing the potential for police harassment.

The particular risks and vulnerabilities faced by FSWs are influenced at the level of society, community, and the individual. Societal factors, including cultural norms, economics, mass media, government policy, legal frameworks, women's rights, migration, trafficking, and stigmatization contribute to the context within which risk and vulnerability are formed [26]. Many factors

contribute to the creation and dynamics of the risk and vulnerability experienced by FSWs [25]. At the community level these include educational and employment opportunities, religion, violence and crime, social services and attitudes related to sex work and HIV/AIDS. At the individual level demographics, length of time in sex work, knowledge, attitudes, and beliefs about HIV/AIDS, substance use, and expectations for the future all contribute. The social organization of sex work, including the solicitation process, work patterns, and venues, is influenced by the interaction of societal level factors, the local sex work environment, and FSW characteristics that operate at individual, interpersonal, community, cultural, and policy levels to influence risk and vulnerability.

Risks and Vulnerabilities of Urban FSWs



STRATEGIC IMPORTANCE OF HIV PREVENTION AMONG URBAN FSWs

Female sex work is an important feature of the sexual structure in many regions. As female sex work is known to contribute significantly to HIV transmission, a key strategy for minimizing the size of HIV epidemics is to greatly reduce transmission in the context of sex work [25].

In a recent review of HIV studies among FSWs in fifty low- and middle-income countries, the overall pooled HIV prevalence was 11.8%, ranging from 1.7% in the Middle East and North Africa to 36.9% in sub-Saharan Africa, substantially higher than the background prevalence in all regions [45]. In fact, the pooled odds of a FSW being HIV infected was 13.49 compared to all females between the ages of 15 and 49 [45].

A joint UNAIDS/WHO review [46] reported that in the Middle East and North Africa, HIV prevalence among FSWs ranged from 0.8% in Egypt [47] to as high as 7% in Yemen [48] and 26% among bar-based FSWs in Djibouti [48]. In Sub-Saharan Africa, the median reported HIV prevalence among FSWs was 19% [49], with a reported prevalence of 49.4% in Guinea-Bissau [49] and 24.8% in a recent study in Kigali, Rwanda [50]. In Asia, the reported prevalence of HIV among FSWs ranged from 7.1% in Indonesia [51], to 14.5% in southern India [52], to 18% in Myanmar. Until recently there have been few cases of HIV among FSWs in India's neighbour Pakistan. However, behavioural and biological surveillance conducted in 2011 identified 25 cases of HIV (0.6% prevalence) [53], and mathematical modeling has predicted a substantial increase in HIV prevalence among FSWs in particular cities across Pakistan over the next decade [54]. Current HIV infection among FSWs in Pakistan was associated with lack of exposure to an HIV prevention programme and having injected drugs in the previous 6 months [55]. The prevalence among FSWs in Ukraine has been estimated to range from 13.6% to 31% [56], and similar prevalence estimates are reported in the Caribbean: 27% in Guyana in 2005 [57] and 9% in Jamaica in 2005 [58]. In Latin America, the prevalence of HIV among FSWs was reported as 3.2% in El Salvador and 4.3% in Guatemala [59].

Clearly, HIV infection among FSWs plays an important role in HIV epidemics in many regions of the world, and represents significant potential for transmission to the general population through the bridging population of male clients [25, 60-62].

In terms of the epidemiology of sexually transmitted infections, it has been suggested that interventions targeting FSWs may be the single most important control strategy, depending on the particular pathogen, local sexual network pattern, and epidemic phase [25]. Focusing on HIV prevention among urban FSWs not only prevents infection among FSWs and their clients, but also prevents transmission to the general population. The geographic variability in HIV prevalence in the context of female sex work has been suggested to be related to the proportion of men who

visit FSWs, the rate of client turnover, the susceptibility to HIV infection due to the presence of STIs among FSWs, and the levels of condom use [63]. It is estimated that up to 37 million men in China and 30 million men in India may regularly buy sex [64]. A higher rate of client turnover and biological susceptibility to HIV infection provide more opportunities for transmission to occur, and it is believed that the rapid spread of HIV may occur once a critical mass of infection is reached among FSWs [63].

Given the fact that substantial condom use in the context of female sex work has been shown to dramatically impact the overall HIV prevalence in communities in Asia, promoting and facilitating the use of condoms in the context of sex work is of key strategic importance for HIV prevention [65-68]. World Health Organization data from 2006 to 2008 in 56 low- and middle-income countries suggests a wide variability in the proportion of sex workers reporting condom use with their most recent client, with a range of 13% to 99% and a median of 86%. In Thailand, acknowledgement of widespread HIV transmission in the late 1980s, particularly among IDUs and FSWs, and to the general population in the 1990s, led to the development of a massive public health initiative, including a goal of 100% condom use. This initiative increased condom use from 63% in 1991 to over 90% in 1995, and new HIV cases decreased from 143,000 in 1991 to 29,000 in 2001 [69]. Similar campaigns were associated with decreases in HIV prevalence among FSWs: from 39% in 1996 to 21% in 2003 in Cambodia and 8.2% in 2000 to 2.2% in 2006 in Chennai, India [70].

However, as the global prevalence of HIV continues to expand three decades after the beginning of the epidemic, it is clear that prevention efforts have not been sufficient and that there is a need to strategically focus resources on effective programmes. Most HIV prevention programmes are of limited scale and do not incorporate an assessment of the local epidemic context and coverage goals, programme scale-up needs, and practical and effective evaluation. Many programmes lack evidence-informed balance between prevention and treatment and fail to prioritize and effectively address the needs of populations most at risk of HIV transmission, particularly FSWs.

Some of the challenges associated with scaling-up targeted HIV prevention programmes for urban FSWs include understanding the heterogeneity of female sex work in time and space. It is the heterogeneity of the state and dynamics of HIV transmission within local sexual networks that adds complexity to the design and delivery of HIV prevention programmes. For example, in Thailand, patterns of commercial sex work have changed, with a decrease in brothel-based sex workers and an increase in the proportion of non-venue-based sex workers. However, these non-brothel-based sex workers are excluded from sentinel surveillance, and in contrast to figures derived from sentinel surveillance of 2.5% HIV prevalence among FSWs in Bangkok, their prevalence was found to be 20% [71]. Furthermore, the average reported condom use by FSWs has fallen short of the targeted 100% [72,73]. This demonstrates a need for the implementation of scaled programmes that can dynamically respond to changing patterns of behaviour and sex work.

THE IMPORTANCE OF TYPOLOGICAL AND EPIDEMIOLOGICAL HETEROGENEITY

Targeted HIV prevention programmes for urban FSWs should incorporate prevention and outreach strategies that are tailored specifically for the unique local contexts and typologies of female sex work. Due to behavioural differences, such as client volume and condom use, and vulnerabilities associated with the context of the typology, including HIV prevalence among their clients, typologies are often employed as proxy predictors of risk and may be used to inform outreach strategies and service delivery strategies designed to specifically and appropriately target those risks [74]. This requires a practical and relevant system to categorize female sex work using criteria that are observable and inform prevention strategies. A variety of criteria have been used in the past to categorize female sex work, including practice, mode of operation, mode of organization, nature of the sex work network, place of sex, primary place of solicitation, earnings, and level of autonomy from brothel owners [74]. However, an effective categorization system should be clearly specified with mutually exclusive and exhaustive categories using criteria that are directly measurable and generally recognized definitions of FSW types [75].

One categorization system for sex workers is based on the types of places where they solicit clients, either directly or indirectly through another person. Using this categorization system, five unique operational typologies have been identified in Karnataka, India.

1. Public/Street-based sex workers generally solicit and pick up clients in streets and public places such as bus stands, railway stations, markets, and parks. Solicitation generally occurs directly by the sex worker, though in some instances it occurs through pimps and brokers who locate themselves in the same public spaces. Sex typically occurs in places that are known to the sex worker or client, such as lodges, brothels, uninhabited buildings, the home of the client, or bushes and wooded areas. Outreach targeting public/street-based sex workers should occur during solicitation times and should include prevention messages and condom distribution.
2. Brothel-based sex workers generally operate from brothels (recognized or hidden) and clients are arranged through the brothel managers (gharwalies) and brothel madams, who receive a portion of the earnings. Typically, a small group of sex workers work out of one brothel, and have little or no control over the choice of clients. Sex typically occurs in the brothel or at an alternative location of the client's choice, such as his home or a lodge. Outreach targeting brothel-based sex workers should occur during times when little sex work is happening, and requires rapport with brothel managers and madams.
3. Home-based sex workers are typically those who operate from their home, a home rented specifically for sex work, or the home of a friend. They are generally not known to be sex workers by their neighbours. Home based sex workers can directly control how they perform sex work, including the choice of clients and payments. Clients are contacted through word

of mouth, middle men, and other sex workers who may refer clients. Sex typically occurs in the home when co-habiting partners are away, or in the home or lodge of the client's choice. Home-based sex workers are considered the most 'hidden' and may be the most difficult to reach through outreach. Outreach targeting home-based sex workers should occur during non-peak times and should be delivered in such a way that it does not result in neighbours identifying her as a sex worker.

4. Lodge-based sex workers operate from hotels and lodges, with client referrals happening through lodge staff. Sex workers operating out of lodges have more autonomy than those working in brothels, but lodge staff do receive a portion of their earnings in exchange for the space and protection provided. Outreach targeting lodge-based sex workers should happen during non-peak times that are agreed upon mutually by the sex worker and lodge owner.
5. Motel (dhaba)-based sex workers operate from dhabas that are located on highways. Clients are typically individuals such as truckers and lorry drivers who stop for rest and food. Sex workers operating in these sites are generally from nearby villages and towns. Sometimes sex workers relocate to different dhabas in order to increase business. Sex workers operating out of dhabas have more autonomy than those working in brothels, particularly because they attract business for the motel, but dhaba staff do receive a portion of their earnings in exchange for the space and protection provided. Outreach targeting dhaba-based sex workers should happen when they are available at the dhabas.

The five categories above represent a large proportion of sex workers in Karnataka, but are not exhaustive, and exclude some groups of sex workers, such as bar dancers.

Another categorization system has been proposed, based on combining both the location of solicitation and the location of sex. In five districts of Karnataka, India, the HIV prevalence among home-based FSWs was 13.5%, 21.3% among street-based FSWs, and 33.2% among brothel- and lodge-based FSWs [76]. In the same five districts, the typology of sex work defined using the categorization system incorporating both place of solicitation and place of sex, was found to be associated with differential risk of HIV infection, with the highest HIV prevalence among brothel-based (34.0%) FSWs and 29.6% in street to lodge-based FSWs after adjusting for other factors [74]. In the same study, the HIV prevalence among street to rented room FSWs was found to be 12.7%, which is a considerable and relevant difference when compared to street to lodge-based FSWs. However, it has been suggested that place of solicitation may be more important programmatically, as making contact with sex workers for outreach at the place of sex may be problematic [75].

Sex worker typology can be used to identify particular risks experienced by sub-populations of FSWs, although it may not always reflect HIV vulnerability, and inform service needs (Box 1). An assessment of local typologies of sex work also identifies strategic places and informs methods for the implementation of programme components and outreach services. Also, it is important to note that FSWs may be involved in one or more typologies of sex work, and the particular typology an individual FSW is involved in may change over time.

Consistent definitions of typologies of sex work that are directly observable and relevant to HIV risk are important in order to inform intervention planning and to facilitate clear communication.

Box 1. Typological and Regional Differences in FSW Characteristics

Urban street-based FSWs in Bangalore, India are typically a mobile group who go to solicitation sites 2-3 times per week and operate on 3-4 streets, taking clients to nearby lodges. They operate individually, in pairs, or through pimps. The most common solicitation sites include the bus station, train station, and local market. Most are married and between the ages of 25 and 35 and typically their families do not know they are involved in sex work.

Street-based sex work typically happens in the evenings (after 5pm), but may start as early as 11am and peak in the evenings in some sites. Urban street-based FSWs are often subject to considerable client violence and police harassment.

Urban dance-bar based FSWs in India are typically 17 to 24 years of age and physically attractive. These up-market sex workers are protected and controlled by bar managers and combine dancing and selling sex in the bars, generally between the hours of 8pm and 3am. Typically, FSWs go with one client per night to a nearby designated lodge for sex. Clients negotiate through bar managers and pay considerable sums. Designated taxi drivers transport FSWs between their homes, the bars, and the lodges and bring clients to the bars.

Regional Differences, identified through Integrated Biological and Behavioural Assessment (IBBA) performed in 2005

The characteristics of FSWs vary geographically and by typology of sex work. Micro-planning is important to ensure the most appropriate programme design for the given context. The population of FSW in Belgaum, a district located in northern Karnataka State, India, differs in several programmatically significant ways from Shimoga, a district in southern Karnataka. In Belgaum, home-based FSWs tend to be younger, have more clients, be paid more, and are more likely to have been motivated to enter sex work due to tradition rather than poverty. In Shimoga, home-based FSWs tend to be older, have fewer but regular clients, be paid less, and entered sex work due to poverty. The proportion of FSW residing outside of town has implications for the design of services accessible to the population (Table A). The Devadasi tradition of northern Karnataka continues to influence structure of female sex work in Belgaum. In Belgaum, 24% of FSW are Devadasis, who are home-based and unmarried. Shimoga does not have a tradition of Devadasis, (Devdasi is part of the tradition in rural Northern Karnataka. According to Devadasi tradition, young girls are dedicated to the temple of Goddess Yellamma [Renuka Temple of Saundatti], and sometimes to the local temples of Khandoba and Hanuman) in order to fulfill the vows taken by families at times of their difficulties. A dedicated girl is designated as a Devadasi. In the past, Devadasis performed sacred functions such as lighting lamps, cleaning temples, serving the deity through dance, and providing sexual gratification to the main priests of the deity, who were considered to be part deity. Once dedicated to the Goddess, Devadasis are not allowed to marry and live as concubines. Many of the Devadasis also enter into commercial sex work.

Table A. Female Sex Worker Population Characteristics in the Districts of Shimoga and Belgaum

	Shimoga	Belgaum
District Population	1.6 million	4.2 million
Estimated Number FSW	1,744	2,185
Average Age	31.8	31.6
% Illiteracy Among FSW	59	83
% Married	48	17*
% from Town	68	32
% from Outside Town	14	54
% from Outside District	18	14

As the data in Table B demonstrates, the proportion of home-based and brothel-based FSW differs in Shimoga compared to Belgaum. As described in the micro-planning section of this document, different targeted intervention programme structures should be used in regions with different mixes of sex work typologies. Table B also demonstrates that the prevalence of higher risk behaviors and characteristics of FSW can vary regionally and by typology of sex work.

Table B. Female Sex Worker Population Characteristics by Typology in Shimoga and Belgaum

	Shimoga			Belgaum		
	Home	Public Places	Brothel	Home	Public Places	Brothel
% FSW by typology	54.0	40.0	6.0	34.0	41.0	25.0
% with <5 clients/week	56.7	49.8	31.3	15.3	34.4	8.1
% with 5-9 clients/week	32.4	38.1	30.9	32.2	16.3	10.6
% with 10+ clients/week	10.9	12.1	37.8	52.5	47.9	79.7
Average Amount Charged/Encounter (Rs.)	131.1	142.2	246.6	83.2	78.6	70.5
% 100% Condom Use with Previous 10 Clients	40.0	45.0	60.0	76.9	78.0	91.9

An additional level of complexity when designing HIV prevention programmes is related to epidemiological heterogeneity, as the particular phase and typology of the epidemic, the sexual structure and high-risk group networks, and socioeconomic and political factors that influence the transmission dynamics, and therefore strategic prevention activities, at the local level.

Large differences in HIV prevalence may be observed within and between defined populations and geographic regions. It is important to consider how this heterogeneity emerged in order to design well-informed and prioritized targeted intervention programmes. In the context of female sex work, this epidemiological heterogeneity may exist for a variety of reasons. The variation could simply reflect different times of introduction of HIV into different populations and/or regions. However, a more likely explanation relates to how differences in the underlying sexual structure (that is, sexual behaviours and networks), localization and mobility of clients and FSWs, and typology of sex work and sexual behaviours drive epidemiological heterogeneity. Other risk factors for HIV transmission such as injecting drug use may also influence transmission dynamics

and should be identified if present and targeted by the HIV prevention intervention to the degree warranted by the relative contribution of this risk behaviour to overall HIV transmission within the context of female sex work. Also, transmission among MSM may influence and be influenced by transmission within the context of female sex work, as overlaps in solicitation sites and client populations have been observed between the two groups in some contexts. Furthermore, MSM may represent a client population in some contexts [77].

