The Avahan India AIDS Initiative: Managing Targeted HIV Prevention at Scale

In 2008 Ashok Alexander, director of the Bill & Melinda Gates Foundation's Avahan India AIDS Initiative, received the costing estimates to transition the Avahan program to the Indian government. Alexander had been running Avahan for five years, during which he had seen it transform from a fledgling idea into a USD 258 million large-scale management and delivery system. By the end of 2008, Avahan was working to deliver HIV prevention services in 82 districts of India's six highest prevalence states through seven state-level lead grantees and 137 district-level subgrantees.

While reviewing the budget report from the Indian government's National AIDS Control Organization (NACO), Alexander realized the budget lacked the investment in management and oversight that he knew had been critical for the program's operations. He pondered how to convey the components of Avahan's robust management system to NACO so that the government could effectively execute and deliver Avahan's prevention services after the transition to those at greatest risk for HIV.

Overview of the Republic of India

In 2005 India was the second most populous country in the world (see **Exhibit 1** for map). The majority (80.5%) of the population identified itself as Hindu, followed by sizable Muslim (13.4%), Christian (2.3%), and Sikh (1.9%) populations. Demographics varied across the 28 states, ranging from 60% Muslim in Jammu and Kashmir to more than 95% Hindu in Orissa, Chattisgarh, and Himachal Pradesh, and 92.5% Christian in Mizoram.[1]

The Hindu caste system was prominent in Indian society. The system consisted of five strata: Brahmin, Kshatriyas, Vaisyas, Sudras, and lower caste "Untouchables," many of whom identified as "Dalit" in an effort to reclaim their social status from "untouchability." Although the Indian Constitution outlawed caste-based discrimination, social and power stratifications still existed.[2]

There were 15 official languages in India. Hindi was the most common language, spoken by 41% of the population. Other languages varied by region. Nationally, 85% of male and 81% of female primary school-aged children attended school. Among secondary school-aged children, 59% of males and 49% of females attended.[3] Regional variation existed for both school attendance and literacy rates, with the former ranging from 56% in the state of Bihar to 90% in Kerala, and the latter ranging from 47% in Bihar to 91% in Kerala.[1]

Many in the Indian workforce (90%) held low-productivity, informal-sector jobs.[4] Of the overall workforce, 52% percent worked in agriculture, 34% in service, and 14% in industrial labor.[5] Women composed 25.6% of the workforce overall, with more women working in rural areas than in urban.[6] The national unemployment rate was 9.1% in 2008.[5]

In 2009 the Government of India estimated that India was home to 3.3 million non-governmental organizations (NGOs), one NGO for every 400 Indians.[7] The growth in the sector had been recent, as there were only 144,000 registered by 1970. Some of the newer NGOs were started by private groups that used their nonprofit status to avoid paying taxes on revenue. Legally, an NGO could neither be a source of profit nor the only source of livelihood for its promoters, but this was not always the case. About 41% of the organizations were engaged in social services and philanthropic activities. More than 36% worked in education, housing and development, and religious, business, and professional union activities. The sector was not well regulated.[8]

Basic Socioeconomic and Demographic Indicators[1]

INDICATOR		YEAR
UN Human Development Index ranking	134 out of 182	2007
Population (thousands)	1,151,751	2008
Urban population (%)	28.7	2005
Drinking water coverage (%)	89	2006
Poverty rate (% living under USD 1.25 per day)	42%	2005
Gini index	36.8	2004
GDP per capita in PPP (current international dollar)	2,780	2008
GDP per capita in constant 2000 USD	713	2008
Literacy (total, female, male)	66, 54.5, 76.9	2007

Sex Work

The Indian Ministry of Women and Child Development estimated that the country was home to 3 million sex workers in 2009.[9] While solicitation for sex, exploitation for sex, and profiting from another's sex work were illegal in India, the exchange of money for sex was not.[10] (See **Appendix B** for profile of a commercial sex worker.)

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[1] This table was compiled from the following sources: United Nations (UN), United Nations Children's Fund (UNICEF), United Nations Development Program (UNDP), World Bank, International Monetary Fund (IMF), and United Nations Educational, Scientific, and Cultural Organization (UNESCO).

International human trafficking accounted for up to 150,000 new sex workers in major Indian cities each year, with the majority of foreign sex workers coming from Nepal and Bangladesh.[11,12] Some Indian women and girls were trafficked domestically between states.

Though any form of homosexual sex was punishable by up to 10 years in prison[13] until 2009, male sex work comprised an estimated 12% to 28% of the sex work industry in India depending on the report source. Male sex workers were more likely to be literate than their female counterparts. According to a study of over 6,600 female sex workers (FSW), 75% were illiterate.[14]

Brothel-, street-, and home-based sex work in India was concentrated in urban centers. Sex workers migrated to these centers primarily through the villages and towns along the national highway system, termed the "Golden Quadrilateral" (see **Exhibit 2** for map of the Golden Quadrilateral). A 1997 study of female sex workers in Calcutta found that the average monthly incomes ranged from USD 32 to USD 80, depending on where they were based and other factors.[15] In general, female sex workers earned considerably more than other hourly workers,[16] but somewhat less than the average income of all Indian women.[17]

Health in India

Many population-level health indicators improved in India throughout the 1990s and early 2000s. The leading causes of death in the country were ischemic heart disease (15%), lower respiratory infections (11%), cerebrovascular disease (7%), perinatal conditions (7%), chronic obstructive pulmonary disease (5%), diarrheal diseases (4%), tuberculosis (4%), HIV (3%), traffic related deaths (2%), and self-inflicted injury (2%).[18]

Health System and Epidemiologic Indicators[2]

INDICATOR		YEAR
Average life expectancy at birth (total, female, male)	63, 64, 62	2006
Maternal mortality ratio (per 100,000 live births)	450	2006
Under five mortality rate (per 1,000 live births)	69	2008
Infant mortality rate (per 1,000 live births)	52	2008
Vaccination rates (% of DTP3 coverage)	62	2007
Undernourished (%)	22	2010
Adult (15-49 years) HIV prevalence (%)	0.36	2008
HIV antiretroviral therapy coverage (%)	10	2006
Tuberculosis prevalence (per 100,000)	299	2006
DOTS coverage (%)	100	2007
Malaria cases (per 1,000)	9	2006
Government expenditure on health as a % of total government expenditure	4.1	2008

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[2] This data was comprised from the following sources: WHO, UNICEF, UN.

INDICATOR		YEAR
Government expenditure on health per capita (international dollar, USD)	33, 12	2008
Total health expenditure per capita (international dollar, USD)	116, 43	2008
Physician density (per 10,000)	9	2005
Nursing and midwifery density (per 10,000)	16	2005
Number of hospital beds (per 10,000)	17	2005

Indian Health Care System

State governments had full ownership of most health-related matters within their borders. Together with local governments, they planned, organized, and funded public health services independent of the central Indian government. These services included sanitation, drinking water, health and family welfare, woman and child development, and poverty alleviation.[19] The Government of India allocated slightly more than 4% of its national budget to health care.[20] Comparatively, most Indian states allocated a slightly larger portion; state investments ranged from 3.7% in the state of Karnataka to 5.9% in Tamil Nadu.[20-22]

Health insurance was not common. About 5% of households had one member insured.[1] There was higher coverage in urban households (10%), Jain households (24%), and the wealthiest households (16%). Indians living at or below the poverty line often sought care from public providers where they paid out-of-pocket user fees.[23] A growing majority of all Indians, however, including those in urban (70%) and rural areas (63%), sought care from private entities, believing that they would receive better quality care.[1] A study of rural families' expenditure patterns revealed that 70% of families spent 60% of their annual income on health, and medical treatments were one of the most important causes of rural indebtedness.[24] Access to and quality of care in the Indian public care delivery system varied across facilities and states, and there was little regulation on quality standards of private providers.[19]

In rural areas the public health system was divided into three levels.[17] Community health centers for every 100,000 people reported to the state ministry of health and employed four medical specialists (one surgeon, one physician, one gynecologist, and one pediatrician) and 21 paramedical staff. Each was equipped with 30 beds and received referrals from four smaller primary health centers. For every 30,000 people, a primary health center was responsible for providing curative and preventive services, including family welfare services. There were positions for a medical officer and a team of 14 paramedics at each primary health center, which had four to six beds. Finally, sub-centers were the most peripheral point of contact. Sub-centers provided basic pharmaceuticals to treat minor injuries or illness, serving 5,000 people each. One female auxiliary nurse midwife and one multi-purpose male health worker (not medically trained) were supposed to rotate through six sub-centers[19] and were overseen by a "lady health worker" who reported to and received assistance from the national Ministry of Health and Family Welfare.[25]

In urban areas health centers for every 50,000 people included a dispensary and provided outpatient care, prenatal care, family planning, home visits to render routine medical services, immunizations, and awareness about personal and community hygiene, nutrition, and health promotion, as well as referrals to specialist and government hospitals. Family welfare centers offered family planning and related services for every 100,000 people.[26,19]

Public hospitals provided secondary and tertiary care in both urban and rural areas, and one to four facilities per district also contained a public sexually transmitted disease (STD) clinic. The STD clinics provided free testing and were dispersed according to population size.

While the rural health system was more organized than the urban, there were 50% fewer community health centers than needed. According to the World Health Organization (WHO) India had a health workforce crisis.[27] In 1999, 75% of community health centers reported no adequate equipment, and 67% of primary health centers did not provide labor and delivery services.[19] In 2010, whereas the WHO recommended at least 230 health workers per 100,000 people, India had only 190. There were tens of thousands of Indian physicians working abroad.[28]

HIV in India

In 2008 national HIV/AIDS prevalence was 0.36%, but it was much higher among several vulnerable groups, including injecting drug users (IDU; 8.71%), men who have sex with men (MSM; 5.69%), and female sex workers (FSW; 5.38%; see **Exhibit 3** for prevalence rates among various groups, 2000-2004).[29] Most HIV infections occurred through heterosexual transmission, though injecting drug use was the most common route of transmission in the northeastern states of Manipur and Nagaland. Prevalence was slightly higher among men (0.44%) than women (0.29%) and had become higher in rural areas than in urban areas over the years.

History of HIV in India

HIV was discovered in India in 1986 among 10 FSWs who contracted the virus from foreign travelers.[30] The majority of early HIV cases were transmitted via heterosexual sex associated with sex work, but there were also cases among IDU.[31]

During the 1990s India used the WHO's HIV sentinel surveillance method, which involved testing blood samples from pregnant women at public antenatal clinics to estimate HIV prevalence.[32] In 2000 the government began to supplement the antenatal clinic data with data from public STD clinics to better estimate national prevalence. It calculated prevalence among high-risk groups, commercial sex workers, men having sex with men, and injection drug users with data from HIV testing sites targeting those groups. The government also directly monitored the prevalence in "bridge populations" who had sexual contact with high-risk groups and the general population. Bridge populations included truckers, migrant workers, and the clients of commercial sex workers. The updated surveillance indicated overall adult HIV prevalence rates higher than 1% in six states. Seven other states found prevalence rates higher than 5% among high-risk groups.[33]

In 2002 the United States National Intelligence Council projected that India would have between 20 million and 25 million HIV-positive individuals by 2010, the "highest estimate of any country." In response, a number of high-ranking Indian officials argued that the projections were based on "completely inaccurate data."[34] In 2006 new data showed HIV prevalence rates higher than 5% in high-risk groups in 81 districts (out of 600).[35] Simultaneously, in collaboration with a variety of donors and technical groups, the Government of India integrated HIV surveillance into its existing National Family Health Survey. The updated estimates indicated 2.5 million people were living with HIV, half the previous estimate of 5 million.