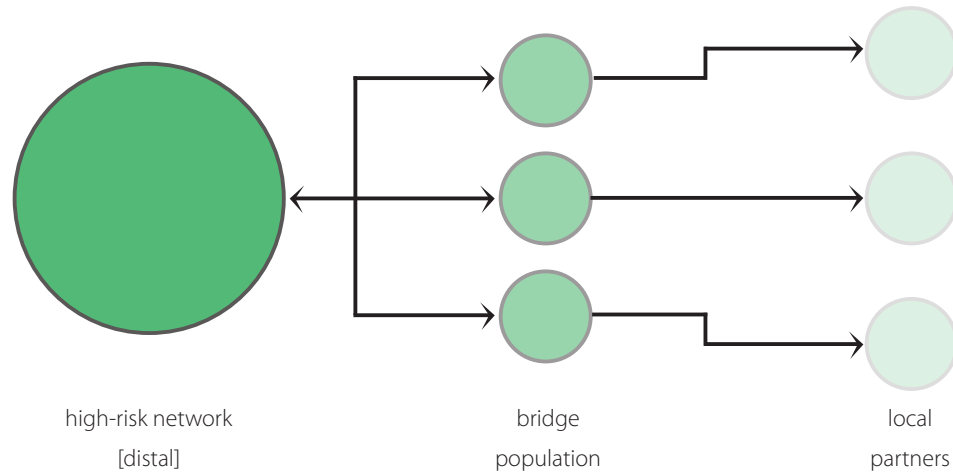
A diverse range of structural factors such as poverty, low social status of women, stigma, limited condom use, high rates of STIs, and widespread migration and/or mobility also influence HIV vulnerability and are differentially distributed by geography and socioeconomic context. Epidemiological triangulation and mapping techniques are available to assess the transmission dynamics and sexual structure of a region and are described in the following pages.

There are two broad epidemiological concepts that apply to the concept of epidemiological heterogeneity: epidemic potential and epidemic phase. Epidemic potential focuses on the extent to which an HIV epidemic is maintained and amplified beyond the spread within networks that are directly linked to high-risk sub-populations, and is based largely on the size and distribution of key high-risk sub-populations, e.g., FSWs, clients of sex workers, and the sexual network structure. A categorization system for epidemics is used to identify epidemic typology and incorporates the extent of maintaining and amplifying an HIV epidemic beyond the spread within networks that are directly linked to high-risk sub-populations. The three categories of epidemic typology are truncated, locally concentrated, and generalized epidemics. Different HIV prevention strategies and interventions are used depending on the particular epidemic typology present in a given context.

A truncated epidemic is one in which HIV transmission is confined to individuals who participate in non-localized high-risk networks, such as commercial sex, and to their local partners. Non-localized high-risk networks are in communities outside of one's typical place of residence, and are connected to local networks through bridge populations, such as migrants who become clients of sex workers when outside of their home communities. HIV transmission may occur among the sexual partners of returning migrants without further amplification by local high-risk transmission networks. Prevention activities should interrupt transmission at the destination location(s), with prevention message reinforcement at the origin and transit points with a high concentration of out-migrants. Prevention activities at the location of origin should include HIV counselling and testing services for those with high-risk behaviours, as well as care and support services.

Figure 2: Truncated Epidemic

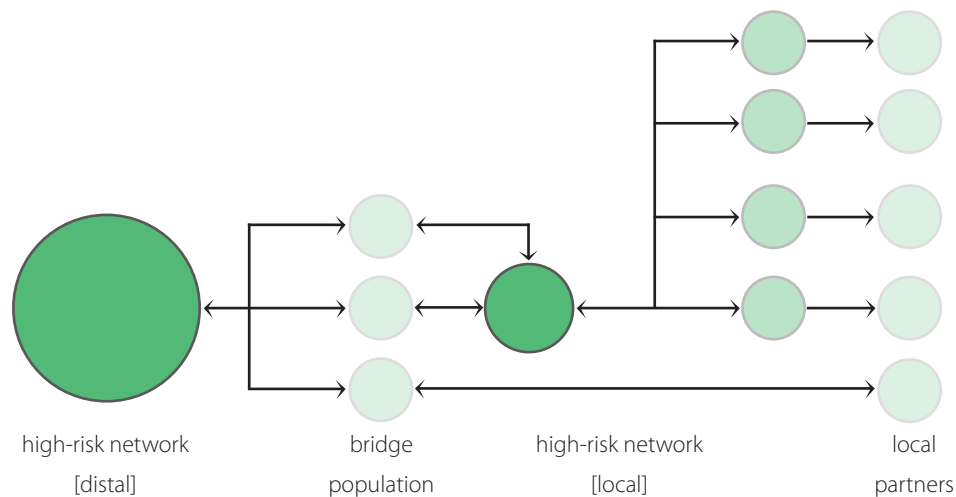
Figure adapted from Moses et al. 2006 [66].



A locally concentrated epidemic is one in which HIV transmission occurs through local high-risk networks and to the wider local population through bridge populations. The size of the high-risk sub-populations and other sexual networks in the local area largely determine the size of the epidemic, but HIV transmission dynamics remain driven by the high-risk networks. Prevention activities should interrupt transmission within the distal and local high-risk transmission networks. Although HIV prevalence within these high-risk networks reaches high levels, the prevalence in the general population remains relatively low unless a very high proportion are clients of FSWs because limited transmission occurs between local partners who are independent of high-risk networks.

Figure 3: Locally Concentrated Epidemic

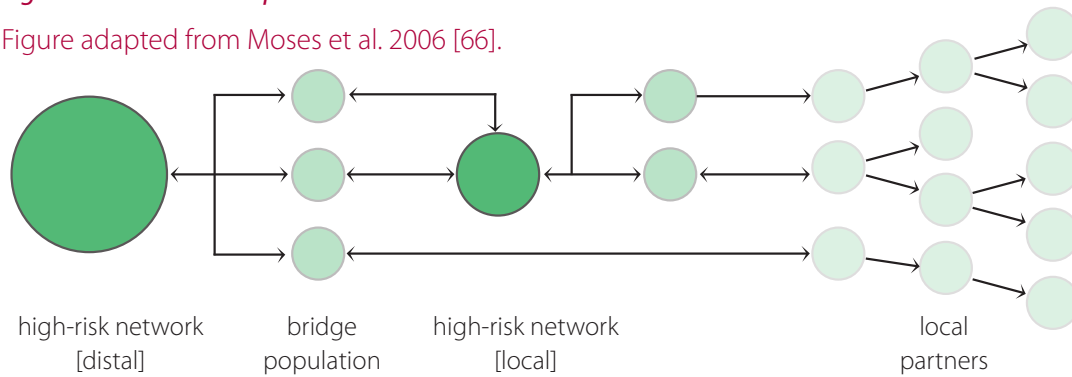
Figure adapted from Moses et al. 2006 [66].



A generalized epidemic begins in local high-risk networks, but spreads beyond the highest risk networks due to extensive risk behaviours in the wider community, ultimately independently of easily-defined high-risk groups. Prevention activities should include both targeted interventions for high-risk groups and an early emphasis on reducing the potential for transmission in the more general population through enhanced sexually transmitted infection (STI) services, broader behavioural change programmes, and aggressive condom promotion.

Figure 4: Generalized Epidemic

Figure adapted from Moses et al. 2006 [66].

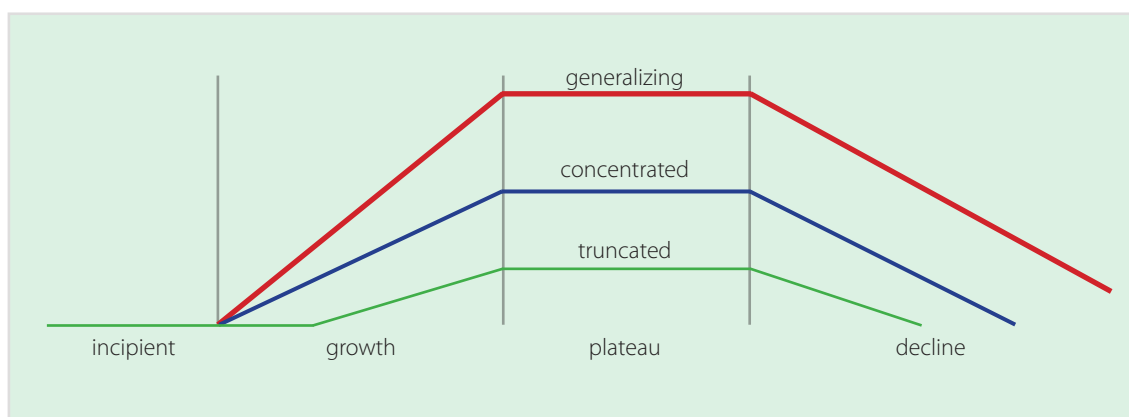


Locally concentrated and generalized epidemics will generally result in higher HIV prevalence, but this prevalence does not strictly define those typologies. Instead, the transmission structure in terms of behavioural patterns and networks constitutes the distinguishing characteristic.

The epidemic phase describes the extent to which an HIV epidemic has progressed along its expected trajectory in terms of its sub-population distribution, which is determined by the epidemic potential. This requires an understanding of when HIV was introduced into the populations, the HIV prevalence in the sub-populations, HIV-associated risk in the sub-populations, and factors related to sexual and needle-sharing networks, because otherwise an early phase generalized epidemic may be indistinguishable from a late phase concentrated epidemic.

Figure 5: Epidemic Phase

Figure adapted from Moses et al. 2006 [66].



Sexual structure, the sexual behaviours and networks that are present in a community, affect the transmission dynamics and epidemic potential of HIV. The number of persons in a network, how central the high-risk persons are within it, the percentage of monogamous relationships, and the number of links each has to others all determine how quickly HIV can spread. In the context of female sex work, sexual structure includes the volume and distribution of sex work and male sexual behaviour, and the presence of non-commercial sexual partners. There is considerable diversity and complexity in sexual structure, and the particular configuration of the sexual structure associated with female sex work may vary considerably from context to context.

In addition to epidemic potential and epidemic phase, biological factors related to the virus or the population, such as male circumcision, may affect the spread of HIV within the population. Behavioural and structural factors, such as number of partners and patterns of partner change, also influence epidemic potential.

HIV prevention programmes have the potential to reduce the spread of HIV within a population. In Mysore, India, mathematical modeling results have suggested that increases in condom use in the context of female sex work, as promoted and documented by the AVAHAN intervention, may have averted 31.2% to 47.4% of new HIV infections between 2004 and 2009 [78]. The presence, quality, and scale of HIV prevention programmes have the potential to significantly affect the spread of HIV within a population. Programmes must be planned with an understanding of the local epidemiological context. The presence of populations at high risk of HIV transmission, the configuration of FSW typologies and sexual structures operating in that location, and the local epidemic phase and HIV potential are important considerations when determining what types of services to provide and how to provide them. Gaps in policies and programmes may become evident as information about the local epidemiological context is obtained, and efforts should be made to configure and reconfigure programmes according to this evidence.

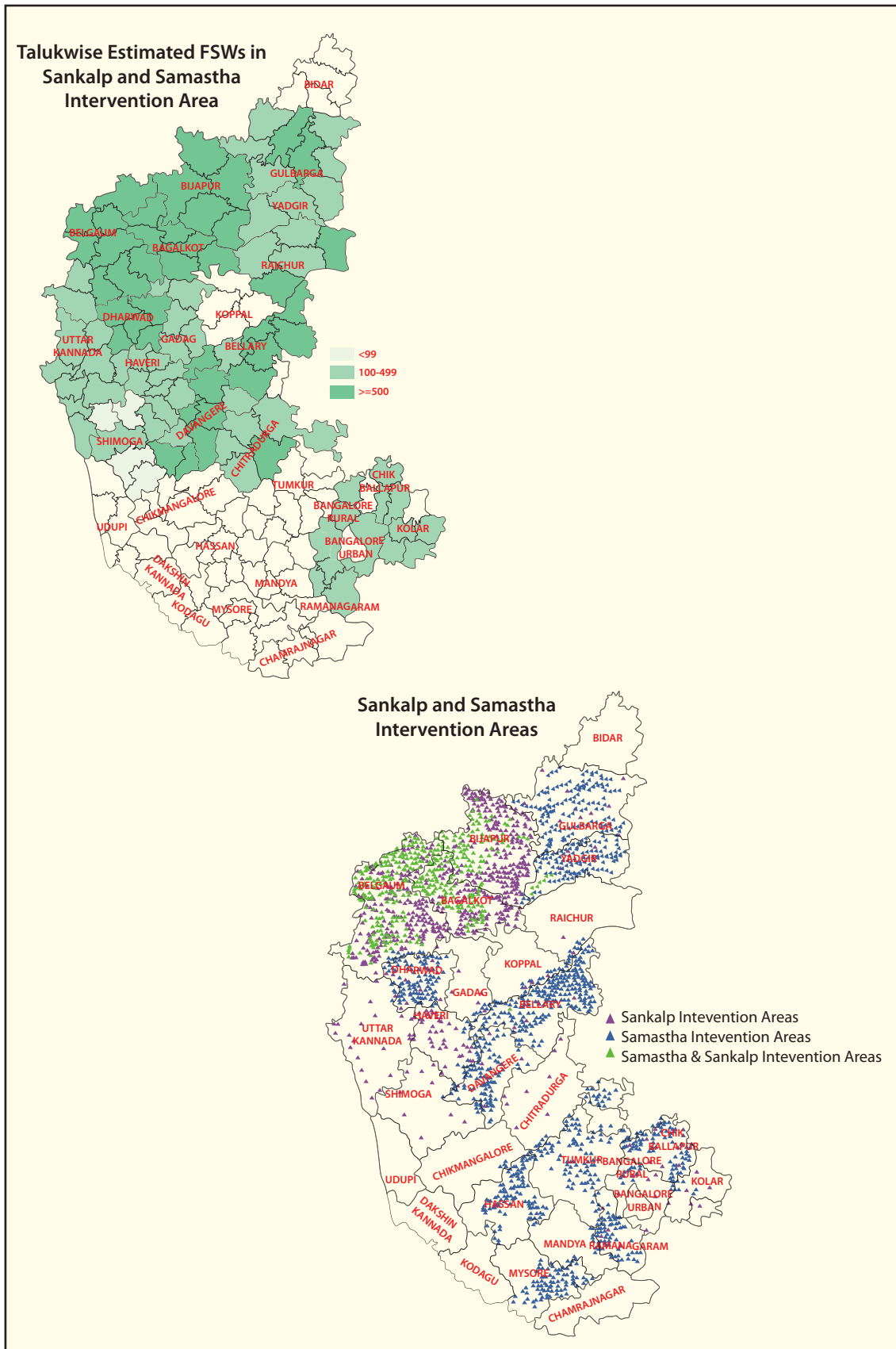
For example, in the context of a truncated plateau-phase HIV epidemic, with street-based FSWs, few of whom have non-commercial partners and most of whom perform a high volume of sex work, outreach with prevention messages and a high volume of condom distribution during solicitation times and at solicitation locations would be an important component of a prevention programme. The provision of HIV counseling, testing, and support services for FSWs and clients is also an important programme component in the context of a plateau-phase epidemic.

Mapping characteristics relevant to HIV transmission is useful because it clearly identifies the geographic locations that programmes should target, and relates these locations to each other and to other features of that location. This approach is particularly unique in terms of its ability to rapidly map the local context of the epidemic and enumerate key populations and apply this knowledge directly for decision-making purposes during programme planning and implementation.

This mapping methodology is based largely on the understanding that urban FSWs congregate and/or meet clients in definable geographic locations. Accordingly, this approach focuses on identifying these locations, characterizing specific 'hot spots' within the locations, determining how and where clients are met and where transactions occur, and estimating the number of FSWs that frequent the locations and 'hot spots'. This information is used to define and prioritize locations where programme coverage should be saturated and to inform the delivery of the services (Box 2).

Box 2: Mapping methodology in Karnataka, India

In Karnataka, India, mapping data was used to identify sex work locations in the State and to differentiate typologies and types of places. Based on this information, the decision was made at the State level to implement different macro-planning in northern and southern Karnataka. In the largely rural North, the Corridors Programme was developed, with a focus on the effects of movement and migration of FSWs. In the South, the programmatic focus was on urban FSWs. The following maps illustrate the distribution FSWs and of programme and service sites within Karnataka, informed by mapping, and developed through macro-planning.



Rapid growth, socioeconomic changes, and political fluctuations may lead to changes in the profile of the urban FSW population and emphasize the need to conduct mapping at regular intervals. For example, improved opportunities elsewhere may lead FSWs to other locations, or policies of the current administration may push them underground or away from their original locations. New or evolving gaps in coverage of existing interventions can be identified by mapping.

There are three main principles that guide the mapping process: optimal ignorance, participation of stakeholders, and rapid execution.

- **Optimal Ignorance**

Mapping should focus on gathering only information that is critical for making necessary recommendations and decisions during the planning stages of interventions. Mapping should not be used to gather information about behaviours, such as condom use, health seeking, client volume, and harassment.

- **Participation of Stakeholders**

Mapping provides opportunities for the meaningful participation of local stakeholders. The inclusion of primary stakeholders in the mapping team adds value to the process. It is practical, as key informants are likely to be more open with the primary stakeholders, have access to FSW social networks, and be more able to identify non-obvious locations.

- **Rapid Execution**

The mapping methodology is designed to be a rapid process of data collection and validation to allow programmes to be designed and implemented without much delay, maintaining momentum.

The mapping methodology described here is distinguished from others in terms of scale, detail, and rapidity of implementation (Box 3). Moreover, this method incorporates standardized methods for the identification and interviewing of key informants and the collation and triangulation of the information collected.

Box 3: Outline of Mapping Methodology

Pre-mapping preparations

Define objectives

Review existing literature/information

Involve stakeholders, implementing partners

Let police, the community, local service providers, and business owners know that mapping will take place

Select districts and identify target areas on maps

Recruit and train field team

Recruit and train peer key informants

Define roles and responsibilities

Define key concepts and terms with stakeholder input

Design ongoing monitoring and quality assurance mechanism for implementation during data collection

Collect data (rapid, minimalistic, practical)

First level data collection to determine locations, population size, and pre-existence of macro-level coverage

Second level data collection to obtain specific details about locations and 'hot spots', including:

- The number of FSW who work there on a typical day
- The general organizational typology of sex work
- The presence of any additional locations or 'hot spots' not previously identified
- Data collation
- Data collection for validation
- Data triangulation
- Data management, analysis, report preparation and dissemination

In preparation for mapping, the objectives must be clearly defined and existing data and literature about the FSW population in the local context should be reviewed. There must be a clear understanding of the inclusion and exclusion criteria in order to frame and inform the mapping work: who is considered an urban FSW and who is not, and what the different typologies of FSWs are. Another important component of pre-mapping preparations includes contacting and involving stakeholders and implementing partners. It is important to inform local police that mapping staff will be in female sex work locations, in order to preclude suspicions and potential confrontation. Also, contact with leaders or prominent members of the female sex work community should be made. Implementing partners may facilitate acceptance within female sex work sites and contact with FSWs, and may also facilitate the identification of potential members of the field team or peer key informants, who may be staff of partner organizations or community members. The next pre-mapping step involves the recruitment and training of the field team and development of an ongoing monitoring and quality assurance mechanism to be used during data collection.

Two levels of data collection and analysis are used. The first level involves a systematic process of interviewing secondary and tertiary informants (e.g., pimps, taxi drivers, police officers, and NGO workers) to identify locations where FSWs can be found, with a focus on locations of solicitation and sex. Depending on the size of the community, it is recommended that 40 to 75 key informant interviews be conducted. All locations mentioned by multiple key informants and/or those identified by a key informant as having a high FSW population are tabulated daily and undergo a second level of data collection. Second-level mapping interviews are used to obtain specific details about locations and 'hot spots', including the number of FSWs who work there on a typical day, the general organizational typology of sex work, and the presence of any additional locations or 'hot spots' not identified by first-level key informants. This snowballing process continues until location identification becomes redundant and no new locations or 'hot spots' are identified. Once this initial mapping is complete, local teams should validate mapping results and pursue information

on other sex work locations and networks that are in the area, which may have been missed in the initial mapping, such as low-volume home-based sex work. Data triangulation is used to ensure accuracy and consistency. The final step involves data management, analysis, and report preparation and knowledge translation. Spot-by-spot validation for locations identified by key informants is conducted with the participation of local FSWs in the data collection process (Box 4).

Box 4: Case Study: Mapping High-risk Locations for Scaling-Up HIV Prevention Programmes in Karnataka

In 2003, a rapid mapping methodology was developed and implemented in Karnataka to assess the locations and 'hot spots' in urban areas where activities that increase the risk of HIV transmission take place, to inform the development of appropriately scaled targeted HIV prevention programmes. Using this approach, the locations, population estimates, and operational typologies of groups at higher risk for HIV infection were identified. The key risk population groups considered were FSWs, high risk MSM, and IDUs.

Using first level mapping techniques, the State of Karnataka was divided into three zones. A team of 15 field researchers, 2 supervisors, 2 data collators, and one assistant was assigned to each zone, and mapping took place over the course of 3 to 5 days. In each town, 40 to 70 key informants were interviewed to identify locations. Key informants included auto drivers, panwallas, coolis, hamalis, transportation workers, shop-keepers, lodge owners, vendors, students, health care providers, and staff at pharmacies. Key informants were asked the following questions:

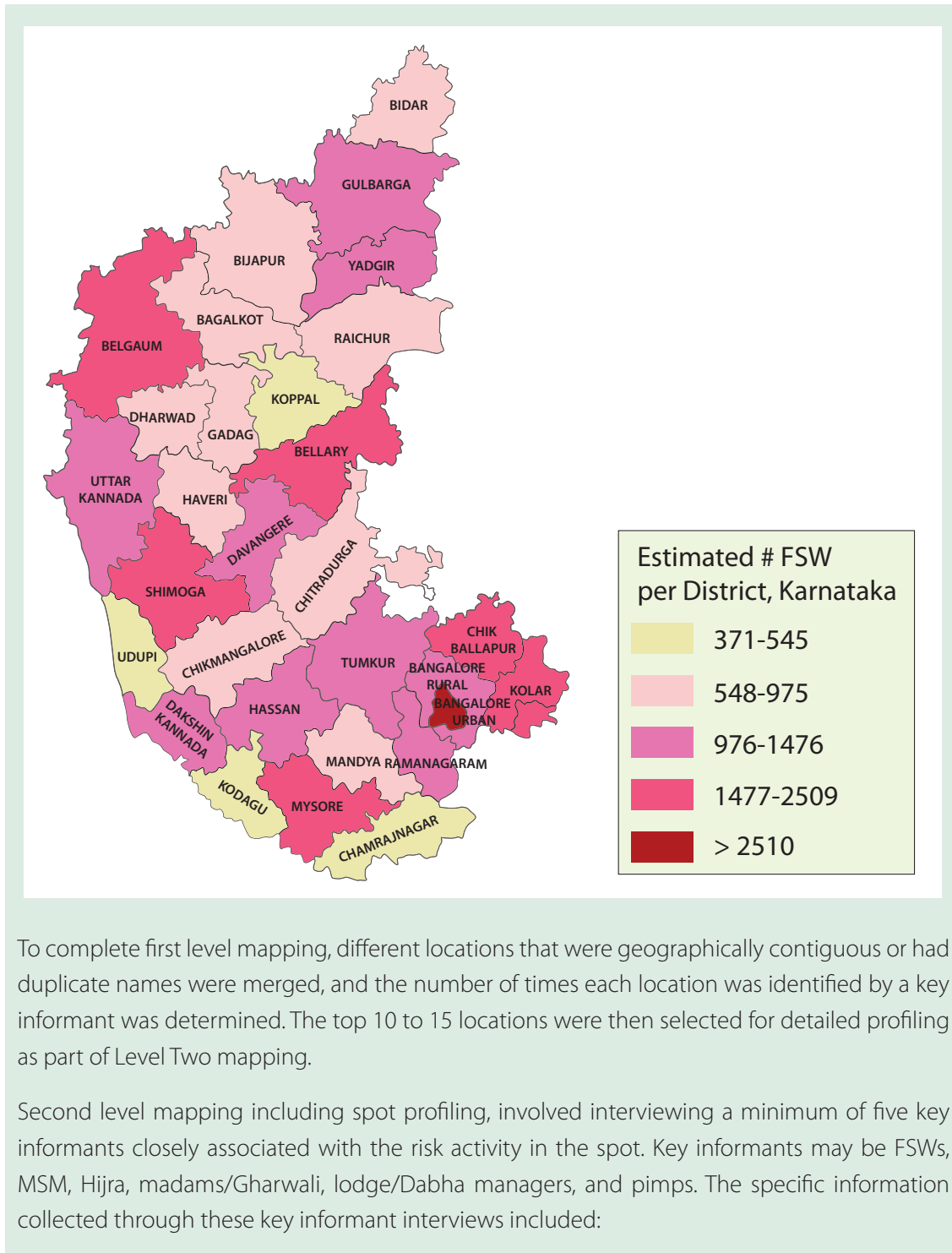
Where do the FSWs operate in the town?

Where do MSM operate in the town?

Where are the IDUs in the town?

Where are the traditional groups at risk such as Devadasis in the town?

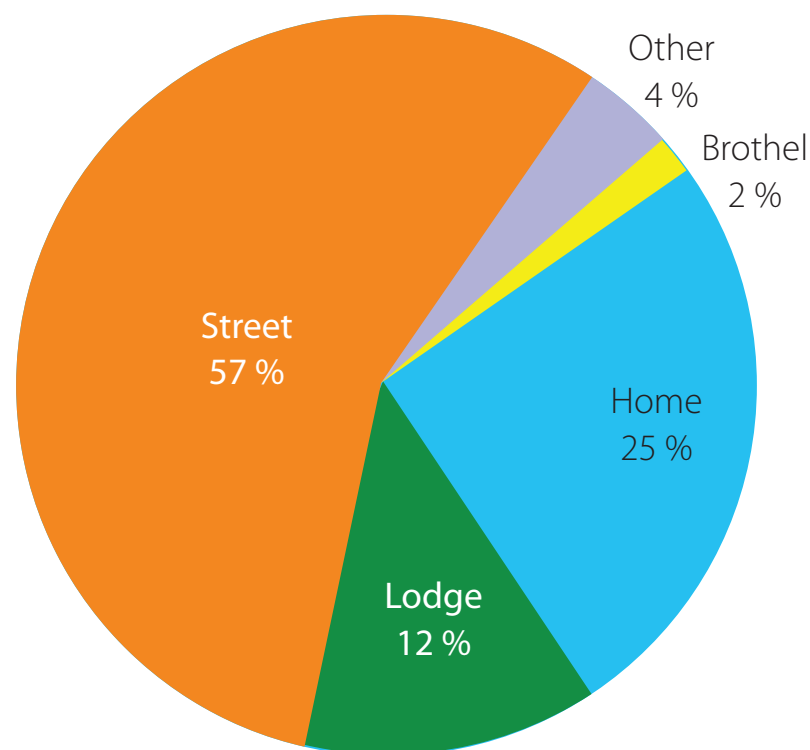
What types of locations are these? For example, are they residential, commercial, entertainment, official, educational, or open spaces?



- The size of the risk population in the spot on a typical day, and weekly/seasonal variations
- The type of operation (seeking risk versus taking risk)
- The approximate client volume (for FSW spots)

Data triangulation was then used to confirm locations, estimations, and typologies present. Through this process, 210 cities and towns in Karnataka and an additional 49 zones in Bangalore Urban District were mapped¹. A total of 76,762 key informants were interviewed and 2,043 locations and 7,756 spots were mapped. A total of 73,410 persons with high risk activities were estimated, including 34,810 in Bangalore.

▼ *Typologies of Female Sex Work*



This mapping data was used to prioritize the towns for the establishment of HIV prevention interventions. It also identified locations and 'hot spots' in which to initiate community mobilization and rapport-building. The identification of typologies of female sex work provided information used to design the most appropriate targeted interventions. Within six months of the initiation of programmes, once rapport had been built with the community and basic outreach and clinical services were established, site validation was performed to validate the population size estimated through mapping. Validated estimates differed from the mapped estimates by approximately 5 to 10%.

¹ Blanchard JF, Bhattacharjee P, Kumaran S, Ramesh BM, Kumar NS, Washington RG, Moses S. Concepts and strategies for scaling up focused prevention for sex workers in India. *Sex Transm Infect.* 2008 Oct;84 Suppl 2:ii19-23.

There are some important ethical issues that should be considered when planning and conducting mapping in and with a community. It must be acknowledged that the presence of mapping staff may interrupt the regular routine of sex work, and efforts should be made to avoid disruption as much as possible. Also, individual FSWs should not be identified and efforts should be made to avoid stigmatizing specific geographic areas if possible. The consent process should be thoughtfully planned to ensure that individual FSWs who act as key informants understand and genuinely provide consent regardless of literacy levels.

The mapping data should be treated with care, especially when individuals and locations are being identified through micro-planning, so that it does not fall into the wrong hands, for example, the police, who have a mandate to curtail sex work. Overall estimates should also not be given to the media as publication of figures may result in unintended political or law enforcement action. This will push high-risk groups underground, further increasing their vulnerability to HIV. These estimates should instead be shared at appropriate forums for policy and advocacy purposes. The micro-planning data should be given to NGOs to plan and execute interventions. Mapping staff who are peers must be treated fairly and in such a way as to not marginalize them from other FSWs.

Mapping does have limitations. Initial mapping may not catch all sex work locations. This may be a result of the particular days or times of day when the mapping took place. Some sex work locations may also be more 'hidden' or difficult to find or identify than others. Follow-up mapping and validation of additional locations identified by key informants can be used to identify sites missed in the initial mapping. However, even with additional mapping work, it may be difficult to identify and locate certain types of sex work, in particular, in Karnataka, India, a type of small mobile brothel-type sex work that is prevalent in some larger cities was missed, as were some low-volume home-based sex work settings [61]. Despite these shortcomings, it is believed that this mapping methodology is essential and adequate for prioritizing and establishing initial outreach and service delivery points. Once established, local teams need to diligently pursue information on other sex work locations and networks in their vicinities to overcome the challenges of identifying all types of sex work settings [79].

OVERVIEW OF STRATEGIES FOR SCALING UP TARGETED INTERVENTIONS

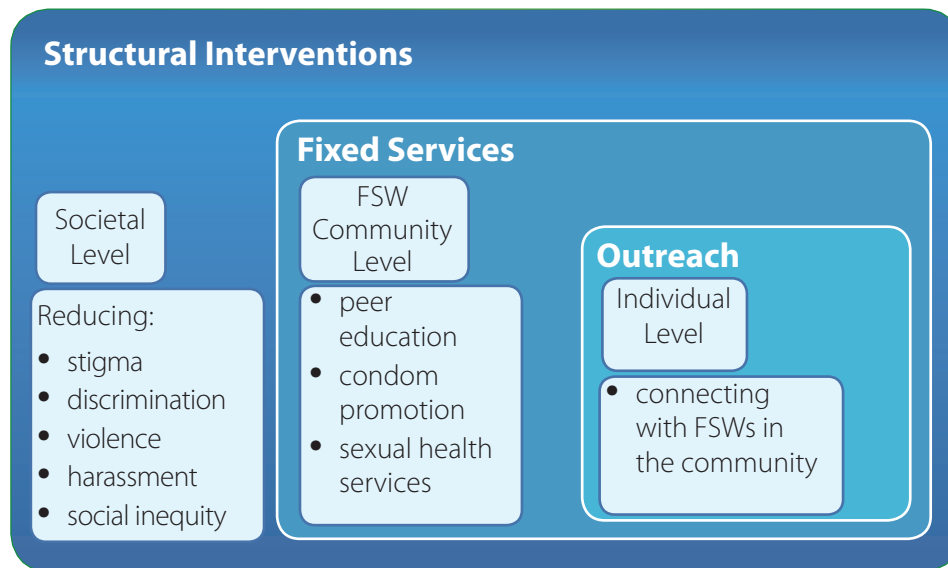
Given the epidemiological heterogeneity of HIV and potential for rapid spread to the general population, HIV prevention programmes targeting urban FSWs should be designed to reduce their multiple risks of HIV transmission and address the diverse social and structural vulnerabilities that create and exacerbate opportunities for HIV transmission.