Government Response

The Ministry of Health and Family Welfare established its first National AIDS Committee to investigate HIV in 1986 and formulate a strategy and plan for implementation of HIV/AIDS prevention and control across the various ministries and sectors of society. In 1992 the committee was replaced by the National AIDS Control Organization (NACO), a permanent division of the Ministry of Health and Family Welfare. NACO's operations relied on funding from international donors as well as the Indian government.[36] At that time, due to social and political pressures, many HIV/AIDS programs opted to serve the general population rather than focus on particular high-risk groups.[37]

NACO implemented its first National AIDS Control Program (NACP-I) in 1992. NACP-I focused on preventing HIV transmission via blood transfusions and called for the establishment of 504 STD treatment clinics in district hospitals and medical colleges. NACP-I was initially five years and was granted a two-year extension.

The second NACP (NACP-II) began in 1999 with a similar five-year timeline and allocated 14% of its budget to targeted interventions.[38] It created State AIDS Control Societies (SACS), government entities that operated independently from the state health ministries. SACS were responsible for overseeing NACO programming at the state level by issuing grants and overseeing district-level NGOs. These NGOs delivered services in line with the national HIV plan.[36] NACO funded the SACS, which submitted an annual operation plan and budget for approval each year. The SACS also could seek additional funding or technical support from private sources as needed.[39]

During the NACP-II, the government established public voluntary counseling and testing (VCT) clinics. Beginning in 2004, free provision of antiretroviral therapy (ART) was scaled up at public hospitals across the country. The number of patients on ART increased from fewer than 5,000 at the end of 2004 to almost 50,000 by the end of 2006. In 2007 there were more than 76,000 patients receiving ART at 127 public sector centers.

The NACP-II's total budget between 1999 and 2006 was USD 480 million, including USD 46 million from the government of India. About USD 70 million was spent on interventions for high-risk groups (about 300,000 people) across the country (see **Exhibit 4** for NACP-II funding sources).[40]

The Avahan India AIDS Initiative

The Bill & Melinda Gates Foundation (Gates Foundation) created the India AIDS Initiative, later called Avahan ("call to action" in Sanskrit), in 2003 to curtail the spread of HIV in India.[3] Avahan worked in the six states—home to 300 million people—with the highest HIV/AIDS prevalence in the country. It focused efforts on high-risk populations. Avahan did not deliver services itself, but rather contracted with existing NGOs already working with target populations.

The Gates Foundation initially committed USD 100 million to the initiative for five years, increasing its pledge to USD 200 million in 2004. It provided Avahan with financial and program oversight from its headquarters in Seattle. In addition, the Gates Foundation invited important outside leaders and government officials to join an Advisory Board for the initiative that met annually. A Technical Advisory Panel consisting of field experts and others actively advised on the program's grant selection process, monitoring and evaluation, and technical best practices. At the implementation level, staff from the Gates Foundation's Delhi office monitored the day-to-day operations across all six states and spent significant time in the field to understand program practices (see **Exhibit 5** for Avahan organizational chart).

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[3] Avahan referred to all levels of actors engaged in the initiative, including the Foundation's staff and the grantees.

History of Avahan

Planning

Following the United States National Intelligence Council's projection that India's HIV-positive population would reach between 20 million and 25 million by 2010, Bill Gates, the founder of Microsoft, held a press conference to announce the Gates Foundation's intention to fund a USD 100 million initiative to "combat societal stigma surrounding the disease and increase awareness of HIV/AIDS through a nationwide communication and advocacy effort."[41]

In 2002 the Gates Foundation brought together two teams with "India-specific skills" to aid in the initiative's planning and design for this sizeable investment. The technical team was led by India- and US-based analysts from a major global management consulting firm and representatives from Family Health International. Together, the two groups decided to approach HIV in India by rapidly scaling up HIV prevention activities targeting the most-at-risk groups.

The Gates Foundation explained the decision to focus on prevention in later documents, saying "few examples of HIV prevention interventions that provided services for a large portion of high-risk individuals at a country or regional level" existed at the time, and "prevention practitioners were calling for a 'bridging of the prevention gap.'" It believed treatment and care had come to overshadow prevention. The Gates Foundation also cited a UNAIDS study reporting that "Asia presented the greatest risk of expansion of the global epidemic."[42]

The Gates Foundation decided to manage its funds directly instead of channeling them through the public sector. Although the decision drew negative attention from the Government of India, the group thought directly funding the implementation would allow the initiative to scale with speed and flexibility.[43]

In 2003 with a USD 100 million budget, the Gates Foundation formally launched the Avahan HIV initiative. The Gates Foundation did not sign a formal memorandum of cooperation with NACO to confirm the terms of its involvement in HIV prevention in India.

Ashok Alexander, senior partner and head of the Delhi office of a major global management consulting firm, became Avahan's Director. As a consultant, Alexander had helped lead the management firm's "large-scale transformation and institution-building" projects in the US and Asia for 17 years.[44] Alexander felt there was no time to waste in the fight against HIV/AIDS. "It wasn't just urgent— it was an emergency," he said. Alexander's strategy for Avahan was clear: to rapidly scale the initiative within two years to deliver services as quickly as possible to the highest-risk groups. Avahan would "tell the world" that large-scale targeted HIV prevention was achievable.[43] Alexander said that he was "obsessed" with speed and understood that "quality could take years to scale up," time he didn't feel they had.

Alexander convinced the Gates Foundation to establish an office in Delhi to manage the project and oversee grantees. Most of the eight initial Delhi office Foundation team members came from the business sector and had little to no prior professional experience working with HIV/AIDS, a fact that would receive scrutiny from the international global health community and potentially cause some missteps.[43] In selecting staff, Alexander said he looked for:

> Passion, tremendous passion; a strong analytical ability, and an ability to get things done. Just to get it done. That's it. No talking about problems. Get it done, get it done fast, and get it done with quality. People who can execute… and for a certain type of thinking, I wouldn't say that it's business thinking, but it's a certain type of thinking that should be in public health. It boils down to the ability to look for data to tell you how to change the program and use that data to be very flexible throughout.

Twenty-hour work days were common, and the sense of urgency was pervasive. As a technical advisor to the initiative said, "They work incredibly hard. I mean, I would expect a team 10 times their size to get done the amount of work they've gotten done."

Grants and Partnerships

Avahan wanted to target female and male sex workers and their clients, IDU and their partners, and interstate transport workers in select districts of India's six highest prevalence states – Andhra Pradesh, Karnataka, Nagaland, Maharashtra, Manipur, and Tamil Nadu. The team's goal was to work where the government was not already implementing services, and it met with NACO to identify appropriate districts along these lines. Avahan planned to use available, low-cost technologies and "known solutions," such as condoms. For HIV treatment and care services, it would make referrals to government institutions.

To identify organizations able to help execute its plan, Avahan issued a request for letters of interest in 2003 via the Gates Foundation's website. From these applicants, Foundation team leaders selected "implementing partners," primarily large, established NGOs deemed capable of handling USD 10 million to 15 million grants over five years.

There were two types of implementing partners: NGOs contracted to work with truckers and bridge populations nationwide and NGOs that would serve a single state or sub-region. Avahan contracted Population Services International and Transportation Corporation of India Foundation to oversee its national programming and seven state-specific NGOs to oversee service delivery to FSW, MSM, and IDU populations. These state-specific grantees were termed "state lead partners" (SLPs) and were responsible for sub-granting funds to local grassroots NGOs throughout their respective states. SLPs selected district-level NGOs with organizational strength and quality relationships with the target communities in their area. Experience in HIV prevention was not a prerequisite. SLPs provided ongoing oversight, coordination, technical support, and capacity-building to their NGO sub-grantees, some of which were also SACS grantees under the NACP-II (see **Exhibit 6** for descriptions of Avahan's SLPs).

Finally, in each state Avahan created State Advisory Committees consisting of Avahan staff, representatives from SACS, and other state-level stakeholders. These State Advisory Committees were intended to provide SLPs with feedback and guidance.[43] Though the goal was to meet annually, it was not always met.

Avahan soon awarded several monitoring and evaluation grants to support operational and epidemiological research. Recipients of these grants included Family Health International, which conducted an integrated biological and behavioral survey (IBBS) for high-risk community members, and the University of Laval in Quebec, which set out to project the number of HIV infections that could be averted by Avahan's efforts. This research took longer than initially expected, and results were not available in 2004.[43] Despite these investments, Avahan bypassed the advice of some experts to conduct a baseline survey. Alexander reflected:

> It's a dilemma because to get an effective baseline you actually have to start the work and build the trust of the community to … find out what the biological and behavioral markers are. If you are doing a large-scale delivery program, you have to think about how to create a rapid baseline, but you can't create a baseline effectively without having started the program. So it's a chicken and egg kind of problem.[45]

In 2004 Avahan awarded additional grants to fund capacity-building partners, principally US-based NGOs that would help improve the technical capacities and strategies of the Indian NGOs contracted to deliver Avahan services. Family Health International, together with the WHO, provided guidance on STDs. They created clinical operational guidelines and standards for Avahan that explained approaches

for STD prevention, detection, care, and delivery. CARE was contracted as a capacity-building partner to provide training in community mobilization. The Program for Appropriate Technology in Health developed interpersonal communication methodologies to promote behavior change. Constella Futures developed advocacy strategies. The Centre for Advocacy and Research was responsible for print media, including training journalists, tracking media hits, and placing positive stories in the local media. Avahan program officers in Delhi oversaw the capacity-building partners.

While three of the target states' SLPs received funding in December 2003, four others received it in 2004. By March that year, Avahan had laid the foundation of its geographic coverage area—what Alexander termed the initiative's "footprint" (see **Exhibit 7** for depiction of Avahan's scale-up of coverage and services).

By 2005 Avahan had allocated USD 170.5 million, 85% of its total budget, to its various partners and grantees. About 45% went to SLPs, 25% to the two multi-state NGOs, 9% to capacity-building partners, 8% to advocacy partners, and 12% to research and impact and monitoring grantees. The Gates Foundation spent USD 1.8 million on office and capacity-building expenses at Avahan the first year, 60% of which went toward compensation and benefits. Office and capacity-building expenses increased annually.

As Avahan scaled up, the global health community in India had mixed feelings about the initiative. As one stakeholder put it, "They came in with a level of arrogance, [saying] 'We aren't going to make the same mistakes as other donors.'…They believed that they were better than anybody else, and that arrogance means they alienated a lot of good people who could have helped."[43] Donors expressed frustration that the initiative had not been more transparent or collaborative with others working in India's HIV prevention landscape.

Explaining how Avahan dealt with some of the negative press and government hostility, Alexander commented, "We talked about it and said that there's nothing we could do. We just had to keep our heads down and not attract a lot of attention and just get to work, get to work—use Mahatma Gandhi's style of, you know, wearing them down with love. Just do good work, and keep coming back to them."

Other stakeholders described the team positively. As one explained, "There were definitely skeptics…but I saw [in the staff] people who absolutely learned what they needed to know. They brought in experts to help them get up to speed …but they didn't come with all the baggage, and that was exciting to me." Another technical advisor explained, "In public health scale-up, you have to do business *un*usual."