A multisectoral understanding and response to HIV is important to comprehensively address both risks and vulnerabilities and facilitate the following:

- Creation of enabling environments that reduce barriers to prevention and care and facilitate the creation of services specifically for FSWs
- Provision of information and knowledge to enable FSWs and clients to make better informed choices
- Reduction of poverty and inequalities that limit opportunities and access to services
- Reduction of gender inequalities [63]

Prevention programmes targeting urban FSWs include multiple levels of intervention – acting at the level of the individual FSW, the FSW community, and broader society. At the level of the individual FSW, outreach by staff and peers is used to make initial contact with them in their environment to connect them with programmes and services. At the level of the FSW community, a range of fixed services are provided, including peer education, condom promotion and sexual health. At the societal level, targeted interventions address structural barriers that perpetuate stigma and discrimination, result in violence and harassment, and reinforce social inequities. Key actors at the structural intervention level include policymakers, police, government officials, lawyers, and the media [26]. At all levels, FSWs have an important role to play to shape and improve services and interventions, through consultation and direct involvement (Figure 6).

Figure 6: Programme Elements of Targeted Interventions for Urban FSWs

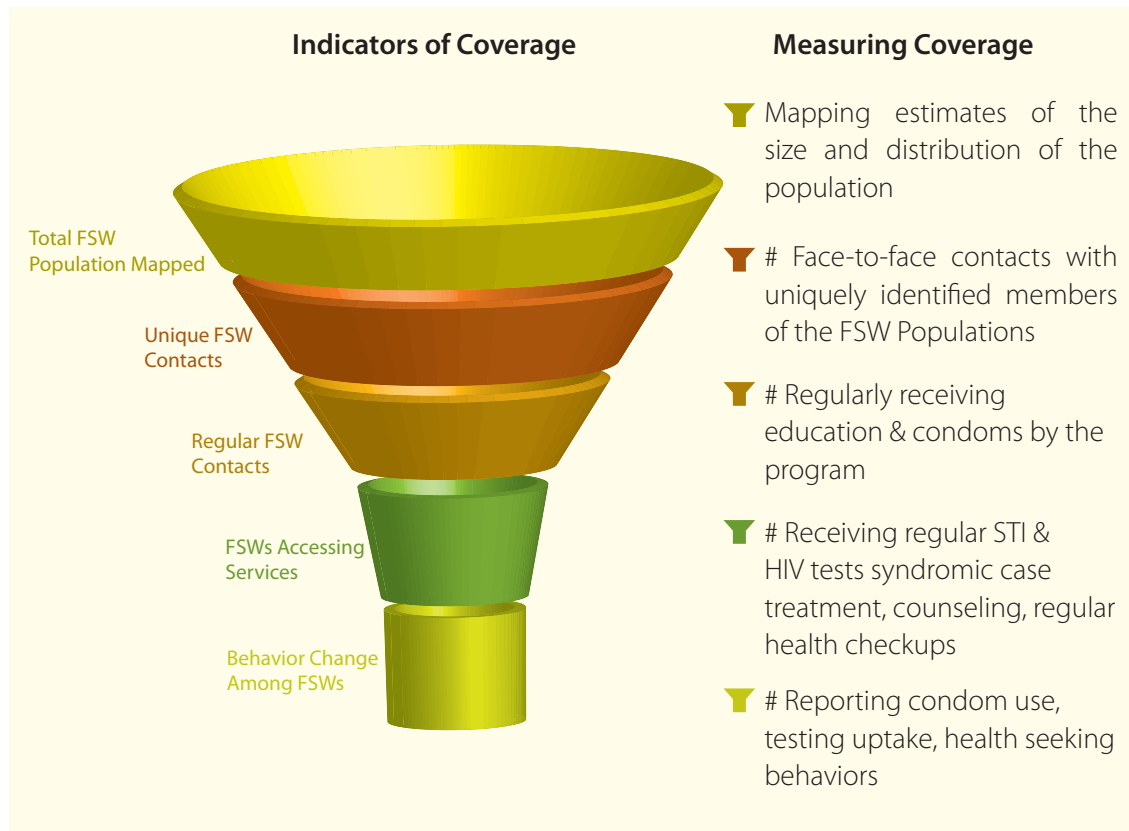


Designing appropriate, large scale HIV prevention programmes targeting urban FSWs requires not only the planning of appropriate service provision, but also the effective identification and characterization of sex work locations, particularly the size and distribution of the population. For the purposes of this document, the term 'scaling-up' refers to increasing the coverage of essential services in an HIV prevention programme for urban FSWs. Coverage is defined as the proportion of FSWs that receive a defined set of services that address their risks and vulnerabilities. Achieving high coverage depends on two levels of planning: macro-and micro-planning.

First, macro-planning involves the evidence-based selection of geographic regions requiring services, and then mapping FSWs in those regions to identify the area with the highest density of FSWs. Next, the size and characteristics of the population should be identified and the local context described, which includes listing the existing relevant service providers. The needs, service gaps, and best configuration of services should be determined, and partnerships formed with existing or new service providers to deliver these services. Advocacy with and involvement of the FSW community, stakeholders, and power structures are crucial. As the goal of macro-planning is to establish appropriate services in optimal locations, high-level programme monitoring can identify the 'opportunity gaps,' defined as the number of FSWs who have not received or are not currently receiving key outreach and service delivery programme components.

As the basic concept of 'scaling up' involves increasing the proportion of the target population receiving a defined set of programmes and services, mapping is key to determine the target population size and locations. These denominators specifying the size of the target population are essential to be able to set goals for and assess programme coverage. To illustrate the interaction of the key indicators used to measure programme coverage, a funnel is an appropriate model (Figure 7). The funnel illustrates that each successive stage of programme engagement requires engagement at the previous stage.

Figure 7: Programme Coverage Funnel

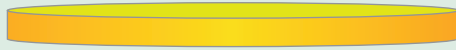


At the initial stages of planning, once the population has been mapped, the funnel will be broad at the top. As outreach and service components are added to the programme, and the urban FSW population begins to engage with the programme, the distal part of the funnel will begin to expand. Achievement of 100% programme coverage would result in funnel expansion to the shape of a cylinder.

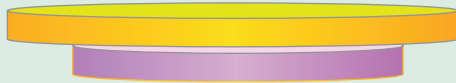
However, while the goal may be for members of the FSW population to be involved in all successive stages of programme engagement, this may not be the case. For example, FSWs who are not accessing programme services may engage in more health seeking behaviours as social norms change and information from the programme spreads by word of mouth. Also, FSWs who are accessing programme services may not regularly receive education, but may regularly access testing, for example. Over time, as new individuals enter sex work or relocate to the community, more FSWs than the number originally mapped may be found to be accessing the programmes and services (Box 5).

Box 5: Measuring Programme Coverage at Different Levels of FSW Engagement

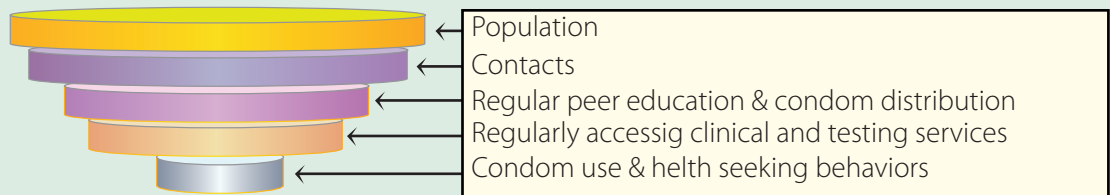
Mapping of FSW population to determine denominator and locations.



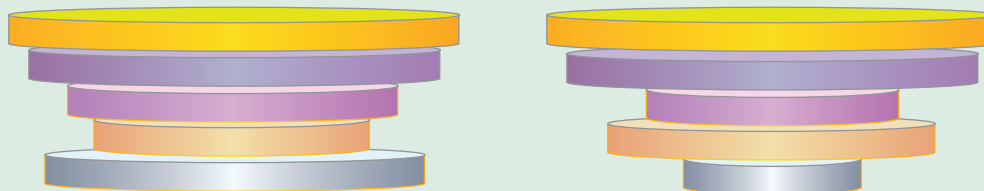
Programme staff begin to make contact with a proportion of the FSW population.



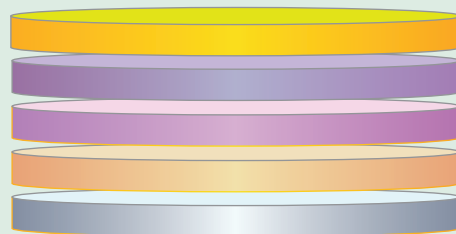
As other aspects of the programme are implemented the proportion of the FSW population involved with each stage of programme engagement increases.



Uneven engagement in programme services, e.g., FSW who are accessing programme services may not regularly receive education, but may regularly access testing.



The goal is to 100% programme coverage, whereby 100% of FSW are reached at all levels of programme engagement.



Macro- and micro-planning and implementation can occur in tandem (Box 6). While programmes are being established at the macro-level, ensuring that all major sites are covered and service providers have been identified and secured, at the micro-level the community is involved in validating sex work sites that were identified during mapping, identifying peer educators, and exploring networks.

Box 6: Macro-and Micro-Planning, Implementation and Scale-Up

Use existing knowledge and data to identify a region of high HIV prevalence in need of prevention activities.

Identify the categories of high-risk populations for HIV transmission that exist within that area (using existing and new knowledge and data).

Perform comprehensive mapping to determine the size and distribution of key populations within the region, and to estimate the proportion not being reached by existing local programmes and services.

Identify 'hot spots' that contain an estimated 80% of the key population.

Establish programmes and services in the 'hot spot' areas, in collaboration with existing programmes and services.

Plan and implement outreach and service delivery to cover a high proportion of the key population individuals within each 'hot spot'.

Perform peer-led mapping to validate and define locations of high-risk activity.

Perform spot profiling of high-risk activity.

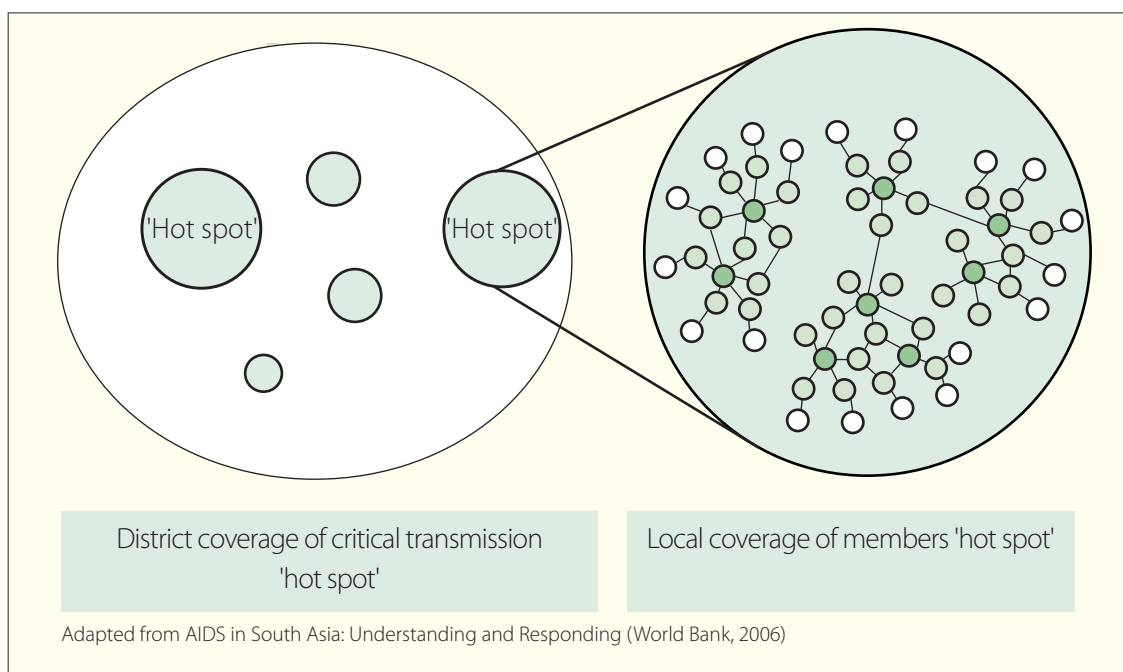
Perform peer social network analysis to determine which peer educator will take responsibility for outreach to each individual member of the key population.

Continuously measure and monitor opportunity gaps, defined as the proportion of the key population that has not yet received key outreach and service delivery programme components.

Design and implement a high level programme evaluation strategy that captures programmatically relevant indicators and distal outcomes.

Micro-planning involves the identification and/or validation of specific locations within the larger region where services should be located and the collection of more in-depth information about sex work in those areas. Micro-planning also includes detailed service implementation planning, service provision, and routine evaluation. At the micro-level, achieving 100% coverage within specific sites is the goal. Achieving this high coverage depends on locating programmes and services in 'hot spots,' defined as the geographic areas that contain a high proportion of the target population. 'Hot spots' have, or have the potential for, higher levels of HIV transmission compared to other areas because of the characteristics of the sexual structure and transmission dynamics of HIV. Appropriate and effective planning and implementation of outreach and service delivery to reach a high proportion of the key populations within 'hot spots' are essential (Figure 8).

Figure 8: Macro- and Micro- Level Coverage



Programme and service elements for development and implementation include basic service delivery, outreach and communication, the creation of enabling environments, and community mobilization. Specifically, components may include promoting and/or facilitating the following:

- Basic information about how STI and HIV are transmitted
- Condom use, negotiation, and decision-making skills
- Female condoms and microbicides
- Community consensus on the importance of condom use
- Benefits of voluntary counseling and testing
- Prompt and effective STI treatment and management
- Presumptive treatment of clients
- Mechanism for referral to other relevant services
- Provision of safe spaces.
- Positive relationships with the police and reduced police violence and harassment
- Advocacy to address gender inequalities, stigma, and the context of sex work within local legal frameworks
- Economic alternatives to sex work

FSWs, particularly those who are more marginalized and have less agency, may be less likely to access programmes and services, yet they may be more likely to be in need of these. There are a number of strategies to address risk reduction linked to specific situations that create opportunities for transmission risk. Similarly there are strategies to reduce the vulnerability related to social inequalities, stigma, violence and harassment and lack of empowerment (Table 1).

Table 1: Addressing Risk and Vulnerability to Improve Health-seeking Behavior and Local Contexts

Components of Outreach	Situations that Create Opportunities for Transmission	Barriers to Addressing Risk/Vulnerability	Strategies to Address Risk/Vulnerability
Risk Reduction	Low risk perception	Poor access to information	Provide information about STI and HIV prevention
	Multi-partner sex with high partner load	Varied typology of sex work and volume of sex partners	Differentiate outreach and ensure total coverage
	Low condom/lubricant use	Poor access to condoms and lubricants, poor negotiation skills, lack of motivation to use condoms.	Promote male and female condoms and lubricants. Teach negotiation skills.
	High STI prevalence	Poor access to health services, lack of motivation to test and treat STIs.	Provide education about STIs. Ensure access to health services.
	Pregnancy	Poor access to health services, lack of motivation for HIV testing and ART.	Increase desire, motivation, and accessibility for HIV testing among pregnant FSWs. Increase consumption of ART prophylaxis among HIV positive pregnant FSWs.
	HIV Positivity	Poor access to health services, lack of motivation for HIV testing and ART.	Increase desire, motivation, and accessibility for HIV testing. Increase consumption of ART prophylaxis among HIV positive FSWs.
Vulnerability Reduction	Social inequities	Poverty and lack of basic needs being met	Facilitate awareness and access to rights and entitlements through provision of basic amenities
	Stigma and discrimination	Negative social attitudes	Sensitize key players including those in the wider community
	Violence and harassment	Lack of legal frameworks and criminalization of sex work	Build crisis response teams and advocate with government representatives for policy change
	Lack of empowerment	Lack of community mobilization	Build sense of common identity and common purpose leading to participation and ownership

MACRO-PLANNING AND IMPLEMENTATION

Macro-Planning

The goal of macro-planning is to rapidly establish appropriate outreach programmes and basic services in locations that contain a high proportion of urban FSWs. The techniques used for macro-planning are scalable and can be applied at multiple administrative levels to make coherent allocation decisions between different regions. The particular geographic divisions within which macro-planning can occur depend on the objectives and the geographic boundaries within which the relevant administrative and resource allocation decisions are made. In general, when developing a new programme or scaling up an existing programme, regions should be selected based on feasibility of programme implementation. In India, it is appropriate to work at the state or district level because these are generally the levels that planning occurs at. It is important not to lose the larger picture and interconnectedness of specific sites by only focusing at a very local level.