On the Ground

In 2005, grantees in 65 of the 140 districts in India's six highest HIV prevalence states were reaching 24,285 FSWs (23% coverage) and 5,352 MSM (35.5% coverage)[4] with prevention interventions "designed to address both proximal and distal determinants of HIV risk."[5]

Every month NGOs updated the estimated size of their target populations, and with time and growing community trust, the size of the target population often increased. Avahan recalculated its

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[4] Avahan's outreach to IDUs in the Northeast took longer to establish.

[5] Avahan defined proximal determinants as "factors, both biological and behavioral, that affected exposure to, transmission of, and duration of infectivity of HIV, including sexual behavior, circumcision and ART." It defined distal determinants as "underlying determinants, the sociocultural, economic and demographic contact, and the availability of intervention programs that influence the proximal determinants."

progress toward coverage goals each month and then increased its targets for coverage (see **Exhibit 8** for Avahan population size estimations and coverage over time).

From the start, Avahan required SLPs to attend cross-grantee quarterly meetings. Avahan central staff directed the early meetings where they reviewed NGO program data, shared innovations, and discussed factors limiting the expansion of their footprint. Over time, SLP relationships developed, and they brought additional agenda items to the meetings, including retaining local talent, reviewing financial flows, and triangulating data sets.

Service Delivery

Avahan's grantees provided services in three primary areas: clinical services, community mobilization, and advocacy. Services varied among grantees, however, and initially there were no formal requirements they had to fulfill. Avahan expected the grantees to calculate their "denominators," i.e., the number needed to serve. These estimations informed milestones and targets, which Avahan program officers approved.

Clinical Services

With Avahan's support, district-level NGOs were expected to provide clinical services. Most established health clinics dedicated to high-risk community members and their partners, though in some instances, NGOs partnered with private providers or provided mobile services and health camps. SLPs aimed to have one clinic for every 350 FSW or MSM community members in their districts. Some clinics saw only MSM or only FSWs, and others saw both, depending on the communities' preferences. Most were staffed by one doctor, sometimes accompanied by an assistant, and all services were free to patients.

The clinics provided gynecological and anal-rectal exams, STD syndromic treatment and counseling, treatment for opportunistic infections, and referrals to government health care sites for HIV, tuberculosis (TB), and STD testing, as well as ART as necessary. Peer educators typically served as advocates and escorted community members on clinical appointments.

SLPs provided sensitivity and clinical guideline training to all Avahan clinicians, each of whom was vetted by their district-level community members before being hired. Clinicians generally were not available full-time and saw Avahan patients on a set weekly schedule during times when community members were least likely to be working.

In addition to these dedicated clinics, Avahan SLPs contracted private practitioners in each district to bolster service coverage. These providers were similarly vetted and trained, and, like all Avahan providers, were required to provide clinical reports for every community member visit. Their reports and performance were monitored by STD technical officers housed at each SLP office who conducted monthly in-person site visits.

All district-level NGOs were responsible for ensuring adequate supplies of condoms, equipment, and pharmaceuticals. Condom distribution was part of the clinical preventative services. SLPs in Manipur and Nagaland also provided clean needles and syringes to IDUs.

Over time, some NGOs expanded clinical services further. A small number of clinics ran their own labs for on-site HIV testing, some provided health education, and most integrated verbal screening for TB into their clinical practice. One NGO began a paramedics program in which community members received training to conduct internal exams and other clinical services. However, these services were not offered by most Avahan NGOs.

Community-Based Services

District-level NGOs mobilized their communities around local priorities. NGOs that served female sex workers developed crisis-response systems to address violence and harassment. Where police beatings, abductions, public altercations, and theft were common, peer educators and other active community members created "on call" schedules during peak sex work hours to receive calls from other community members when violent events occurred. Once the nature of the crisis was understood, the person on call dispatched help and notified local police stations as necessary.

While initially there was little emphasis on community mobilization in the SLP grant proposals, as services rolled out in 2005, Avahan encouraged SLPs to revise grants to include it as a central component. To facilitate this shift, the Foundation team created a tool to help SLPs evaluate and strengthen their activities to better understand and empower the community. It promoted activities that were participatory, strengthened individual agency, community sense of program ownership, and addressed underlying structural and environmental factors. SLPs began to focus more substantially on supporting local, community-led needs assessments with their district-level NGO sub-grantees and then advised the district-level NGOs on how to tailor their programs based on the assessments. NGOs began aiding clients in acquiring government identification cards. And with Avahan's support, they tried creating revenue-generating enterprises for clients, including cosmetics classes and small businesses run by community members.

District-level NGOs involved community members in HIV prevention. They held elections in which target community members nominated the peer educators to run outreach. These individuals became paid staff members (stipend amounts varied between grantees) who continued their regular lives as sex workers and/or MSM, allocating four or more hours to their Avahan duties every day. Peer educators conducted weekly one-on-one visits with the 50 to 60 community members under their charge. They were assigned only to work with individuals from the same at-risk community and would meet them wherever the community members elected—often in the streets or their homes. Peer educators monitored each individual's personal and health-related needs and distributed condoms. In addition, they taught the community about the importance of regular clinic visits, hygiene maintenance, and condom use and negotiation tactics to enable safe sex practices.

In many districts, peer educators were also essential to district-level NGOs' efforts to help community members establish and run their own community-based organizations (CBOs) designed to build the community's capacity to take on relevant issues on their own behalf. With help from the SLP or district-NGO, peer educators conducted outreach, surveyed for interest, brought people together, and secured training for those interested.

Another common community mobilization activity was the establishment of safe spaces. SLPs formed dedicated sites, termed "drop-in centers," in "hotspots," commercial sex solicitation venues, near their district clinics. The community learning centers were clean and brightly lit with snacks and beverages, mats for napping, and amenities to freshen up between clients. They provided a safe place to rest, congregate, communicate, and organize. As one sex worker said, "Before, everyone said I was dirt, and I believed I was dirt. Now I see I have community. We are not dirt. We deserve rights, and now that we have each other, we will never stop fighting for them." Despite competing against each other for clients, through the community mobilization projects sex workers came together in support of one another.

Advocacy

Avahan encouraged NGOs to "create an enabling environment for HIV prevention"[6] by providing funding for such activities. In addition to supporting NGOs in training peer educators and community members to advocate for themselves, by 2005 Avahan was funding state advocacy officers. The state advocacy officers were responsible for working with district-level NGOs on various efforts to achieve Avahan's directive of "neutraliz[ing] persons whose stance and actions could block adequate HIV work." Many NGOs conducted sensitivity trainings for police after learning they were the most frequent perpetrators of violence upon high-risk community members. NGOs supported community members that initiated media advocacy efforts. In some districts, community members also conducted public demonstrations to protest acts of discrimination against their community members, marching to local precincts and elected officials' offices when necessary.

District NGOs also pursued relationships with other powerful stakeholders in their area. They set up educational opportunities for local elected representatives to teach them the benefits of a healthy and safe high-risk community. NGOs and community members encouraged brothel owners to support sex workers' care-seeking behavior, arguing for the business and financial benefits of a healthy, HIV-free sex worker staff. In districts where sex workers were largely street-based, NGOs reached out to lodge owners and other hotspot business owners to encourage distribution of condoms and interventions to stop violence.

Program Support and Operations

To enable implementing partners' successful delivery of services, Avahan invested in three core operational areas: data, program management, and clinical guidelines and standards (see **Exhibits 9a-9c** for Avahan budget allocations).

Data

Alexander believed that "the intelligence of problem solving cannot be removed from the frontline" and encouraged data collection and use at all levels of the initiative. The Foundation team distributed examples of user-friendly tools to SLPs. SLPs often created pictorial tools and techniques for peer educators (who among FSW were largely illiterate) to use to "microplan" their weekly priorities (see **Exhibit 10** for examples of micro-planning tools). As SLPs shared their practices with one another over time, microplanning tools began to resemble each other. Alexander explained:

> Every peer educator typically has a 1-to-50 ratio with the community, but you can't treat all 50 consumers as if they're the same. So, we try to get them to think of that in, roughly, four to five buckets of risk … A, B, C, D, E categories of risk. So, in the A category, which is for the highest-risk community members, there might typically be only four FSW or MSM, and the peer educators may be spending 50% of the time on those four individuals and keeping just the maintenance mode with the community members in the lower risk categories. This is micro-planning. I feel that if I compare these peer educators with some of the pharmaceutical sales forces I've worked with, I'd say those sales forces aren't as sophisticated as this bunch of peer educators.

Weekly, using pictorial representations and color coding, each peer educator recorded the risk behavior, condom use and acceptance of clients and the behavior change communications and services

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[6] Avahan defined an enabling environment as "one in which social inequity and violence, harassment, abuse, and discrimination against people with HIV and high-risk groups are reduced, and the self-confidence of high-risk individuals and their collective identity are strengthened, so that they can advocate for, and take ownership of, effective HIV prevention interventions."

she had offered. They used this data to identify community members needing particularly focused support in the coming week or month. Peer educators also reported monthly data summaries to their NGOs.

The NGOs aggregated the peer educator data, along with crisis response events and clinical reports, into a monthly quantitative technical report and a monthly qualitative narrative report. They used these reports to monitor progress. The reports were turned into the SLPs, which, in turn, reported them to the Foundation team.[46]

Prior to 2005, data was recorded by hand or in Excel spreadsheets that the SLPs developed and maintained individually. No specific data requirements or indicators were collected at every level. SLPs were asked to report on "hard and soft infrastructure" indicators, such as the number of clinics or drop-in centers and the total number of trained outreach staff.[47] In 2005 Avahan grantee Family Health International introduced a computerized management information system (CMIS) it was commissioned to design. The CMIS streamlined reporting at the NGO and SLP levels. The CMIS tracked 40 standard indicators agreed upon by the Foundation team and SLPs. The indicators focused on SLP efforts to roll out basic services and created a "dashboard," including the outreach contacts made by peer outreach workers, the proportion of potentially risky sexual acts involving condoms from Avahan, and the proportion of estimated individuals who ever attended the STD clinic. Over time, these indicators evolved to include metrics related to expanded service scope, such as participation in community groups and assistance in obtaining government-issued ID card.[47] The CMIS created a standardized reporting system across the initiative's six states. Some SLPs collected additional metrics that were not reported, such as the number of clients referred for HIV testing or verbally screened for TB. Periodically, trainings on data collection and usage were conducted for SLPs and FHI traveled with Foundation staff to look at the consistency of indicators and validate data. If there was ever a concern about data, the SLPs would follow up with the NGOs, the original source.[47]

NGOs delivered the indicators through the CMIS system but still sent their narrative reports to their SLPs via print or email. SLPs worked to ensure that each NGO received a response including graphs, data analysis, and feedback within 48 hours of submitting their monthly technical report. Field officers would then meet with the NGO leaders during monthly visits to review the documents and generate new strategies to improve performance and set new targets as needed. The Foundation team received synchronized reports from each SLP, synthesizing state-level data via the CMIS.

In the early stages of its introduction, some NGOs voiced concerns about the ethical ramifications of indicator-driven performance. They were concerned that targets for health services, such as internal exams, could result in coercion of community members to accept physical examinations that they may not want in order to meet Avahan goals. An advisor to one Avahan NGO explained, "Unless Avahan's NGOs have the space to decide themselves what to do, women who don't want to be examined will constantly be examined because it's one of [Avahan's] indicators."

Many NGOs struggled to integrate the CMIS electronic indicator system and the expectations of rapid problem-solving that came with it into their already demanding workloads. They voiced frustration at the pace they were expected to adapt. As one NGO staff member explained after the CMIS launch, "The pace which Avahan sets is highly ambitious. It's good that we need to keep some really tough benchmarks, but it should not be planned in such a way that it damages my organization's credibility, or the credibility of other implementing partners by applying this sort of pressure on us to just get things done."[43]

Many SLP staff felt that the CMIS helped to improve their capacity-building efforts with district-level grantees. It provided a common set of data points for district grantees across the state, enabling them to identify performance barriers and generate potential solutions. Some SLP staff also felt the

system helped them provide improved and individualized problem-solving, advice, and oversight to their district grantees. One SLP posted its monthly indicators on an electronic billboard in the front office to motivate staff and grantees. Another used the data to establish pay-for-performance goals for peer educators, linking clinic attendance, internal exams, and condom distribution to pay rates.

To encourage NGOs to use the data system, Avahan's Foundation team "embraced a work-in-progress attitude." Managers acknowledged there would be mistakes and worked to enable team learning from misfires. Senior Program Officer Gina Dallabetta described, "Something that the NGOs learned over time was that failure meant you needed more support; it didn't mean you got cut. Their sub-optimal outcomes helped everyone look for solutions." With this culture in place, the initiative's reporting grew robust as grantees reflected honestly about their challenges and experiences. For example, when one SLP had difficulty reporting the number of its FSWs' sexual partners, the Foundation team discussed the reasons with the SLP and learned that asking sex workers about their client load in the context of HIV was perceived by FSWs as disapproval of their means of income, which in turn was causing some FSWs to avoid the program. As a result, SLPs were no longer required to report on that indicator.

Overall, Alexander felt that the CMIS helped improve communication among the Foundation team, SLPs, local NGOs, and the more than 8,000 employees at all three levels of the Avahan program. Alexander and his Foundation team also valued grantees' creative use of data to identify and address areas for improvement, particularly related to coverage and service utilization. As district-level NGOs gained familiarity with their target communities, SLPs helped them tailor their activities to local contexts and need.

As grantees' capacity to analyze data for the required reports increased, so did their comfort using the data for their own purposes. Many NGOs began to evaluate their work internally using the CMIS and its indicators. They used the data to guide conversations with staff regarding performance and their SLPs. As NGOs neared saturation of their target populations, their data focus shifted to emphasize the quality and impact of services provided.

With data spanning the entirety of the large-scale operation, the Foundation team could better measure program performance and progress in reaching scale (including geographic coverage and service utilization). "Data and measurement was the most important thing," Alexander said. "The epidemic impact has to be the number one thing that we achieve. If we don't achieve that, we've created community groups with funding and so on; [but] it's all kind of meaningless, isn't it?"(see **Exhibit 11** for depiction of Avahan's data monitoring process).

Management

Despite having data to provide insight to what was happening in the field, Alexander's Foundation team prioritized seeing the program's operations first hand. As Aparajita Ramakrishnan, one of Avahan's senior program officers described, "There was a genuine sense that you had to be near the client. If you're not in the field and you're not at the client site, then you can't know what's really going on. And, let's not forget none of us knew this business, so this was also an opportunity to learn."

Foundation program officers spent more time visiting the local NGOs contracted to deliver services than many SLP leaders did in the early years. There, they learned the needs of "the client" and helped SLPs learn how to continually refine their understanding of needs and innovate to meet them. One program officer explained, "Avahan's Foundation team is really like a [management consulting company], providing problem-solving advice to our grantees."

In the early years of operation, the Foundation officers focused on helping SLPs meet Avahan's ambitious targets for geographic coverage. Through frequent—often daily and at least weekly—contact with SLPs, the officers pushed SLPs to identify district NGOs and make their sub-grants quickly, communicating clearly the goal of speed. As a Foundation team member shared, "We worked hard on how to practice the Gates Foundation's values of being humble and mindful while also being aggressive and strict when necessary." After achieving geographic coverage, the Foundation officers focused on pursuits of quality and consistency and finally on scope.

Most of Avahan's SLPs who had previously worked with other funders were not accustomed to how often they were asked to meet or to report on their progress. As one senior program officer described:

> The Foundation team at that time was mainly private-sector managers, but they were Indian, so the grantees couldn't say, "We can't do that in India" because the Foundation team members knew India, so they knew it could work. But they got push back from grantees saying, "You don't know HIV; this isn't how the sector works." I think the issue really was that NGOs work at a different pace; they don't have the fire in the belly that managers who are going out to make a profit have, the type of managers who say, "Okay, you said you were going to put in two STD clinics but you really need four." These kinds of mid-course changes made the NGOs very uncomfortable for a long time.

In addition to the monthly technical and narrative reports they received, SLPs also prioritized one-on-one consultations with their NGO grantees. SLP field officers visited each of their NGOs at least once a month. They would make sure the local NGOs had the technical support they needed to continue to improve performance. One SLP field officer drove 32 hours roundtrip every month to visit one of the NGOs in her region. This was in addition to the regular visits she made to her other grantees in the state.

The Foundation team also worked to cultivate leaders, advising some grantees on hiring decisions and bringing in new additions with leadership potential to the central office. "Hiring the people with the right skills set, and then building their capacity—these are two things we do very well," a Foundation program officer said. Finding the right ways to motivate staff with such diverse backgrounds was also important. For some managers from the for-profit sector, it took time to learn that recognition was a critical motivator in the public sector. Foundation program officers saw understanding these nuances as key to success.

While the Foundation team sought to work with SLPs and NGOs to improve performance whenever possible, it was willing to terminate contracts when performance was persistently inadequate. For example, the Foundation team made mid-course corrections with Population Services International and the Transportation Corporation of India Foundation. Avahan felt these types of mid-course corrections were new to their implementing partners.

Delivering at Scale

The Common Minimum Program

In 2005, after consultation with its Technical Review Board, Avahan introduced the "Common Minimum Program for Sex Worker Interventions," a document that set out "core program elements to implement" and "build this shared vision and define a set of operating standards for the program."[47] Some grantees had expressed confusion over the delineation and extent of their responsibilities, and many felt the Common Minimum Program offered welcome clarification that was critical to their participation in the Avahan initiative.

The key technical elements of the FSW and MSM program included community mobilization, high quality STD services, communication for reducing risk and sustaining safe behavior, commodity availability, advocacy and policy initiatives, data for decision making, and program management.

Avahan used the Common Minimum Program as a "living document." As SLPs and district-level NGOs continued to innovate, program officers incorporated the best of these innovations into the Common Minimum Program's codified standards. They edited the original guidelines as needed every year or so and distributed revised electronic documents per grantees' request. Between publications, as Foundation Team program officers learned of innovations, changing practices, and new ideas, they shared them through frequent verbal and e-mail communication. Alexander explained, "We're a program that engenders innovation all the time. We don't get fixed to 'Ok, we've done it good and so that's the way to do it.' You know, we just keep innovating." With the Common Minimum Program, Avahan's state- and district-level grantees could see their local innovations turn into large-scale practices across the six states.

The Common Minimum Program also clarified roles and responsibilities between grantees. SLPs, for example, were not to provide services to the bridge and trucker populations in Avahan's target population, as Avahan had explicitly designated this role to the two multi-state implementing partners, Population Services International and Transportation Corporation of India Foundation. Further, the Common Minimum Program suggested that all SLPs should hire one full-time Advocacy Officer to oversee and report on district- and state-wide advocacy efforts using Avahan grant funds. The Common Minimum Program created a structure for the dialogue between stakeholders to balance standardization and innovation.

As one senior Avahan officer explained, "The Common Minimum Program created targets and goals for what grantees were supposed to be doing. It wasn't so much the what-they-should-be-doing that was new to them, but the extent to which we wanted to see them do it" (see **Exhibit 12** for example of Common Minimum Program guidelines).

Supporting the NACP-III

In late 2005, when Sujatha Rao became the new NACO director general, she began planning for the third National AIDS Control Program (NACP-III), set to begin in 2006. In addition to the civil society organizations and multilateral and bilateral agencies that were typically invited to help with planning, Rao invited private foundations, including Avahan. Avahan had hired Gina Dallabetta, an internationally recognized and well-published specialist, that year, which helped gain credibility among detractors. Alexander recalled:

> We were lucky, but we also had the benefit of proving ourselves through on-the-ground experience. We found out there were 14 chapters to the national program to be written … and they eventually looked around the table for volunteers. Being the enthusiastic lot we were, we put up our hands and said, 'Can we contribute to writing any or as many of these as you need?' We ended up spending a lot of time and effort on contributions to the planning of NACP-III. So, it's a lot of work, but I think we got that seat at the table, and then we used the opportunity to introduce our key learnings.

The National AIDS Control Program-III

The NACP-III implementation began in 2006 with a five-year term and stated goal to "halt and reverse the epidemic in India." Rao announced that the NACP-III would further decentralize NACO's structure, shifting authority to the district- and community-levels in order to target high-prevalence areas. NACO would still provide leadership and guidance to the SACS, which would implement programs and provide leadership to community-level programs. The NACP-III adapted and adopted some components of the community mobilization guidelines Avahan wrote.[43]

When allocating resources, NACO prioritized prevention within districts with 1% HIV prevalence in antenatal care clinics or 5% in STD clinics. Community health centers, primary health centers, and NGOs facilitated prevention through promotion of condoms, HIV counseling and testing, prevention of mother-

to-child transmission, treatment for STDs, and management of opportunistic infections. The program also supported community care centers that provided counseling for drug adherence, nutritional needs, treatment support, referral and outreach for follow up, social support, and legal services. The centers were linked to nearby ART centers.

In high prevalence districts, HIV prevention, treatment, and care services were also available in medical colleges or district hospitals. Hospitals offering HIV/AIDS services were linked to NGOs and CBOs that provided peer-support services and home-based care for people living with HIV/AIDS.

In 2007 NACO launched the Strategic Management Information System (SMIS), a national computerized information system to which all SACS were required to report. SMIS brought uniformity to NACO's surveillance, monitoring, and evaluation of its state-level agencies. Some SACS funded NGOs to serve as Technical Support Units (TSU) and provide technical assistance for monitoring and evaluation to staff and district-level NGO grantees. TSUs, some of which were Avahan grantees, coordinated collaborations between SACS and NGOs within the state, as well as supported SACS and NGOs to seek program funding from external sources, such as the UK Department for International Development (DFID). Further, TSUs supported NGOs recognized by the government as "centers of excellence" in providing training on their best practices and innovations to other SACS grantee NGOs around the country. The system aimed to improve performance and quality by enabling cross-district and cross-state learning.[48]

Also during the NACP-III, NACO leadership established the "one donor, one district" rule to organize international donor agencies providing HIV services in India. Under this rule, international donor and implementing agencies could only work in districts assigned by NACO and could not operate in areas already covered by other donors. The rule was intended to guard against overlap of efforts and donor investments, increase accountability for results, and decrease competition between implementers for clients.

The Global Fund supported the NACP-III through the Department of Economic Affairs, as did the World Bank, which directly funded the Ministry of Health and Family Welfare (see **Exhibit 4** for NACP-III funding sources and **Exhibit 13** for the NACP-III budget).[39]

During NACP-III, public services for HIV prevention, care, and treatment expanded greatly. From 2006 to June 2008, the number of public ART centers—located primarily in medical colleges, tertiary hospitals, and district hospitals—increased from 54 to 157. Drug distribution centers called Link ART centers opened in 2008 to reduce the distance that patients had to travel for care and increase adherence and access. More than 140,654 people were receiving first-line ART through the public sector in 2008.[49] By 2010 the country planned to have 250 centers and to provide ART to 300,000 adults and 40,000 children.