In addition to identifying sex work locations and quantifying sex workers, mapping results can be used to identify the presence of existing programmes and services.

In order to provide quality and user friendly clinical services to the community, KHPT, under its *Sankalp* and Corridors Programmes, has developed operational guidelines and standards for their clinics to ensure good service uptake by providing the following:

- Strong linkage with the outreach activities for FSWs
- Prevention activities, such as promotion of correct and consistent use of (male and female) condoms and water-based lubricants
- Effective clinical services, including immediate diagnosis and management for FSWs with symptoms of STIs
- Screening programmes, including immediate diagnosis and clinical management of asymptomatic STIs and HIV
- Partner management programmes (i.e., contact referral) where appropriate

All treatment recommendations should be consistent with national STI clinical management guidelines, adapted over time according to local epidemiological data including the etiology of common STI syndromes, prevalence of STIs and HIV among FSWs, and local patterns of antimicrobial resistance. A standard of high quality service delivery should be adopted by the service providers. The document, Induction Training Manual: Capacitating Key Programme Implementers on Comprehensive HIV/AIDS Prevention, Care & Support Programme: Facilitator's Guide [80], provides an outline of learning objectives and content to train district programme implementers, to ensure consistent knowledge about STIs, HIV/AIDS, sex work, and prevention services.

A successful STI prevention and treatment strategy includes the following objectives:

- Increased availability of and access to quality care for STIs
- Improved health seeking behaviour of FSWs and their clients
- Increased access to and use of condoms.

The strategies for increasing availability of and access to quality care for STIs include making services more accessible to the vulnerable populations. Clinical services could be provided broadly through two types of service delivery units. Programme clinics, including outreach clinics, are special clinics organized by the programme in one of the following ways:

- A clinical facility established within a drop-in center that has been created for FSWs. The clinic may be operational on a daily basis or less frequently, depending on the patient volume. However it should be operational at least once every two weeks.
- A stand-alone clinic established by the project within a 'hot-spot,' entirely or predominantly for FSWs. The location of the clinics and its timings are fixed in consultation with the community.
- Outreach/mobile clinics are an extension of the programme clinics. Clinical services are delivered in the community, thereby addressing issues of access and increasing uptake. These clinics operate periodically at fixed times and locations. Personnel of the programme clinic staff provide services within these outreach/mobile clinics.

Referral clinical staff /physicians are trained to perform a high volume of STI care, and operate out of their own clinics. They are encouraged to spend a fixed amount of time providing services to FSWs, at least once per week during times most convenient to FSWs and with the shortest wait times. Facilities may be enhanced by the programme in some of these sites to improve the clinical and speculum/proctoscopic examination of clients reporting with symptoms suggestive of STI. A major factor that determines the success of the uptake of the services is the friendliness of the clinician. The clinical staff must be motivated, respectful to the community, and trained in the syndromic case management approach for management of STIs. Involving the community members in the process of selection of the clinicians, clinic location, and timings of the clinic improve access and uptake of clinical services.

The responsibilities of the clinicians in this context include practicing syndromic case management which includes taking a relevant patient history, performing a complete clinical examination (including speculum examination and anoscopy among patients reporting anal sex or anal symptoms), and providing treatment according to syndromic case management protocols. To increase treatment compliance, STI treatment kits can be prepared in advance and made readily available in clinics. The formulations of the kits should preferably include single dose therapy, which should ideally be consumed in the clinic under the observation of the clinical staff.

Partner treatment may be prescribed or dispensed concurrently if the patient has a regular partner or spouse and feels comfortable giving it to the partner, even if the partner lacks symptoms. Clinical

staff should work closely with outreach workers and peer educators to ensure follow-up. Clinicians should reinforce condom use messages provided by the outreach and counselling team, and should distribute condoms to patients. Further, the clinicians must ensure that patients receive risk reduction counselling, including a consideration of methods to modify behaviours and/or reduce the risk of infection. Regular review and clinical update meetings are recommended to keep clinical staff engaged.

To ensure quality services, exit interviews should be conducted once every three months with at least five patients of each clinician and referral provider. These assessments should be shared and discussed at the regular review meetings. Clinic monitoring committees comprised of clinical and outreach staff and community representatives can also be used for continuous quality monitoring purposes.

Health-seeking behaviours that should be encouraged among FSWs include the following:

- Monthly general and oro-ano-genital examinations
- Seeking treatment promptly from trained and qualified clinicians whenever one has symptoms related to the genitals
- Correct and complete STI treatment adherence
- STI treatment for regular partners
- Correct and consistent condoms use
- Counselling and testing for HIV

These behaviours could be provided through a general health check-up service package which would be encouraged on a monthly basis. This would include a general, abdominal, vaginal, and anal examination, which should be provided in a manner acceptable to the community. Communication with the community members, either directly or through outreach workers and peer educators, would be required to determine the degree of acceptability of these examinations and the best way to approach the subject with patients.

The service package should also include treatment of asymptomatic infections due to gonorrhoea, chlamydia, and chancroid. Care should be taken on the messaging associated with asymptomatic treatment, clearly stating that these tablets should cure the STI and thereby reduce the chance of HIV transmission, but to prevent HIV transmission, condoms must be used correctly and consistently. The correct use of condoms can be demonstrated in comfortable settings, and community members should be encouraged to share methods of condom negotiation. In select programme clinics, screening tests for syphilis could also be a part of the routine examination. The package can also include educational activities to teach FSWs how to recognize STI symptoms through the use of pictures, photographs, and other tools. The clinics may also be linked to services for HIV testing and counselling, diagnosis and treatment of TB, medical care of pregnancy, HIV treatment with antiretroviral therapy (ART), and other higher tertiary level medical service providers.

Clinical services are an essential and effective tool to reduce HIV transmission, and can serve as entry points for programmes to access the FSW community. The success of clinical services depends on the acceptability of staff, and involving the community in the planning, implementation, and monitoring process leading to more acceptable and appropriate services.

Macro-level Implementation: Creating Enabling Environments

Enabling environments for risk reduction and protection against violence and exploitation also facilitate the success of HIV prevention programmes. Thus, the development of enabling environments should be an objective of the programme and should have well-defined strategies and activities (Table 2). Enabling environments may be created by meeting with a variety of stakeholders and the general public to sensitize them to the challenges, rights, and needs of the FSW community and to attempt to reduce stigma. Also, capacity can be built among the FSW community for legal and social empowerment.

Table 2: Creating Enabling Environments for HIV Programming and Prevention

Objective	Strategy	Activity
Create an enabling environment for HIV programming and prevention	Sensitize local government, police, and other community members to the need for appropriate HIV programming and the needs and challenges of the FSW community	Perform advocacy to influence policy makers, sensitize policy and lawyers
	Increase perceived local responsibility and promotion of HIV prevention practices	Mobilize community groups to execute events designed to reach the community with basic HIV prevention and anti-stigma messaging, leading to overall normalization of HIV programming
	Foster ownership of HIV programming among community leaders, leading to HIV messaging throughout the community	
	Reduce and prevent stigma associated with HIV	
	Build capacity among FSWs for legal empowerment, crisis management, and social entitlement	Provide information on rights, tips for handling crisis situations, tools for articulating and advocating for concerns, build accountability, provide information and facilitate access to social programs.

For more information on the development of enabling environments, please refer to the document entitled *Developing an Enabling Environment and Reducing Vulnerabilities of Key Population in an HIV Prevention Programme* [81].

Macro-Level Implementation: Community Mobilization

Community mobilization engages many diverse members of a community in an effort to address HIV prevention. Policymakers, health care providers, programme implementers, and community leaders, together with FSWs, come together and are empowered to take action to facilitate change. Specifically, change is facilitated by the renewed commitment and enhanced community support, ownership, and collaboration. Competition and redundancy of services are reduced through collaboration, and a stronger unified voice is created to advocate for improved laws, policies, and practices. Community mobilization involves fostering cooperation, generating support, disseminating information, and mobilizing resources.

Community mobilization may include the following steps:

- Conduct community assessment of knowledge, opinions, and existing programmes and structures that address HIV prevention
- Involve the right people
- Select strong leaders
- Define goals and strategies
- Develop ways to measure progress
- Identify resources that can be mobilized

Macro-Level Implementation: Collectivization of FSWs

A collective is a group of individuals or organizations that are motivated to work together to address a common issue, often in a specific space where a sense of community can be built and problems can be managed collectively [82]. Collectivization of FSWs has been defined as, ‘the process through which FSWs are connected to each other, either in small groups or larger institutions.’ [82] This is a very important mechanism to allow FSWs to come together to protect their interests by fighting the exploitation, oppression, and violence that they are subjected to.

Collectivization might include the following objectives:

- To protect the interests of FSWs by constitutional means of collectivization
- To obtain legal sanction for the activities of the collective
- To enlist the cooperation and collaboration of the state and central governments, different departments, and international agencies for the fulfillment of the aims and objectives of the collective
- To acquire and own assets required for the functioning of the collective

- To promote collective responsibility for all the actions taken by it without making any individual personally accountable
- To represent the community in all its dealings with the government to assert their rights and claim various benefits

FSW collectives are typically comprised of peer educators and other members of the FSW community and work to address the multiple vulnerabilities faced by FSWs through the provision of support and guidance and provide a venue within which to support one another and organize activities as a unified group. Collectives have the potential to empower FSWs to have more control over their sexual lives and health and increase their capacity to negotiate safer sex by providing opportunities for peer education, literacy and communication training, financial support, legal support and education about rights and social entitlements, child care, health care, and crisis management response. The extent of personal empowerment gained by belonging to a collective depends on the extent to which members participate in activities offered through the collective. Collectives can also address wider structural issues that affect the lives and health of FSWs through advocacy and awareness raising.

Collectives are primarily managed by peers, who are typically older FSWs who are considered knowledgeable about their communities and willing to assume an educative and supportive role with other FSWs. The role of the collective manager is to raise awareness, disseminate educational materials, expand the distribution and use of condoms, and recruit new collective members from the specified geographic area [83]. The support of local government, police, and health and social welfare institutions is valuable to reduce barriers that may interfere with collectivization and to increase opportunities to connect with available resources and services.

When organizing a new collective, community leaders should encourage community participation in planning to increase the sense of ownership by the community and to inform the design and components such that it will be acceptable and appropriate in the local context. In Karnataka, India, films with themes of gender, violence, patriarchy, religion, tradition, and poverty were shown to community members to initiate discussions, and a previously prepared set of questions was used to maintain and direct discussions.

A collective should have a clearly defined vision for fulfilling their long term goals. For example, the community of FSWs must be empowered to protect its interests and assert its civil rights. Collective action is required to achieve this, and therefore development of the community becomes the vision. Specific aims through which to achieve the vision should also be clearly articulated. Collectivization might have the following aims:

- Achieving economic, social, political, and cultural development and equality for the community of FSWs
- Initiating collective efforts to compel the government to set-up a commission exclusively for promoting health and overall development of the community of women in sex work

To achieve its aims, the collective might have the following objectives:

- To provide health awareness and health services to the community
- To end societal stigma and discrimination against FSWs
- To ensure provision of basic services such as medical care and other elements of care and support as per needs in the community
- To initiate vocational training and other income generating programmes with a view to ensure financial security
- To raise literacy levels among the community members and ensure formal education for their children
- To initiate advocacy and related activities to sensitize society and the government regarding the problems of the community
- To press the government to make suitable policy decisions to protect the interests of the community.

The collective may choose to organize a set of committees of collective members with responsibilities related to the management of the collective. These committees may include an executive committee, an advisory committee, a project management committee, a purchasing committee, and a legal committee.

FSWs working in certain contexts may be difficult to locate and recruit into collectives. FSWs who are married or engage in sex work as an additional source of income may choose to not identify themselves as FSWs to avoid the associated stigma and therefore may not be interested in joining collectives.

Few studies have empirically investigated the effect of belonging to a collective on sexual risk knowledge and behaviour. One study undertaken in Karnataka, India found that FSWs involved with collectives were more likely to be able to identify STI symptoms and to seek medical care when they had STI symptoms, and to know that condom use can prevent STIs and HIV infection. Condom use with clients was higher among FSWs who belonged to collectives [83]. Studies among collectives in Kenya and Zimbabwe, and a peer education programme in Indonesia have suggested that FSWs involved in these programmes engaged in reduced sexual risk behaviour [84-86]. One study in Calcutta, India found that the collectives provided added value over basic peer education [87]. However, similar programmes in South Africa and Thailand did not reduce sexual risk behaviour [88,89], suggesting the need for careful design and execution of collective and peer education programmes.

For more information see *Collectivisation and Community Building: Satellite Training for Collectives, Karnataka* [90] and *Guidelines for the Formation of Collectives of Women in Sex Work and Their Administration* (91).

Capacity Building from Induction to Institution Building

Capacity building within the FSW community has become an integral part of the sustainability of HIV prevention interventions designed for FSWs. Not only does it enhance the ability of the FSW community to contribute to programme development, implementation, and evaluation, but it also provides members of the FSW community with the skills to take over the management of the programme should the original programme implementers phase out their responsibilities.

Capacity building in this context begins with educational opportunities to train community members in the purpose, configuration, implementation, and monitoring of targeted HIV prevention interventions for FSWs. This also includes training about HIV/AIDS, sex and sexuality, and social and structural issues related to sex work, and self-esteem building. As the programmes are scaled up, capacity building involves training community members in outreach, negotiation, service delivery, counselling, and vulnerability- and discrimination-reduction programmes.

As the HIV prevention programme matures, capacity building will progress to the training of community members about community mobilization, developing partnerships with other social service organizations and stakeholders, and programme monitoring and evaluation.

Once the programme is well-established, capacity building activities shift toward critical thinking related to problem identification, collective action, and the development of governance skills. Self-regulatory boards and crisis intervention teams may be formed by community members, and issues related to the legal aspects of sex work may be explored.

As community members take on a more dominant leadership role, committees may be formed to explore various service and advocacy needs and issues in the community and region. Capacity building may focus on how to prepare by-laws for collectives, roles and responsibilities of members, accounting procedures, the refinement of a programme's goals and objectives, and methods of strengthening the organization.

Through capacity building, FSW community members are empowered to form and manage community-based organizations and advocate for their health and well-being. Frequent training and refresher trainings on topics covered earlier are useful to maintain the engagement and knowledge of members.

ENGAGING WITH THE COMMUNITY IN MICRO-PLANNING AND IMPLEMENTATION

Micro-level scaling-up takes place after macro-planning and development, which takes place in the first year of the programme. It occurs at the level of the individual identified FSW locations within each community. To perform micro-planning for each identified location or 'hot spot', programme teams, composed largely of local peer educators, with support from local NGO outreach workers and field coordinators, are established. Optimal locations for outreach, drop-in centres, and clinics are identified and specific service delivery in these locations is planned. Peers have a unique understanding of the local situation, and providing peers with skills and tools to contribute to the strategic planning of outreach and services facilitates the development of relevant, practical, and acceptable services. Micro-planning includes three main activities.

- First, peer-led mapping is used to systematically validate and define 'hot spots' and their logical geographical boundaries.
- Next, spot profiling is performed to inform the delivery and components of HIV prevention programmes, per peer and per location. A simple tool collates relevant information on a particular location where FSWs are known to congregate.
- Third, peer social network analysis is completed. For each location, the peer educators make a list of all the FSWs that they know personally, and then they compare lists. Decisions are made about which peer educator will take responsibility for outreach, education, and monitoring for each individual FSW.

The information gleaned from these stages of planning is used to inform the implementation of appropriate and sufficient services to maximize coverage and achieve programme objectives.