Similar expansion of HIV counseling and testing of women in prevention of mother-to-child transmission programming was seen, with more than 4.2 million women tested in 2009, compared with 1.2 million in 2006. The total number of people tested increased from 5.0 million in 2006 to 9.1 million in 2008.[49]

Avahan's Results

The Gates Foundation had approved a total of USD 211.4 million for Avahan to use through 2009, making Avahan one of the highest-funded HIV prevention programs in the world.[43] Avahan's goal was to reach "saturated coverage" of high-risk FSW, MSM, and IDU in its target geographic areas. It considered "saturated coverage" to mean coverage of at least 80% of the target community members.

At the end of 2006, 79% of eventual total clinics and 75% of drop-in centers were established, and 83% of eventual peer educators were active. The 2006 integrated biological and behavioral survey compared districts covered exclusively by Avahan to those with multiple implementers. Results showed that districts exclusively covered by Avahan with more than 50% coverage had higher rates of program exposure compared to those covered by multiple providers. This was despite the fact that in Avahan's exclusive districts the mean length of intervention was 2.5 years and the other districts had interventions for an average of six years. In Avahan's exclusive districts, FSW who had any exposure to the program were approximately 1.5 times as likely to report consistent condom use with occasional clients as females without exposure to the program (75% compared with 49%). Ninety percent of FSW with program exposure had sought STI services, compared with 76% of FSW with no exposure.[51] About 58% of sex workers reported no unprotected sexual acts in the last month; condom usage during last sex with a repeat client was 63%, and condom usage with regular clients was 31%. Avahan hoped to see improvements in all these indicators with more time.

In the four southern states as of December 2008, Avahan was reaching a monthly average of 66% of FSW (range of 55% to 79% across the states) and 70% of MSM (range of 50% to 87%). There were 116 local NGOs under Avahan in those states operating 520 drop-in centers and 302 STI clinics and distributing the estimated requirement of 34 condoms per month per FSW. In December 2008 the ratio of peer educators to people in high-risk groups reached its target of one educator for 50 FSWs and one educator for 55 MSM.[50]

After three years and with these numbers in mind, Avahan considered scale-up complete for hard infrastructure (clinics, drop-in centers) and for soft infrastructure (trained outreach staff, including peer educators). It considered coverage scale-up for its estimated target population (217,000 FSWs, 80,000 MSM, and 18,000 IDUs in December 2008) reached after five years.[50]

Antenatal clinic data on HIV rates for 15- to 24-year olds (thought to be a proxy for new infections) between 2003 and 2008 had declined significantly in Karnataka and Maharashtra, from 1.36% to 0.81% and from 1.10% to 0.57%, respectively. Rates for Andhra Pradesh and Tamil Nadu decreased slightly (1.28% to 1.15% and 0.67% to 0.61%) but were not statistically significant. Among female sex workers in Karnataka, data showed decreases in HIV prevalence (19% to 16%), high-titer syphilis, and gonorrhea.[52]

Avahan Phase II

Despite the program's rapid scale-up and continued support from the Gates Foundation, Alexander and the Foundation team began to realize that making a true impact on the HIV epidemic would take substantially longer than the five years they had planned. "The notion of dependence and sustainability struck me," Alexander explained. "When you go into the field and you talk to a woman there, and she's saying, 'Well, what will happen when you people stop?' These were just heart-wrenching conversations, so we had to say 'We will stop being a donor, but this service that you're getting will never stop.'"

The Foundation team in India began to talk to the Gates Foundation's HIV Program leadership in Seattle about the program's future. While the Seattle-based leadership expressed interest in expanding service delivery activities in India, Avahan was a five-year project and did not fit the long-term vision for India's portfolio. Alexander, along with the Technical Review Board and the Foundation's HIV Department leaders, decided that Avahan had to be transitioned financially to another "natural owner." Avahan identified two groups that could be complementary: "the communities we serve … and the government's public health system." Avahan believed its investment in CBOs had empowered and equipped the FSW and MSM groups to advocate for their programs.

Avahan began planning for "Phase II," which would begin in 2009 and end with Avahan's exit in 2013.[13] The Seattle-based leadership approved Avahan's request to continue the program until 2012. Avahan's Phase II transition plan entailed transitioning portions of the program to the government in three stages.[43] During the first phase, 10% of all programs serving high-risk groups would transition to government ownership by the end of 2009. In the second phase, another 20% of high-risk group programs would transition by the end of 2011. Finally, the remaining 70% of programs serving FSWs, MSM, and IDUs would be transitioned between 2012 and 2013. Three-quarters of Population Services International's programming would be transitioned by 2010 and the rest in 2011. Transportation Corporation of India Foundation would hand over one-third of its programs in 2010 and the rest in 2011.[52] The transition plan was based on assumptions regarding the rate of government absorption.

The transition plan and timeline were formalized with the Government of India through a second signed memorandum of understanding (MOU). The MOU stated that by 2013, Avahan would work to ensure that the populations it served could independently identify and combat structural barriers to their health, shape new sex workers' health-seeking behavior, and continue advocating for condom use during all sexual encounters. Furthermore, Avahan SLPs and their district NGOs would work with CBOs to ensure they had organizational leadership skills and professional capacity to pressure their local government health systems to demand continued quality services.

As a first step, the Foundation team encouraged SLPs to strengthen working relationships with the SACS. NACO's Technical Support Units would assume the SLPs' role of providing technical support after 2013. SLPs were instructed to align their budgets with those of the SACS. In nearly all cases, this meant trimming them. Some NGOs had to realign their salary structures with NACO's norms (though most staff in NGOs were paid per NACO norms as of 2004). Some NGOs also had to give up office space and close community drop-in centers. Whereas Avahan aimed to have one STI clinic per 350 target population members, NACO's guidelines called for one STI clinic per 1,000 population members.

During Phase II, key program officers shifted their schedules away from the field to spend more time offering NACO technical advice on a range of issues, including data triangulation and community mobilization. Despite Avahan's commitment and plans to strengthen NACO and SACS through 2013, some people doubted whether the public sector could sustain the program completely. While the cost per beneficiary at the sub-grantee level was similar between Avahan and NACO (USD 40 and USD 45, respectively), Avahan's management costs were much higher. Avahan devoted 25% of its budget, USD 14 per beneficiary, to management, while NACO devoted USD 5 per beneficiary.[38] Director General Rao reflected:

> [Avahan is] expensive. I mean they have the luxury of money right? All the Ashoks … and all these people—they bring in high value. But [they are] very, very expensive. I can't have them in my work.…because [the Avahan model] is not sustainable for low-income countries… When the budget gets tight and you have competing demands, for how long can you go on putting in money into HIV?

Next Steps

At its peak, Avahan was delivering services through 156 NGOs across the six target states. By the end of 2008, it had contacted more than 240,000 high-risk individuals using 6,200 peer educators.[53] Of high-risk individuals, Avahan had reached 159,000 FSWs, 56,000 MSM, and 13,000 IDUs in addition to male truckers and male clients in hotspots. The estimated coverage of target groups was about 75%. Avahan remained one of the largest HIV prevention programs in the world, with a commitment of USD 258 million from the Gates Foundation. [54]

As the Gates Foundation's investment and control of the program neared completion, Foundation staff wondered whether a guide or manual, such as the Common Minimum Program, would help transition program management and clarify the components essential to Avahan's success to the initiative's new stakeholders. One Foundation program officer commented, "Structure [had been] key to developing the connectivity within Avahan's team … that helped the program and our teams be effective. Lack of structure leaves you to assume. Clarity helps to build the team connectivity."

Alexander wondered what such a document might look like and what it should include. He reflected, "There is a type of strategic thinking involved in Avahan, an ability to step back and look at the entire program, and I think that that is probably the most difficult thing to transfer." Alexander was unsure how to preserve Avahan's "business intelligence" and "'fire in the belly" during the transition to its future owners. With four years to complete the transition, he followed his own advice and stepped back to look at the program as a whole to think about what had fostered these assets and how they might be instilled in the government.

Exhibit 1   *Map of India Showing Political Borders and Religions*
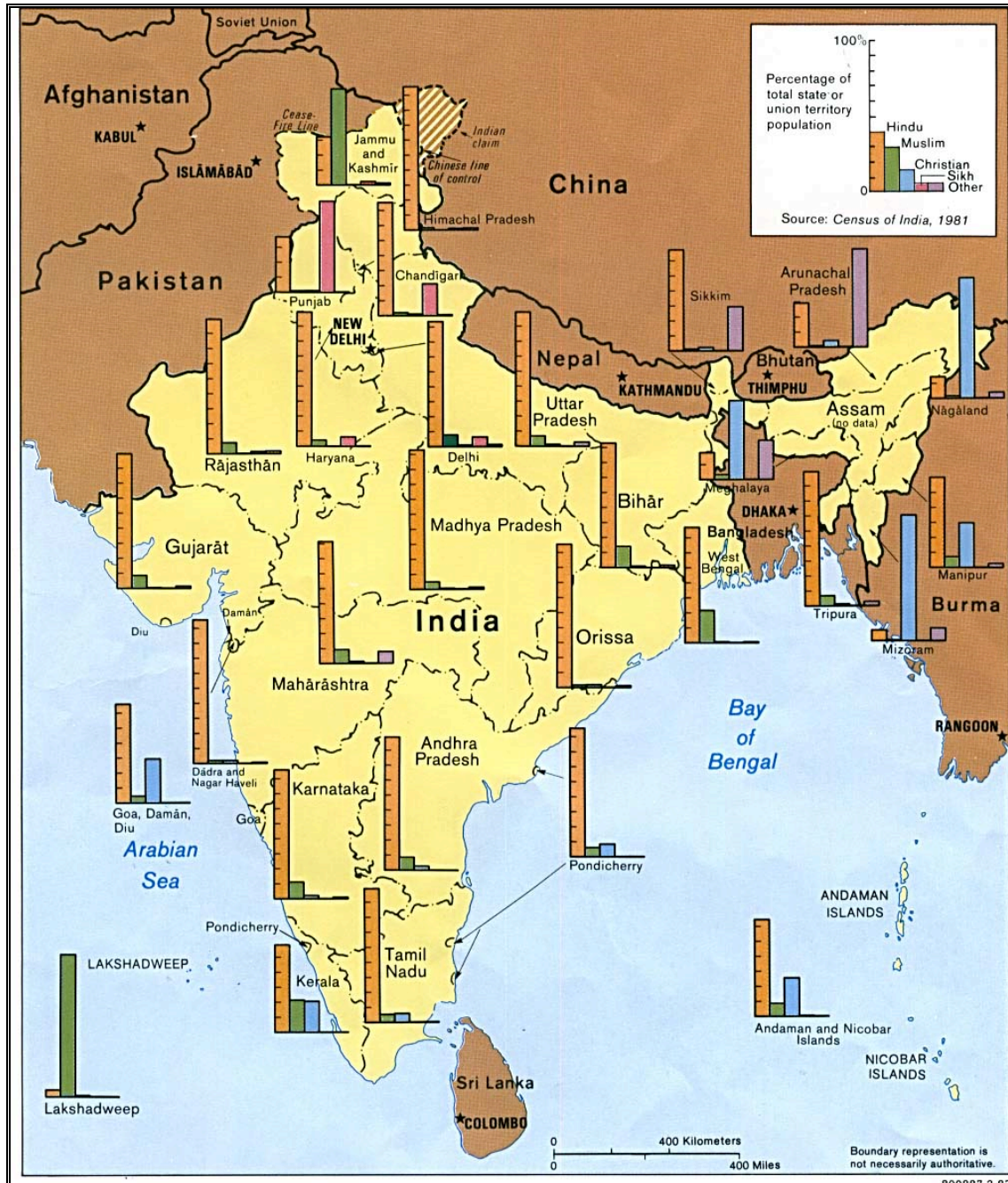
Source: Public domain. Available at:
        http://www.lib.utexas.edu/maps/middle_east_and_asia/india_religions87.jpg.

Exhibit 2   *Map of the "Golden Quadrilateral" Trucking Route*
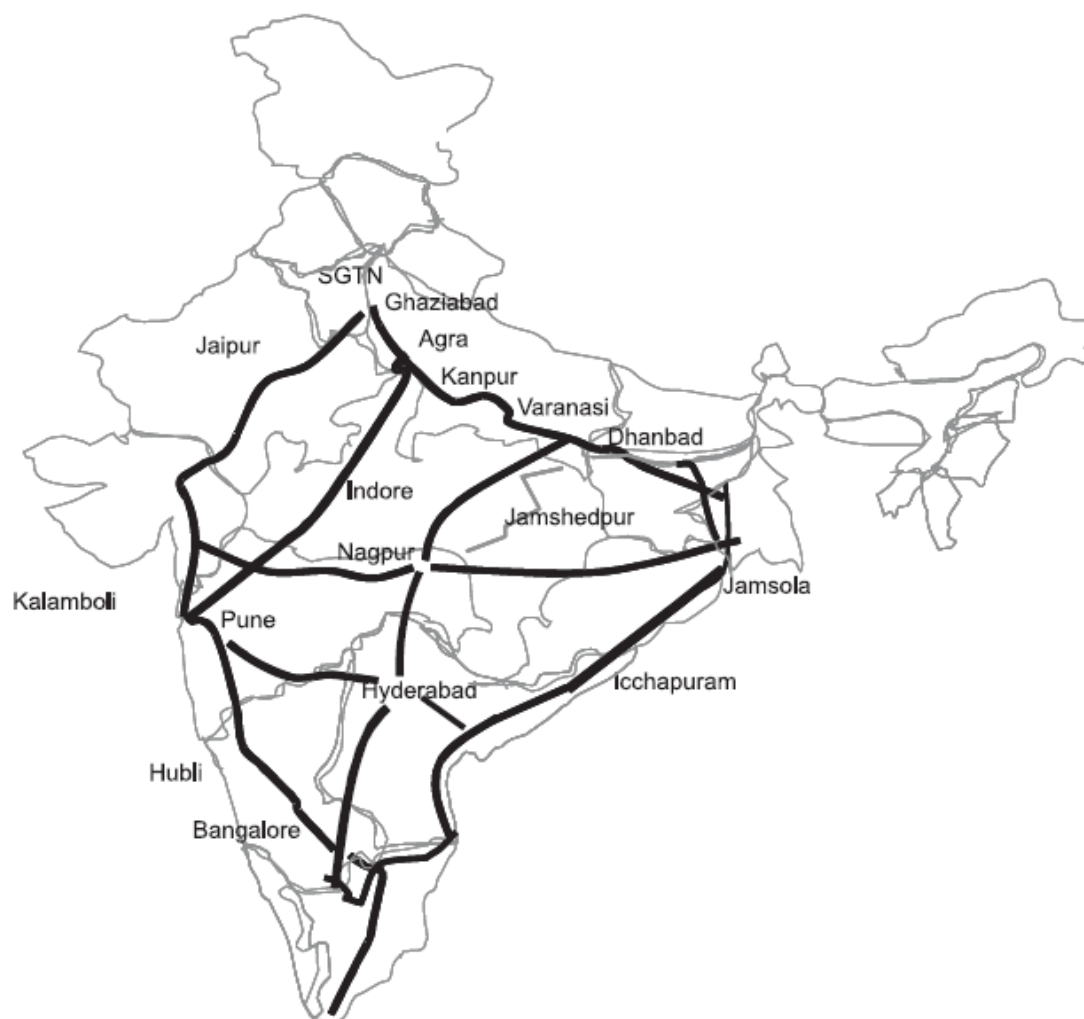
Source: Bill & Melinda Gates Foundation. *Off the Beaten Track: Avahan's Experience in the Business of HIV Prevention among India's Long-Distance Truckers*. 2008. New Delhi, India.

Exhibit 3 *HIV/AIDS Prevalence Rates in India, 2000-2004*

| HIV ESTIMATES 2000-2004 IN MILLIONS (% OF TOTAL INFECTIONS)	2000	2001	2002	2003	2004
Total estimated HIV infection	3.86	3.97	4.58	5.10	5.13
Infected males	1.94 (60.2)	2.04 (61.5)	2.58 (68.14)	3.22 (63.06)	3.13 (61.1)
Infected females	1.24 (39.8)	1.24 (38.5)	1.21 (31.86)	1.89 (36.94)	2.00 (38.9)
New infection among children	n/a	n/a	n/a	0.05 (01.08)	0.06 (1.11)
Infection in urban areas	2.45 (75.9)	2.54 (76.8)	2.683 (70.77)	2.046 (40.07)	2.17 (42.4)
Infection in rural areas	0.74 (24.1)	0.74 (23.2)	1.11 (29.23)	3.06 (59.93)	2.96 (57.6)
HIV infection in specific sub-populations					
Clients attending STD clinics	1.44 (44.6)	1.37 (41.5)	1.44 (37.39)	1.49 (29.24)	1.33 (25.82)
Women attending antenatal clinics	1.75 (54.3)	1.91 (57.6)	2.36 (61.90)	3.48 (68.09)	3.60 (70.15)
Injecting drug users	0.04 (1.1)	0.03 (0.9)	0.03 (0.71)	0.01 (0.20)	0.01 (0.21)
Female sex workers	n/a	n/a	n/a	0.07 (01.39)	0.14 (2.71)
HIV infections by high and low-prevalence states					
Among high prevalent states	2.38 (74)	2.35 (70.9)	2.59 (67.91)	3.15 (61.75)	3.56 (69.38)
Among medium prevalent states	1.26 (3.9)	1.38 (4.2)	0.11 (02.88)	0.18 (03.43)	0.11 (2.05)
Among low prevalent states	0.71 (22.1)	0.83 (24.8)	1.12 (29.21)	1.78 (34.82)	1.47 (28.57)

Estimated totals may not add up due to rounding and the models used to compensate for under-reporting.

Source: National AIDS Control Organisation (NACO). Progress Report on the Declaration of Commitment on HIV/AIDS: United Nations General Assembly Special Session on HIV/AIDS. 2005. New Delhi: Ministry of Health and Family Welfare, Government of India.

Exhibit 4   *Funding Sources for the NACP-II and NACP-III, in USD Millions*

FUNDING SOURCES	NACP-II	NACP-III
Government of India	46.01	648.61
External Aid		
World Bank	225.12	301.07
USAID	54.13	51.01
UNDP	1.47	n/a
Global Fund	28.81	405.13
DfID	110.50	183.18
CIDA	8.88	n/a
AusAID	5.79	5.44
Total	*480.69*	*1594.42*

Source: Adapted from National AIDS Control Organization (NACO). *Funds and Expenditure. 2007.*

Exhibit 5   *Avahan Organizational Chart*
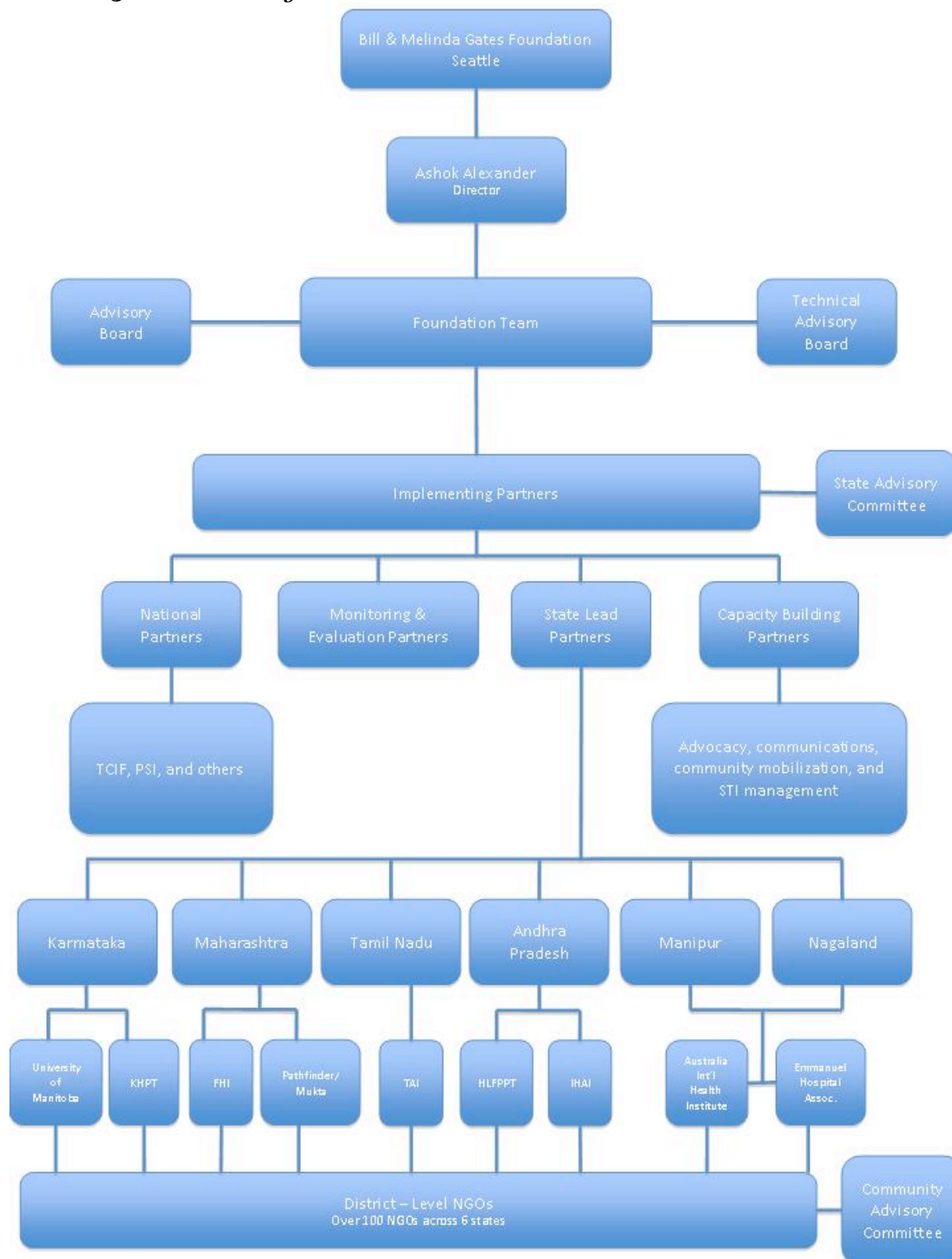
Source: This exhibit was created by case writers using documents from Avahan, Gates Foundation and
        public documents.