Micro-planning also involves identifying and engaging with existing organizations that provide services relevant to the core programme goals for HIV prevention among urban FSWs. The specific programme and service components should be selected according to the needs and structure of the local context, defined by the location, and FSW population size and characteristics. Collaboration can deliver a minimum intervention package of a synergistic and complementary set of services with delivery strategies that provide broad coverage with minimal redundancies, utilizing collective pre-existing contacts and trust within the FSW community (Table 3).

Table 3: Minimum Intervention Package and Delivery Strategies

Minimum Intervention Package	Delivery Strategies
Basic HIV/AIDS-related information	
Behavior change messages	Working with community leaders and informal contacts to assess a population.
Sex worker empowerment	
Condom promotion	Peer-led promotion of self-protection, condom use, STI, VCT, treatment, and health promotion.
STI treatment	
Voluntary counseling and testing for HIV	Outreach activities through a credible NGO or trained community members.
Sexual health services	
Provision of antiretroviral treatment either directly or by linking to ART services	Free and social marketing of condoms.

Engaging the Community in Planning

It is important to promote the active involvement of FSWs in programme development, implementation, and evaluation. There are many advantages to engaging the community, including the opportunity to develop and maintain good relationships between the programme and the community. The involvement of the community increases the appropriateness and acceptability of programme design and implementation, which may result in increased uptake and more efficient and effective programmes based on the needs and priorities of the FSW community.

Community engagement builds capacity by providing opportunities for community members to obtain relevant knowledge, skills, training, and employment. Community participation improves perceptions of personal value, control, and agency. For the FSWs this is an opportunity to form a sense of community and organize into an articulate group to facilitate community action. Engagement with the community creates a sense of ownership, which may lead to improved work performance, and interest in programme and service improvement. It also improves trust and access to the FSW population and provides opportunities to obtain valuable information from them.

Involving the community in micro-planning includes the following benefits:

- Builds good relationships between the community and programme
- Leads to more acceptable and appropriate programmes and services
- Maximizes coverage
- Creates opportunities for capacity building within the community
- Facilitates participation and ownership
- Builds accountability and responsibility of the peers
- Facilitates continuous reflection on the gaps

Outreach

Outreach is a key strategy of any programme designed to reach FSWs for health promotion and HIV prevention and care. It involves actively making contact with existing or potential service users in locations where they typically spend time, rather than relying on them to come to programme sites. An outreach programme should strive to achieve high coverage of risk sites and high coverage of the risk population and networks at the sites.

The core objectives of outreach are to build rapport with the community and directly provide means for HIV prevention through the provision of consistent and high quality HIV prevention services, with an emphasis on safer sexual behaviour and health-seeking behaviour such as STI testing, while also supporting interventions that reduce risk and vulnerability.

Key strategies for outreach programme design include hiring credible and trusted outreach personnel, planning outreach activities based on the context and needs of the community, and building capacity within the FSW community by empowering FSWs as leaders and owners of HIV prevention programmes. Programmes should be designed to maximize the target population's sense of ownership (Table 4).

Table 4: Principles for Working with FSW Communities

Adopt a non-judgmental attitude
Ensure interventions do no harm
Ensure HIV exposure will not occur as a result of participation
Ensure rights to privacy, confidentiality, and anonymity are respected
Ensure human rights
Respect and incorporate views, knowledge, and life experience of FSWs
Involve FSWs in all stages of planning and implementation
Build capacity and leadership among FSWs in order to facilitate effective participation and community ownership
Recognize and adapt to the diversity of FSWs and contexts
Recognize and incorporate the contribution of clients, other third parties, and contexts on HIV transmission
Ensure the same rights as other staff, including safety, training, and career opportunities

The specific outreach strategies implemented in a given context are informed by the geographic distribution of sex work, the number of sex workers and their volume of sex work, type of sex, typologies of sex work in that location, age of sex workers, time considerations, and third parties involved in the lives of FSWs. The barriers to accessing prevention services should be considered and addressed by outreach. Geography is also an important consideration when planning outreach services, as outreach should be implemented in each location and site where sex work takes place, with attention given to the specific characteristics and needs in different contexts. Volume of sex is relevant, as high volume (ten or more clients per week) FSWs are more vulnerable and require prioritization over those FSWs with medium volume (5-9 clients per week) and low volume (4 or less clients per week). Outreach components should be tailored to the specific types of sex typically performed, given the fact that unprotected anal sex, for example, carries a higher risk than other activities.

The provision of outreach to urban FSWs who solicit on streets requires a strong peer network and should be conducted in pairs for safety. A drop-in centre providing a safe environment, condoms, information, and STI management and referral services is appropriate. For urban bar, brothel, or lodge-based FSWs, who often live together in groups, outreach to their residences may be more productive, as it may be difficult to gain access to FSWs in the bars. Outreach within bars may be more productive with the support of the bar owner and through male outreach workers and outreach within brothels requires the support of madams. Outreach to home-based FSWs requires a discreet approach, such as framing it as health promotion for low-income women.

Age is an important consideration for outreach programme design, as younger FSWs have different concerns and needs than those who are older. For example, those who are younger may be concerned with family planning, maximizing their physical appearance and their client load. Older FSWs may be more concerned with finding economic alternatives and protecting their children.

When planning outreach the specific context and various typologies of sex work that link to how FSWs organize their time should be considered to ensure feasibility of service uptake. The impact and influence that third parties, such as family members, community leaders, pimps, and bar managers, have on the lives of FSWs should also be considered. These third parties may be able to promote condom use and service referral, and offer protection against harassment and violence.

An outreach programme should be designed so that it maximizes contact with FSWs in order to develop relationships, understanding, and trust, and to allow for frequent HIV education and prevention opportunities. There are a number of strategies for making initial contact with urban FSWs (Box 7).

Box 7: Strategies for Initial Contact with Urban FSWs

- Explain who you are and what you would like to talk about
- Emphasize the confidentiality of the programme
- Reassure FSWs and their managers that you are not affiliated with the police or journalism and that rather you are from a NGO (and have proof of identity available)
- Do not expect to administer a questionnaire during initial contact
- Do not interfere with business; wait until she is available
- Make an immediate offer of condoms
- Provide a card with your name, and the contact information of the programme
- Provide details of the location and hours of operation of drop-in centres, services, and peer education events and encourage her attendance
- Encourage her to refer her peers to the programme if she feels comfortable doing so

However, given the different typologies and geographies of female sex work and regional variations in challenges, priorities, languages, and literacy levels, gaps in communication may exist between outreach workers and peer educators and FSW communities. Also, evolving contexts and unforeseen challenges require that communication with the FSW community be dynamic and responsive to changing needs.

For more information, please refer to the document *Equity in Communication: A Communication Strategy for Focused HIV Prevention with Urban Sex Work Interventions* [92].

Peer education is one of the most effective strategies for reaching FSWs for health promotion, HIV prevention, and community mobilization. Peer education is based on the premise that FSWs should be empowered to actively protect themselves and their sexual partners and is organized and provided by a member of the community. Peer educators therefore share many of the same characteristics and life experiences of the target population, and should be selected to represent the various typologies and contexts of sex work present within the programme catchment area. Peers are knowledgeable about the challenges and stigma experienced by FSWs. This facilitates credibility and trust within the FSW community and a sense that peers are sympathetic to the difficulties experienced by the community members and able to provide appropriate support. Peers are able to act as role models and can change social norms, and are able to act as a link between communities and programme, thereby facilitating local participation in programmes. Peer educators should possess the following traits:

- A recognized member and leader in the community
- Acceptable to other members of the community
- Able to organize and conduct educational sessions
- Highly motivated to mobilize the community to protect themselves
- Prepared to commit a certain amount of time to peer education activities

The role of the peer educator within a programme varies depending on the context and vision of the programme, and may include contacting specific individuals regularly or making contact with a defined number of FSWs per week, distributing education and prevention materials, demonstrating condom use, making referrals, running education and training sessions, mobilizing community members, and advocating for rights and safety.

A strong supportive structure of full-time outreach staff is required to sustain continuity. An organized training programme for peer educators is crucial for success. Training can include small and large group discussions, brainstorming sessions, role play, lectures and demonstrations, storytelling and experience sharing, and field visits.

The aim of the training programme is to provide participants with knowledge and skills related to the following areas:

- Values and structure of the programme
- Sex, sexuality, STIs, HIV and AIDS
- HIV prevention programming
- Roles and responsibilities of individuals employed by the programme
- Techniques used for mapping, outreach and service provision
- Monitoring and evaluation

Initially, considerable management resources should be devoted to overseeing the development of the training programme, including the use of a training guide, the training of trainers, and the successful initiation of the programme's first peer educators in each district. Over time, senior peer educators can be provided with additional training and promoted into full-time outreach workers.

For guidelines for communicating with peers, please refer to the document *Communicating with Peers: Grassroots Strategies for HIV Prevention among Sex Workers* [93]. For guidelines for training individuals who train peers, please refer to *Dialogue Skills: Training of Trainers (TOT) Handbook* [94]. A guide to outreach for focused HIV prevention settings, entitled *Community-Led Outreach: An Outreach Strategy for Focused HIV Prevention Programming in Urban Sex-Work Settings in India: Based on the Experience of Working with Sex Worker Communities in Karnataka, South India* [95] is also available.

PROGRAM MONITORING AND EVALUATION

The KHPT strategic approach for scaling-up targeted interventions for HIV prevention among urban FSWs is unique in its emphasis on monitoring and evaluation (M&E). The proposed M&E system incorporates a feedback system and micro-planning to ensure dynamic programmes have the agility required to identify gaps and evolve quickly in response to changes in the population, behaviours, and transmission dynamics.

M&E of the implementation and outputs of an HIV prevention programme provide an indication of the effectiveness and efficiency of the programme. M&E also can provide opportunities for the identification and characterization of opportunity gaps that should be addressed in order to increase the impact of the programme. Opportunity gaps indicate the presence of obstacles that prevent or inhibit a FSW, or community of urban FSWs, from progressing from one level to the next in the process of reducing high-risk behaviours. Effective programme M&E should focus on identifying and addressing the obstacles to behaviour change and risk reduction.

The specific strategy for ongoing M&E should be developed during programme planning and should incorporate opportunities for participation and input from community members. The goals and short-, medium-, and long-term objectives of each component of the programme should be clearly outlined, and M&E indicators should be developed to define what is measured in order to determine how successful programme components are and thus whether those objectives are being achieved.

Evaluative data should include a variety of methodologies including epidemiological data, quantitative management measurements, mathematical modelling, along with qualitative research, which can inform issues ranging from programme management to empowerment and is essential to clarify quantitative indicators [96].

Biological and behavioural baseline data should be collected at the beginning of the programme to facilitate the future evaluation of the effectiveness of interventions. To avoid underestimating the importance of the public sector to the results, an in-depth analysis of existing government HIV prevention interventions should take place at the beginning of programme implementation, and over time.

Programme staff and members of the urban FSW community should be involved in the development of a detailed description of programme interventions and expected outcomes. This programme 'logic model' makes explicit the relationship between programme interventions and expected outcomes and the associated underlying assumptions, identifies programmatic gaps, and acts as a tool to communicate programme components and expected outcomes, both internally and externally.

A participatory approach to developing a programme 'logic model' provides a sense of ownership over the programme, while it builds the capacity of staff and community with valuable first-hand knowledge about the needs of the community and progress, obstacles, strengths and weaknesses of the programme.

Initially it is important to clearly define the goal and objectives of an HIV prevention programme for urban FSWs. An example goal might be 'to reduce the transmission of HIV and other sexually transmitted infections' within a specific and defined context. Programme objectives are used to define the major activity components of the programme. Specific and measurable objectives provide benchmarks against which to measure success and might include:

- Increased condom use
- Reduced incidence of STIs
- Provision of outreach and clinical services
- Addressed social inequities and structural barriers to HIV prevention

For each objective, specific indicators with which to track progress towards achieving the objective need to be identified. Data that was collected as a baseline should be entered here in order to measure the impact of a programme. When the programme objectives, indicators, and expected outcomes are included, this 'logic model' provides a clear plan for ongoing programme monitoring (Table 5).

Table 5: Urban FSW Programme Logic Model

Objectives and Outcomes				
OBJECTIVE	INDICATOR	BASELINE	ACHIEVEMENT	EXPECTED OUTCOME
1. Increase condom use by FSWs with clients and other sexual partners	Condom use during last sex with clients.	30%	73%	Prevalence of consistent condom use to reach 80% among FSWs within 3 years.
	Condom use during last sex with regular partners.	10%	77%	Prevalence of consistent condom use with regular partners to reach 50% within 3 years.
2. Reduce incidence of curable sexually transmitted infections (STIs) among FSWs.	Prevalence of Genital Ulcer Disease (GUD) among FSWs.	40%	Prevalence of GUD among FSWs is 0.9%	50% reduction in GUD among FSWs within two years. 20% reduction in non-GUD STI within two years.
	Prevalence of cervicitis and pelvic inflammatory disease among FSWs.	20%	Prevalence of vaginal discharge is 17% Prevalence of lower abdominal pain is 2%	

For both of the two objectives outlined in the programme 'logic model' in Table 7, specific activities need to be developed and executed at sufficient scale to reach the majority of the population. For each activity, specific indicators are monitored regularly to inform the iterative refinement of programme configuration over time to ensure the achievement of defined targets (Table 6).

Table 6: Major Activities linked to Objectives in an Urban FSW Programme Logic Model

Activity Level – High quality focused HIV & STI prevention programmes for urban FSWs related to objectives 1 and 2				
MAJOR ACTIVITY	INDICATOR	BASELINE	ACHIEVEMENT	EXPECTED TARGET
Activity 1 (Objectives 1 and 2) Mapping and situation assessment of FSW in priority districts	Proportion of districts with a completed mapping of FSWs. Proportion of districts with completed IBBA in FSW populations	None	100% IBBA in all districts completed.	13 districts with completed social mapping report. 5 districts with a completed IBBA in FSWs.
Activity 2 (Objective 1) Implementation of a peer outreach and education programme for FSWs in priority districts.	Proportion of FSWs in districts contacted by peer outreach activities. Proportion of FSWs regularly contacted.	Estimate: <20%	124% of estimated FSWs were contacted at least once in last year. 81% of FSWs regularly contacted in 2009-09.	90% of FSWs in priority districts contacted through peer outreach. 70% of FSWs in priority districts regularly reached within 3 years.
Activity 3 (Objective 2) Establishment of enhanced STI management services for FSWs.	Proportion of FSWs accessing STI services (programme linked & referral).	Estimate: < 20%	55% of contacted FSWs were accessing STI services in a quarter. 33% of FSWs were availing STI services every month.	80% of FSWs are regularly using programme-linked STI services within 3 years.
Activity 4 (Objectives 1 and 2) Mobilizing the FSWs for empowerment and ownership.	# of districts with at least 1 DIC established. # of Key Populations (KPs) attending community/KP events. # of collective actions taken by KPs. # of FSW institutions formed.	No DICs FSW collectives present in 7 districts	13 districts have at least 1 DIC. Up to date, 18,241 FSWs are members of community groups. 20 CBOs have been formed covering all 13 districts.	At least 1 DIC set up in each district by Year 2. 50% of regularly contacted KPs participate in events twice/ year. Initiation/ formation of at least 1 collective/institution of FSWs in all districts by Year 4.

Activity 5 (Objectives 1 and 2) Enhancement of the enabling environment for FSWs.	Establishment of effective crisis response system (CRS). Reduction in police violence.	None	CRS established in all districts. 93% of crisis has been redressed by NGO within 24 hours 94% of all police-related crises have been redressed within 24 hours	Establishment of CRS in all districts by Year 2. 70% of all crisis episodes related to FSWs are attended to by the NGO by Year 3. 50% reduction in police violence
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Early in the scaling-up process, a method for ongoing problem solving should be developed and implemented. Simple field tools that can be used to measure the success of programme activities by peers educators and outreach staff are a key part of the KHPT strategy for scale-up (Table 7). These tools can be developed so that they can be used by individuals at all literacy levels, and should incorporate local knowledge, be practical and flexible, and capture information that is readily analyzable, applicable and practical for gap analysis and programme improvement. Sustainability depends, among other things, on the level of ownership by the community. Providing peer educators and outreach staff with a practical system of monitoring builds a sense of achievement and ownership among them. Monitoring should also be outreach worker-specific, as opportunity gaps may exist due to the approach used by a particular outreach worker. A high turnover of peer educators and outreach staff can have a harmful effect on outreach and monitoring processes, so capacity building efforts to increase their skills and knowledge is beneficial to individuals, the wider community and the programme.