Exhibit 6   *Organizational Background on Avahan State Lead Partners (SLPs)*

STATE	SLP	MISSION/ VISION	PROGRAMMATIC FOCUS
Andhra Pradesh	Hindustan Latex Family Planning Promotion Trust *Founded in 1992*	"Develop high-quality services, products and partnerships to empower communities [to] address their most important health challenges and vulnerabilities."	• Reproductive and child health • HIV care, treatment, and support • Public health consulting
	International HIV/AIDS Alliance *Founded in 1993*	"We believe everyone has the right to access the HIV treatment they need, without stigma. Our core principles underpin all of our work, and the goal of universal access to treatment is just one of them. Community mobilization is crucial if we are to achieve this goal, and it is vital to take into account issues that affect engagement with services, such as human rights, issues related to gender, and the need for a greater involvement of people living with HIV and AIDS."	• HIV prevention • Treatment, care, and support • Children • TB and HIV • SRH and HIV • Drug use and HIV • Health system strengthening • Health and HIV financing
Tamil Nadu	Voluntary Health Services *Founded in 1958* *("Tamil Nadu AIDS Initiative")*	"VHS' basic concepts are the prevention and cure of serious illnesses, and the fostering of the family as a unit for medical care, with a family insurance scheme that income-based. Among VHS' other objectives are community participation in its endeavors, medical research, and fieldwork in the organization of medical care and health education."	• Community health • Research • Education and training • HIV/AIDS prevention
Karnataka	Karnataka Health Promotion Trust *Founded in 2003 (by the Karnataka State AIDS Prevention Society and the University of Manitoba)*	"KHPT was set up as a partnership between the Karnataka State AIDS Prevention Society and the University of Manitoba in 2003… It works toward reducing the risk and vulnerability to HIV among high-risk groups, generating awareness on HIV/AIDS and other health issues among the general population and improving the availability and access to treatment, care and support services."	• Community mobilization • Outreach and communication • Advocacy • Capacity-building • STI care and surveillance • Monitoring and evaluation • Knowledge management
	The University of Manitoba (as of 2008, the Centre for Global Public Health) *Founded in 1877*	"Design and implementation of international health and development projects in several countries including India, China, Kenya and Pakistan, primarily in the areas of HIV and STI prevention."	• HIV and STI prevention • Applied public health research • Knowledge translation

STATE	SLP	MISSION/ VISION	PROGRAMMATIC FOCUS
Maharashtra	Pathfinder International *Founded in 1957* *(Mukta Project)*	"Pathfinder International places reproductive health services at the center of all that we do—believing that health care is not only a fundamental human right but is critical for expanding opportunities for women, families, communities, and nations, while paving the way for transformations in environmental stewardship, decreases in population pressures, and innovations in poverty reduction."	• Contraceptive and maternal care • HIV prevention • AIDS care and treatment • Family planning • Safe abortion services • Policy advocacy
	Family Health International *Founded in 1971*	"FHI is a global health and development organization whose science-based programs bring lasting change to the world's most vulnerable people. Our approach is rigorous and evidence-driven. Among our worldwide staff of 2,500 are physicians, scientists, and technical experts in health, development, and management. Our work is global in scale yet country focused, with international offices staffed by local professionals."	• Family planning and reproductive health services • Partnerships with governments and organizations to build capacity • Strengthening health systems
Manipur and Nagaland *(Project Orchid)*	Australia International Health Institute *Founded in 1998* (as of 2006, termed the Nossal Institute for Global Health)	"The Nossal Institute focuses its global health activity on priority areas within the Asia Pacific region and Southern Africa, working mainly in India, Indonesia, Cambodia, Vietnam, Laos, Papua New Guinea and Mozambique. …Major areas of work include developing and implementing public health biomedical responses to major challenges such as HIV/AIDS, malaria, tobacco use, mental health, maternal and child health, disability, and harm reduction."	• Disease prevention and health promotion • Health systems strengthening • Education and learning • Tropical health and infectious diseases • Inclusive development practice
	Emmanuel Hospital Association *Founded in 1970*	"EHA was founded as an indigenous Christian health and development agency serving the people of North India. Its primary focus is the poor, largely in rural areas. With a catchment population of nearly seven million, EHA treats more than 500,000 patients each year in some of India's most needy areas."	• HIV/AIDS • Slum renewal • Community dentistry • Reproductive and child health • Functional literacy

Source: Created by case writers using state lead partners' publicly available online resources.

Exhibit 7   *Sample of Avahan Scale-up Indicators*
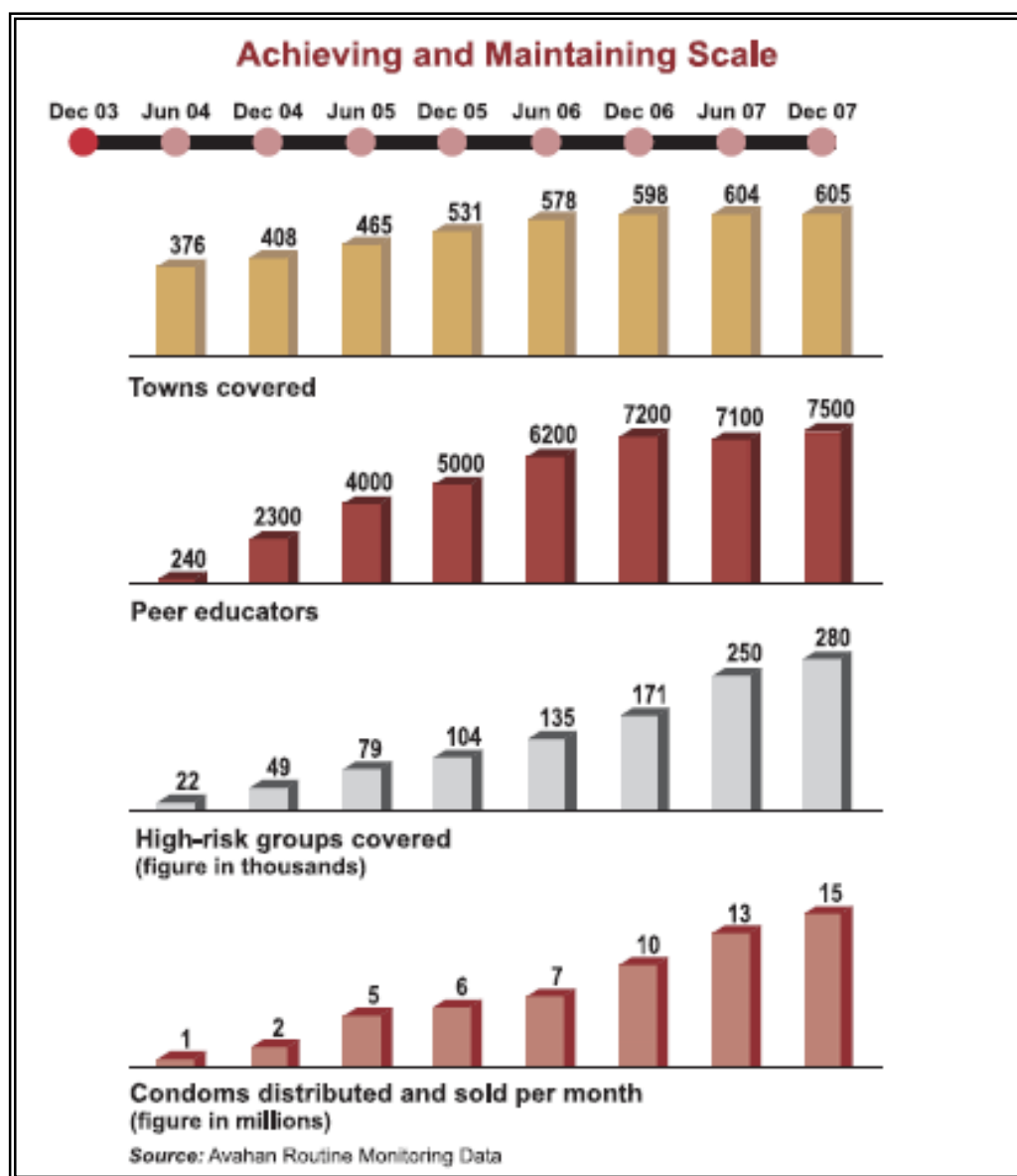
Source: Avahan— The India AIDS Initiative: The Business of HIV Prevention at Scale. Bill & Melinda
       Gates Foundation. New Delhi, India. 2008.

Exhibit 8   *Avahan Size Estimations and Coverage, 2005-2009*

		FSW	MSM	IDU
March 2005	*Estimated*	106,410	19,012	5,975
	Served	24,285	5,352	0
	Coverage	**22.82%**	**28.15%**	**0%**
March 2006	*Estimated*	142,221	34,406	14,950
	Served	62,756	14,187	7,237
	Coverage	**44.13%**	**41.23%**	**48.41%**
March 2007	*Estimated*	178,126	61,434	16,350
	Served	121,283	35,311	10,622
	Coverage	**68.09%**	**57.48%**	**64.97%**
March 2008	*Estimated*	210,616	74,229	17,550
	Served	158,991	55,669	13,051
	Coverage	**75.49%**	**75.00%**	**74.36%**
March 2009	*Estimated*	221,755	81,592	18,000
	Served	167,099	59,297	13,495
	Coverage	**75.35%**	**72.68%**	**74.97%**

Source: Created by case writers using data from the Avahan CMIS. The "served" figures were drawn from the CMIS indicator "number of individuals contacted during the reporting period."