Table 7: Tools for Measuring Outreach Activities

Objective	Quantifier	Tool
Improve quality of outreach	Reach all contacts at least once	<ul style="list-style-type: none"> • Spot analysis • Contact mapping • Geographic and social networks
	Reach all contacts regularly	<ul style="list-style-type: none"> • Sex work typology-wise outreach planning • Site load mapping • Seasonal calendar • Force field analysis
Improve service levels	STI clinic attendance, condom distribution	<ul style="list-style-type: none"> • Preference ranking • Peer map for condom distribution • Condom accessibility and availability mapping
Build peer educator capacity to monitor her/his own performance	Monitors own performance and fills gaps proactively	<ul style="list-style-type: none"> • Peer Education card • Peer calendar
Continuously improve programming	Uptake of services	<ul style="list-style-type: none"> • Opportunity gaps analysis

A tool to improve the quality of outreach and to allow peer educators and outreach staff to reach all contacts at least once is spot profiling. This tool identifies and describes the organizational and operational configuration of sex work in each location, including where clients are encountered, where sexual transactions take place, the size of the FSW population, the turnover rate, the timing of sex work (time of day, days in the week), the age distribution of FSWs, and the usual client volume (Box 8).

Box 8: Spot Profiling

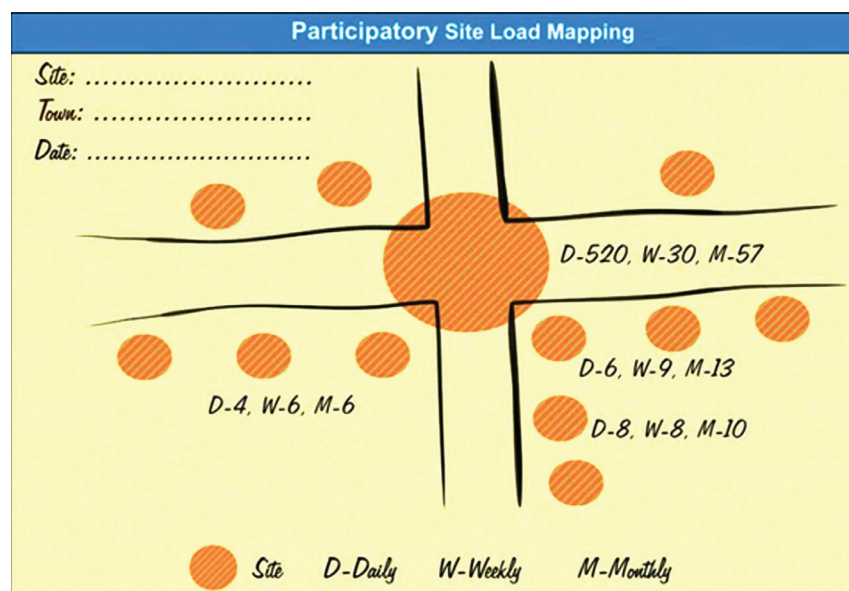
Spot profiling is performed using a simple tool which collates relevant information on a particular location where FSWs are known to congregate. The size of the FSW population, the turnover rate, the timing of sex work (time of day, days in the week), the age distribution of FSWs, and the usual client volume is recorded on a large board by peer workers. This information is used to inform the delivery and components of HIV prevention Programmes, per peer and per location. The following is a photograph of a spot profile used by a peer worker in Karnataka.

NAME OF THE SPOT : OLDBUS STAND												ESTIMATED FSWs No : 185															
TYPOLOGY																											
STREET						185						HOME						-									
VOLUME												VOLUME															
HIGH				MEDIUM				LOW				HIGH				MEDIUM				LOW							
105				55				25				-				-				-							
AGE						AGE						AGE						AGE									
< 20	20-25	25-30	30-35	35-40	> 40	< 20	20-25	25-30	30-35	35-40	> 40	< 20	20-25	25-30	30-35	35-40	> 40	< 20	20-25	25-30	30-35	35-40	> 40				
10	53	30	12	2	2	30	10	18	-	10	7	8	-	-	-	-	-	-	-	-	-	-					
TIMINGS						TIMINGS						TIMINGS						TIMINGS									
M	A	E	N	M	A	E	N	M	A	E	N	M	A	E	N	M	A	E	N	M	A	E	N	M	A	E	N
105	105	-	-	55	55	-	-	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
FREQUENCY						FREQUENCY						FREQUENCY						FREQUENCY									
D	W	15	M	D	W	15	M	D	W	15	M	D	W	15	M	D	W	15	M	D	W	15	M	D	W	15	M
15	55	20	15	5	18	20	12	2	3	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-			
SPOT ANALYSIS												ಸ್ಥಳದ ವಿಶ್ಲೇಷಣೆ															

Another tool to improve the quality of outreach and to allow peer educators and outreach staff to reach all contacts regularly is Participatory Site Load Mapping (Box 9). This tool can explore the gap between estimates of FSWs, the number of unique contacts in the programme, and the number of regular contacts. This activity can be performed every six months, which determines the daily, weekly, and monthly sex worker load in different sites. Participatory Site Load Mapping can also give information on the potential regular contacts, or the number of FSWs a team can contact in one month. The process for performing Participatory Site Load Mapping includes the following steps:

- Explain to participants the importance of knowing FSW locations and the number of FSWs there on a given day, week, and month
- Divide the participants among the geographical communities and ask them to draw a map depicting FSW solicitation sites, with colour coding indicating sex work typology
- Ask participants to indicate on the map the number of FSWs who are always available there on a normal day, a normal week, and a normal month
- Ask participants to note whether there are any specific peak days during the week and the reason for the peak
- Ask participants to note whether there are specific days during the month with a high turnover and the reason for this observation
- Ask participants to draw a picture of FSW daily, weekly, and monthly turnover in their area
- Ask participants to compare these figures with their estimates and then answer the following questions:
 - Is the total number of FSWs available in these sites more or less than the unique contact and regular contact? Why?
 - Is high weekly and monthly turnover linked with any specific typology of sex work? Why?
 - Are there specific sites where unique contact and regular contact is less than monthly turnover? Why?
 - Which sites and typologies of sex work need focused outreach in the area?
 - Which members of the outreach team are responsible for these specific sites?
 - What should they do to improve outreach to ensure higher contacts?

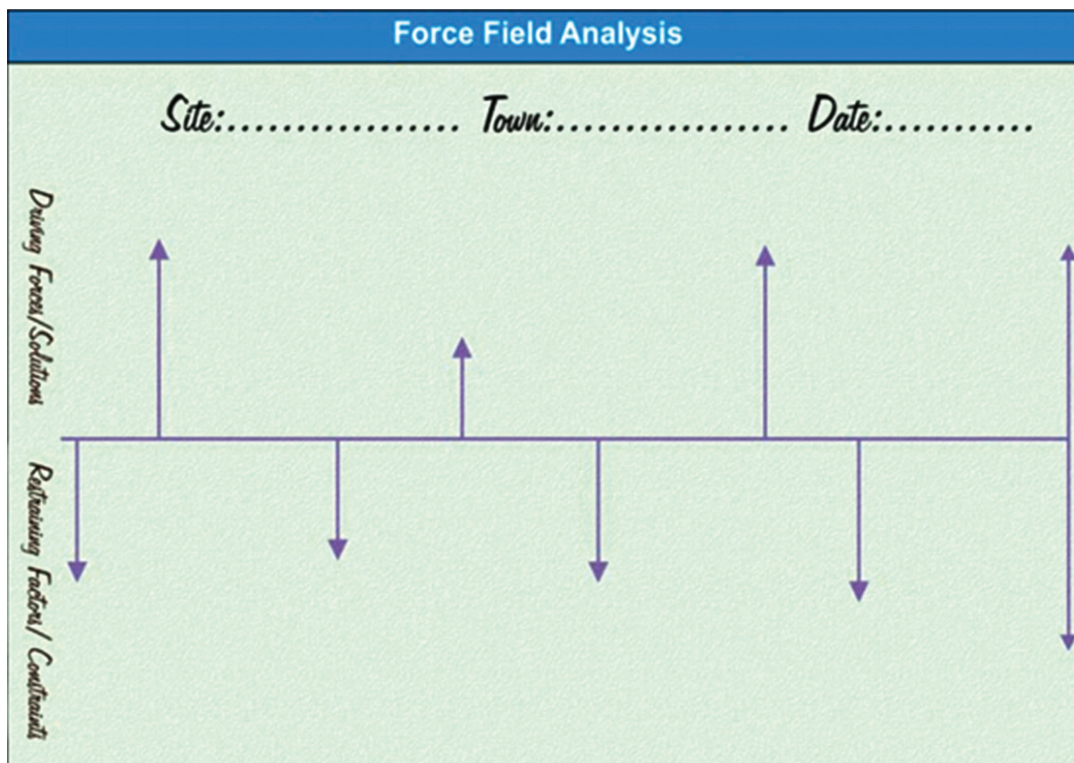
Box 9: Participatory Site Load Mapping



Another tool to improve the quality of outreach and to allow peer educators and outreach staff to reach all contacts regularly is Force Field Analysis (Box 10). This tool can be used to analyse the reason why there are gaps in unique contacts and regular contacts, and then to develop plans to address the reasons. The process for performing Force Field Analysis includes the following steps:

- Divide the participants into groups according to geographic area
- Ask each group to identify reasons for the difference between the number of unique contacts and the number of regular contacts
- Ask the participants to rank these reasons in order of priority
- Ask each group to illustrate these reasons on the Force Field Analysis chart
- Ask the participants to suggest strategies to address the identified constraining reasons and indicate feasibility of the identified strategies
- Compile all results and discuss, particularly focusing on the following questions:
 - Were participants aware of these constraints and the ways to overcome these constraints?
 - How will this knowledge help them in planning outreach?

Box10: Force Field Analysis



Another tool to improve the quality of outreach and build a peer educator's capacity to monitor her/his own performance is the Peer Calendar (Box 11). The Peer Calendar allows for monitoring personal performance and to proactively fill any gaps.

Box 11: Peer Calendar Case Study from KHPT

Aim: To monitor the day-to-day progress of outreach for each FSW under a designated outreach worker using this monthly individual follow-up chart.

This simple tool tracks outreach on a day-to-day basis at an individual level and helps identify gaps in the outreach.

Description: The peer calendar is a simple and versatile tool, which can be modified according to programme needs and priorities, and which requires no reporting or written narrative skills. Given the recognition that individualized outreach is important to achieve behaviour change, peer calendars track priority outreach indicators, such as condom distribution and clinic visits, considered 'recurrent indicators', for each FSW. Peer calendars can also be used to maintain an HIV risk profile for each individual, by collecting "static indicators" about specific high risk behaviours, the presence of violence or harassment, and other vulnerabilities. The number of recurrent indicators tracked should be no more than four, as peer workers may have difficulty tracking more.

Process: Colors are assigned to each recurrent indicator and symbols are assigned to static indicators. The names of all FSW enrolled are listed and static indicator symbols are assigned as appropriate to each listed FSW. Similarly, the assigned colors are used to mark the outreach results for the previous two months. This is an important part of the process to link the past two months' efforts with current outreach. Continue to record the day-to-day outreach progress for the current month with the color-coded specific indicators.

Analysis: The overall risk profile and service use pattern for an individual is assessed regularly by the assigned peer worker. FSWs who have not attended the clinic in the previous two months should be encouraged to attend the clinic in the current month, and should receive outreach services. Identified gaps become the outreach priority for the next month.

Name of the Staff		Designation		Indicator																													
SA		Peer Worker		Indicator A	Indicator B	Indicator C	Indicator D																										
Name of Supervisor																																	
				Current Month Name: Sept - 2011																													
Sl. No.	Name of Key Population	Date of Birth	Profile	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	A																																
2	B																																
3	C																																
4	D																																
5	E																																
6	F																																

A tool to continuously improve programming related to the uptake of services is Opportunity Gap Analysis. Opportunity gaps are obstacles that increase the proportion of FSWs who are not engaged in the various stages of the prevention programme. Opportunity gaps are defined by the number of FSWs who have not received or are not currently receiving key outreach and service delivery programme components. Ongoing monitoring of opportunity gaps is recommended so the identified obstacles can be continuously assessed. Once these opportunity gaps are identified, efforts should be made to eliminate or reduce them to facilitate increased programme uptake.

A set of pre-identified indicators that reveal programme coverage gaps can trigger changes in the programme to address such gaps and improve coverage (Table 8). The particular indicators used depend on the specific programme configuration and should be identified in the process of development of the programme 'logic model'. The goal is to have in place a reliable system to continually identify programme and service gaps at all levels in order to ensure the continuous iterative refinement of interventions using this information.

Table 8: Specific Key Indicators used for Opportunity Gap Analysis in Karnataka

Indicator	Description and Benchmarks
Mapping Estimates	Estimate the number of FSW community members active in a particular site.
Unique contact	At least one face-to-face contact with a uniquely identified sex worker. If the programme has made 100 unique contacts, it means that outreach staff has met at least 100 different members of the FSW community, at least once.
Registration with the programme	After building rapport with the FSW community, these community members are asked to register by filling out the registration form. This assigns a number to the FSW and helps the programme track outreach provided. Registration usually happens after 1-8 contacts in the field.
Regular contact	Every FSW is receiving education regularly (once every 15 days), over a period of one year or for the entire period that the high-risk group is in that location (total 24 interactions a year). Every FSW is receiving condoms for 90 percent of their estimated/reported client/partner interaction. Condom distribution is accompanied by demonstration and training in negotiation skills if needed.
Clinic visit	An outreach worker or peer educator does referral. Referral should include STI information, condom information and demonstration, distribution of at least four condoms, and address of an STI clinic should be provided. The clinical staff provides syndromic case treatment for STI. Complete STI treatment includes the following components: understanding the symptoms, clinical examination, prescription or distribution of drugs, partner notification and/or treatment, risk assessment and risk reduction counseling by the doctor or the counselor, with condom demonstration, and distribution. Referral to the clinic needs to be done whenever a high-risk group member exhibits a symptom. Every six months, the high-risk group members are referred for presumptive treatment.

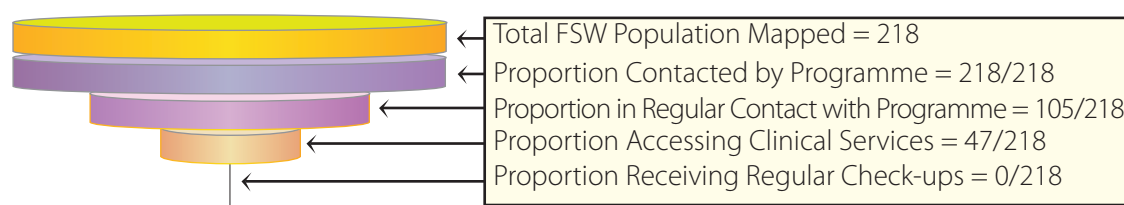
Syphilis test	Every FSW is expected to test for Syphilis once in a year. An outreach worker (ORW) or peer refers FSW to the project clinic and in the clinic the counselor counsels her and refers her for testing. The ORW/peer follows up with the High Risk Group (HRG) and if needed motivates him/her again and accompanies him to the testing centre. If the FSW is positive then it becomes the responsibility of the outreach team to motivate her to go to the clinic and obtain treatment.
HIV test	Every FSW is expected to test for HIV every 6 months. Ideally, an outreach worker or peer refers FSWs to the clinic, where she receives counseling and is referred for testing. The outreach worker or peer follows up with the FSW to ensure testing occurred, and if not, provides motivation and accompaniment to the testing centre.
Regular health check-up (12 times per year)	Every FSW receives STI or other health care services every month from the programme clinic or through referral doctors. The objective is to promote regular health-seeking behavior among the FSW community.

Tracking outreach and service provision on an individual basis allows peer educators to plan their daily and weekly activities to focus on those who have not received services and thereby minimize these opportunity gaps within their own roster (Box 12). Field coordinators and programme managers use aggregate data on outreach and service gaps from each location, town, and district to optimize programme tactics and service configurations.

Box 12: Opportunity Gap Analysis of the NGO Myrada

Activities	Count	Gap	Internal Reasons	External Reasons	Action to Address Gaps
Population Estimate	218				
Contact	218				
Registration	139	79	Lack of rapport with 79 FSW.	Low volume of FSW. Fear of identification. FSW infrequently go into town.	Determine when FSW go to town and plan meetings accordingly. Build trust by contacting them through peers or other stakeholders.
Regular Contact	105	34	Unable to generate interest.	High mobility of FSW. FSW infrequently go into town.	Link with other programmes in the area. Reach FSW through their social networks.

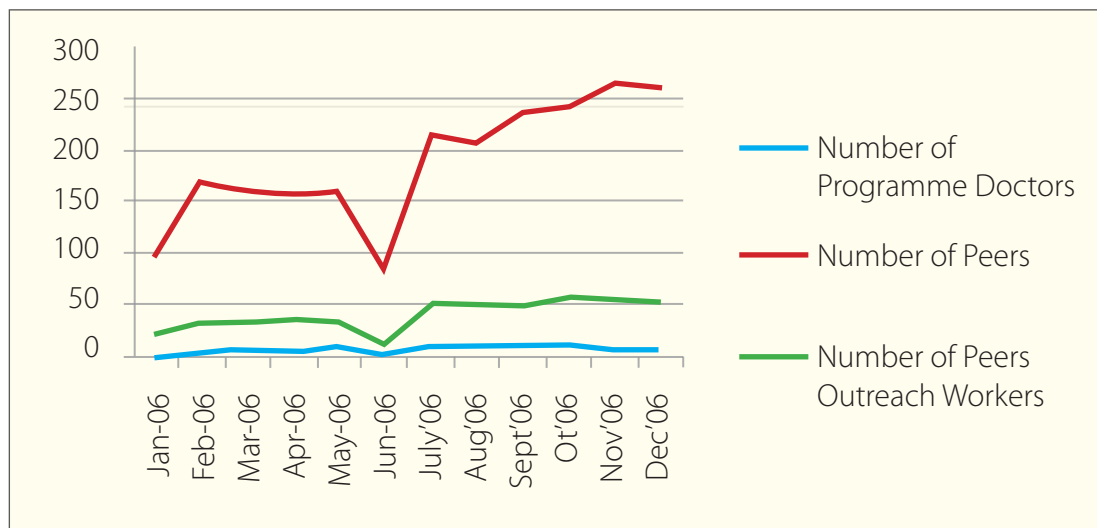
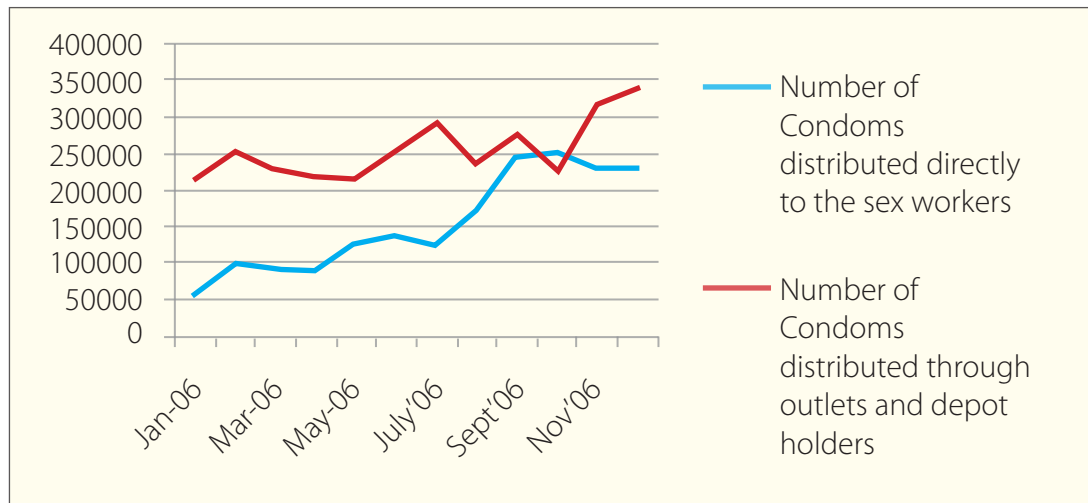
≥ 1 Clinic Visit	47	58	Referral clinic is new. Clinic is available only on certain days. Lack of trust.	High mobility of FSW. FSW infrequently go into town. No symptoms.	Build trust through peers. Inform FSW about the advantages of clinic visits.
STI Treatment Completed	20	27	Referral clinic is new. Clinic is available only on certain days. Lack of trust. Lack of effective education about importance of completing treatment.	High mobility of FSW. FSW infrequently go into town. No symptoms.	Build trust through peers. Inform FSW about the importance of STI treatment.
Follow-up	11	36	Importance of follow-up not properly communicated. Staff did not provide clear guidance on follow-up.	High mobility of FSW. FSW infrequently go into town. No symptoms.	Build trust through peers. Provide counseling about value of follow-up to FSW during first clinic visit. Frequently remind FSW about clinic day.
Regular Check-up	0	47	Importance of regular health check-ups not properly communicated. Staff did not provide clear guidance.	High mobility of FSW. FSW infrequently go into town. No symptoms.	Build trust through peers. Provide counseling about value of follow-up to FSW during first clinic visit. Frequently remind FSW about clinic day.

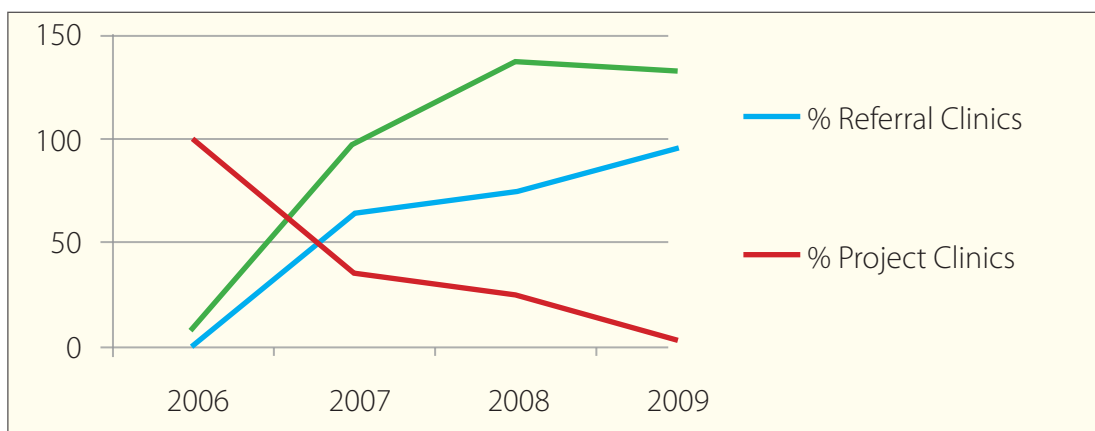
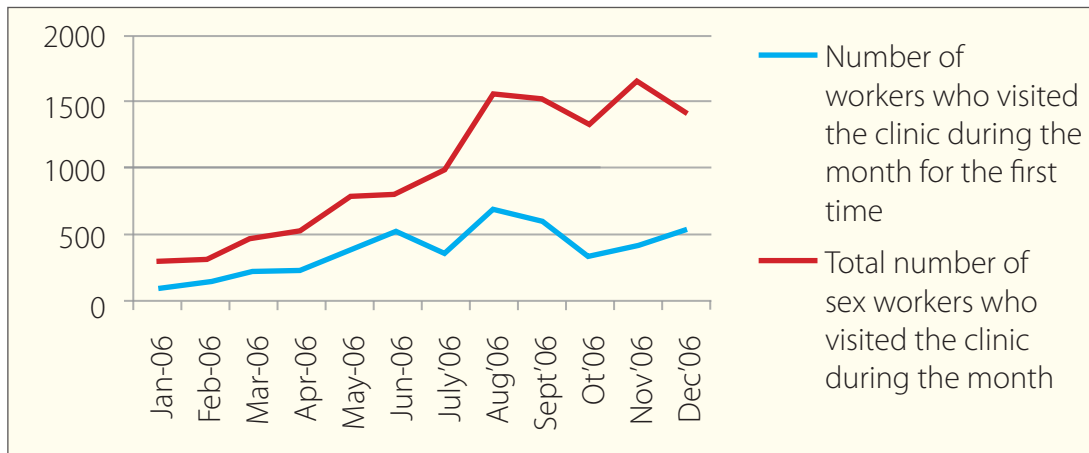


For more information about community involvement in planning and monitoring, please refer to the following documents: A Guide to Participatory Planning and Monitoring of HIV Prevention Programmes with High-Risk Groups, Modules 1-4[97].

All of the routine monitoring data that is collected should be carefully analyzed and compared against targets and achievements of specifically identified timeframes (e.g., quarterly, semi-annually, or annually). At least once a year, programme directors and managers should engage staff and peer educators in a process to evaluate success and failures of the past year against programme milestones (Box 13).

Box 13: Examples of Macro Level Scale Up in 4 Zones in Bangalore, Karnataka





Staff and peers should reflect on progress, gaps, and opportunities and develop strategies to address those gaps and take advantage of opportunities to improve programme and service delivery. This process provides information that can be used to determine how resource allocation may need to be reallocated and which programme components require increased effort (Table 9).

Table 9: Evaluation of Programme Progress against Milestones

Objectives 1 and 2: Increase condom use by FSWs with clients and other partners, and reduce the incidence of HIV and STIs			
Activity 1	Mapping and situation needs assessment of female sex work		Achievement
	Milestone 1	At least 10 of the 12 monthly Management Information System (MIS) reports submitted before the 15th of the subsequent month (Year 4: 4 of 6)	9 of 12 months
	Milestone 2	FSW second-round IBBA completed in four districts (Year 4: completed in one district previously)	4 districts completed
	Milestone 3	First-round client IBBA completed in one district (Year 4: completed in four districts previously)	Completed in 1 remaining district
Activity 2	Implementation of peer outreach and education Programme for FSWs		
	Milestone 4	At least 80% of brothel-based FSWs reached in all districts (Year 4: 75%, but estimates of brothel-based FSWs are being revised, and will likely be revised upwards in Year 5)	74% of the registered FSWs were contacted at least once; on an average, 41% contacted regularly;
	Milestone 5	Reported condom use with regular clients increased to 70% in all districts (Year 4: Overall 72%; in 9 districts above 70% and in 4 districts about 50%)	81% (5 districts lower than 80%)
	Milestone 6	Reported condom use with husbands/ lovers increased to 50% in all districts (Year 4: Overall 54%, in 8 districts above 50% and in 5 districts less than 50%)	77% with lovers; 59% with husband
	Milestone 7	Programmes and services reach scale in four Bangalore zones, with 80% of FSWs contacted monthly, and peer/FSW ratio of 1:50 (Year 4: 109% of the estimate are registered in Bangalore Urban and 60% of the registered are met in a month, with a peer/ FSW ratio of 1:55)	1. Average Monthly contact: zone 1 (66%), Zone 3 (80%), Zone 4 (45%)'Zone 6 (53%), Overall- 58%; 2. Peer-FSW ratio: Z1- 63, Z3- 50, Z4- 73, Z6-67, Overall- 64 3. 152% of the estimate are registered 4. An average of 37% of registered are met in a month, Z1- 40%, Z3-34%, Z4- 33%, Z6-41%

	Milestone 8	At least 30% of regular partners of FSWs (denominator estimated from FSW surveys), receive clinical services at project clinics each year (Year 4: 21%, denominator 23,247)	40% of regular partners of FSWs received clinical services
Activity 3	Establishment of enhanced STI management services for FSWs		
	Milestone 9	At least 70% of FSW access clinical services at least every six months (Year 4: 51% of the estimated FSWs accessed clinical services at least once every six months)	78% of FSWs have visited clinic at least once every six months
	Milestone 10	At least 75% of FSWs classified as high risk (based on client volume, young age, new to sex work, or brothel-based) access clinical services every quarter; also get screened for syphilis twice a year (Year 4: 39% of high-risk FSWs accessed clinical services every quarter. Data on syphilis screening twice yearly will only be available in Year 5)	47% high client volume FSWs, 41% Young FSWs, 37% FSWs who are new to sex work and 40% brothel based FSWs visited clinic in each quarter. Also, 6% Young FSWs, 3% brothel based FSWs, 6% FSWs who are new to sex work, and 9% high client volume FSWs have visited clinic in each quarter and screened for syphilis at least twice during this period. The information on syphilis screening is available from Sep 08 onwards.
	Milestone 11	At least 80% of FSWs attending clinics screened for syphilis annually (Year 4: 69%)	45%
	Milestone 12	At least 80% of FSWs who test positive for syphilis receive appropriate treatment (Year 4: 63%)	89% (denominator:964 FSWs who were syphilis positive)
	Milestone 13	All clinics continue to have working linkages for TB screening and DOTS (Year 4: 100%)	100%
	Milestone 14	At least 90% of clinic and outreach staff trained on verbal screening for intensified TB case detection (Year 4: 72% outreach staff; 93% clinical staff)	100%
	Milestone 15	At least 95% of suspected TB cases are referred to diagnostic microscopy centres (Year 4: 88%)	91%
	Milestone 16	At least 90% of those diagnosed with TB are put on DOTS (Year 4: 58%)	73%

	Milestone 17	At least 95% of sex workers attending clinics have received HIV risk reduction counselling (Year 4: 87%)	69%
	Milestone 18	At least 50% of sex workers referred to Integrated Counselling and Testing Centres (ICTCs) for HIV testing are tested (Data for Year 4 are not available; this information has been collected through clinic forms only recently)	5496 are referred to ICTC, data on testing at ICTCs is not available
	Milestone 19	All FSWs who are tested for HIV and disclose their status to programme staff continue to receive counselling on positive prevention (Year 4: 100%, denominator 1,237)	100%
	Milestone 20	At least 80% of positive sex workers who disclose their status attend an ART centre. (Data for Year 4 are not available; this information has been collected through clinic forms only recently)	87%
Activity 4	Mobilizing FSWs for empowerment and ownership		
	Milestone 21	Engagement of at least 60% of FSWs in collectives or other community institutions. (Year 4:44%)	47% of estimated FSWs are members of community committees/ Self Help Group (SHG)/collectives
	Milestone 22	All existing district level CBOs linked to a state-level network with democratically elected office bearers. (Year 4: a state level body has been formed which needs to be formalized)	The state level body has been formed and operational
	Milestone 23	At least 75% of intervention sites show improvements in all three areas of the KHPT diagnostic tool, average increase of at least 0.5 points on the five-point scale. (Year 4: 100% of sites showed this improvement over Year 3)	100% sites have shown an improvement of more 0.5 points
Activity 5	Enhancing the enabling environment for FSWs		
	Milestone 24	All project sites have established and documented a rapid crisis response system. (Year 4: 100%)	100%
	Milestone 25	At least 95% of all crisis episodes continue to be attended to in all districts (Year 4: 96%)	100%
	Milestone 26	At least 95% of crisis incidents continue to be responded to within 24 hours (Year 4: 96%)	93%

	Milestone 27	At least 90% of district police headquarters stations have had at least one police sensitization workshop (Year 4: 96%)	95% (out of 298 police stations)
	Milestone 28	At least 70% of police personnel have attended at least one police sensitization workshop (Year 4: 51%)	82% of 17,057 police personnel
	Milestone 29	Social entitlements are successfully obtained by 60% of FSWs who apply for ration cards (Year 4: 54%, denominator 9,503); 60% of FSWs who apply for subsidized school fees for their children (Year 4: 50%, denominator 2,565); and 30% of FSWs who apply for housing subsidies (Year 4: 22%, denominator 6,447)	Ration Card: 54% of 12,876; School admission: 64% of 3167; Housing schemes: 32% of 4569

A World Health Organization Toolkit for Monitoring and Evaluation of Interventions for Sex Workers, published online in December 2009, is available online and provides an overview of interventions for FSWs and clients, a detailed general approach to effective monitoring and evaluation, recommended indicators and targets, and a guide to the use of monitoring and evaluation data [98].



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