Exhibit 9a *Avahan Grant Disbursements, 2004-2008*
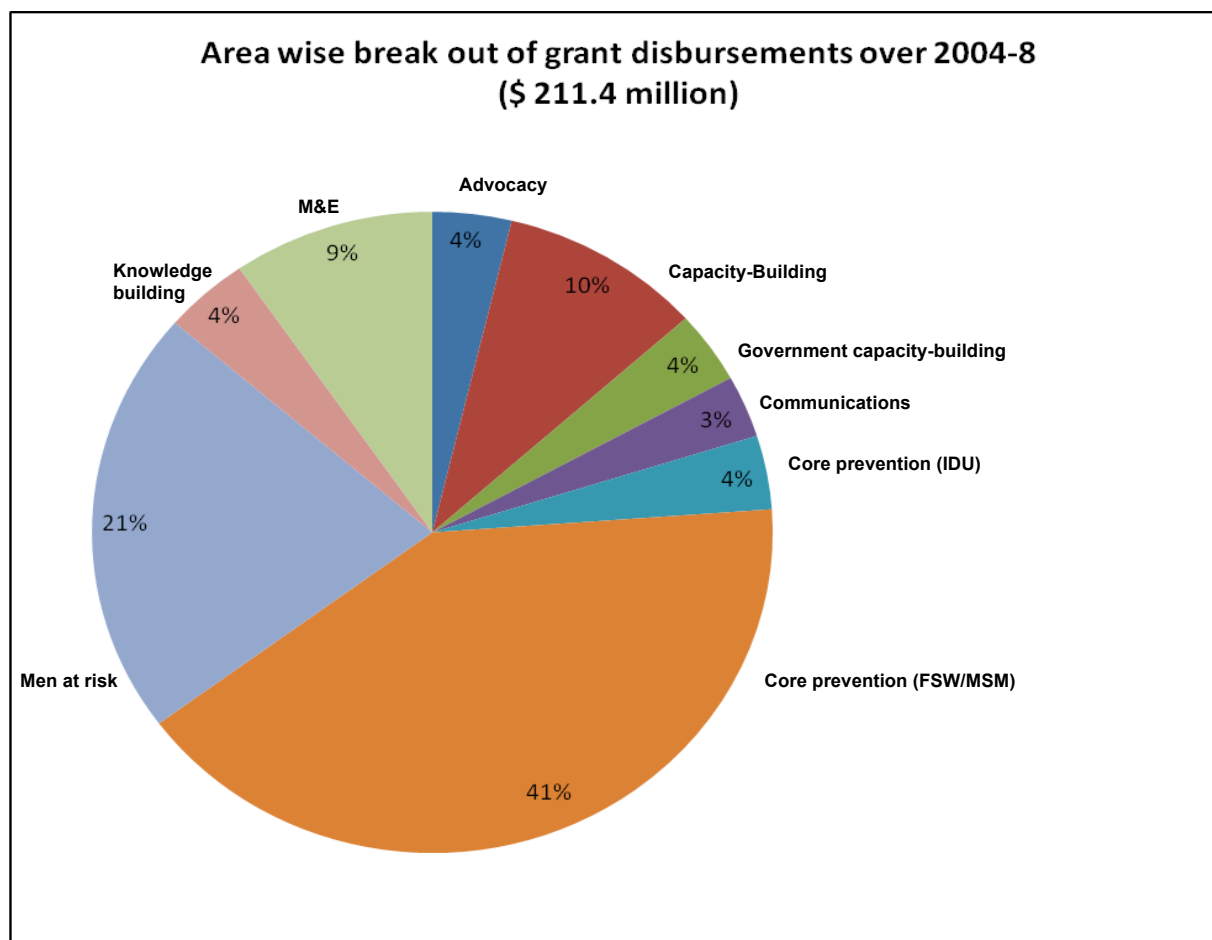

Note: Men at risk include long-distance truck drivers, their helpers, and men at sex solicitation venues.
Source: Avahan.

Exhibit 9b   *Avahan Office and Capacity-Building Expenses, USD*

	Year 1	Year 2	Year 3	Year 4
Professional fees for P&A consultants/contracts	297,245	257,500	587,795	408,942
Compensation and benefits	997,539	1,605,808	1,656,735	1,866,607
Convenings and participant travel	64,845	151,291	141,377	235,989
Other direct employee expenses (training, recruitment, travel, telephone, etc.)	244,200	307,982	353,723	691,418
Office costs (facilities and equipment costs)	44,917	43,397	60,996	76,035
Total	1,648,746	2,365,978	2,800,626	3,278,991

Source: Avahan.

Exhibit 9c   *Comparison of Avahan SLP Budget Allocations and Governmental SACS Budget Allocations in Andhra Pradesh*
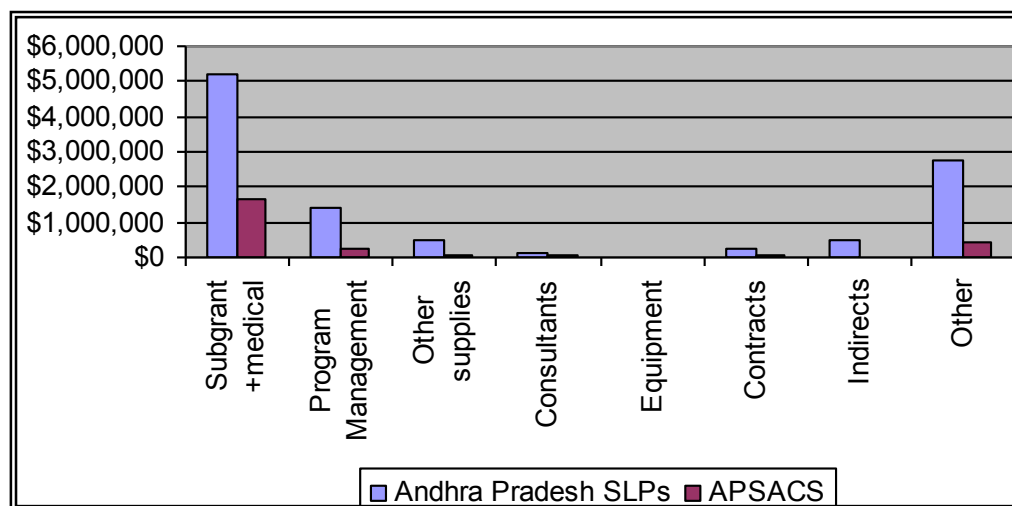
Source: Financial Analysis of Avahan, Phase I.

Exhibit 10   *Examples of Microplanning Tools Developed by Avahan SLPs*

Maharashtra SLP Pathfinder /Mukta uses this "Peer Educator Flipbook" as a data collection tool for peer educators, as well as a prompt for the topics peer educators should remember to cover in their behavior change communications with community members *(Upper left)*.

Many SLPs developed similar microplanning tools for their programs. *(Bottom left)* These cards were developed by the University of Manitoba and KHPT, and are designed to help peer educators working with highly migratory FSWs. *(Bottom right)* Peer educators aggregate the data from their cards into charts to track their community members' behavior change over time.

Source: Created by case writers using data collected during case research.

Exhibit 11 *Avahan Routine Monitoring Data Flow*
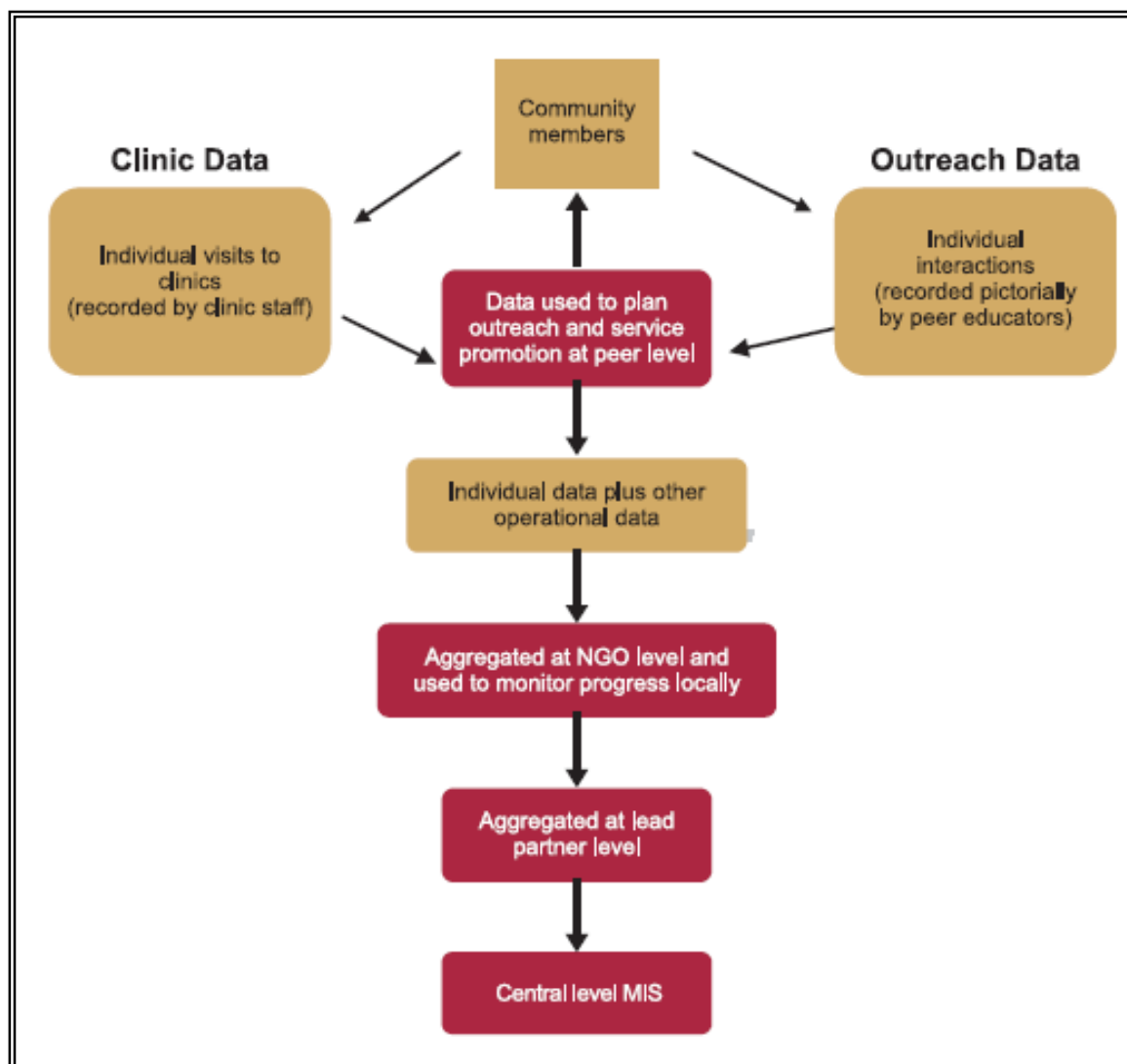
Source: *Use it or Lose it: How Avahan Used Data to Shape its HIV Prevention Efforts in India.* Bill & Melinda Gates Foundation. New Delhi, India. 2008.

Exhibit 12 *Excerpt from the Common Minimum Program (2005): Guidelines for Community-Led Structural Interventions*

TECHNICAL AREA	STRATEGY	ROLE OF TECHNICAL/ CAPACITY- BUILDING PARTNER	ROLE OF IMPLEMENTING PARTNER
Community-led Structural Interventions (CLSI)	• Community consultation in program design and implementation. Increasingly giving community role in decision making and management of project activities. • Concomitant community capacity development efforts.	**Avahan:** Ensure key population representation on planning committee and advisory boards. **CARE:** • Develop minimum standards and tools. • Capacity-building at SLP through demonstration at field level. • Quality monitoring at the field level.	**Avahan:** Identifying and developing TOR for community members as part of Avahan committees and boards. **State lead partners (including national partners as appropriate):** • Adaptation of standards/tools. • Capacity-building of NGOs. • Implementation/ roll-out. • Monitoring of NGO clinics by SLP TI.

Source: Adapted from Bill & Melinda Gates Foundation. *Common Minimum Programme Sex Worker Interventions.* 2005. New Delhi.

Exhibit 13   *NACP-III Budget Allocations (National)*

Program Component	Amount (Rs. 10 million)	Amount (USD millions)	Percentage of total
Prevention	7,786	1,730	67.20
Care, Support, and Treatment	1,953	434	16.90
Program Management	910	202	7.90
Strategic Information Management	360	80	3.00
Contingency	576	128	5.00
Total	11,585	2,574	100.00

Source: National AIDS Control Programme Phase III (2006-2011) Strategy and Implementation Plan.
          National AIDS Control Organization. 2006. New Delhi.

Appendix A   *Useful Abbreviations*

ARV	antiretroviral
ART	antiretroviral treatment
Gates Foundation	The Bill & Melinda Gates Foundation
CBO	community based organization
CMIS	Computerized Management Information System
DOTS	directly observed therapy short-course (internationally recommended strategy for TB control)
DTP3	third dose of diphtheria toxoid, tetanus toxoid, and pertussis vaccine
Foundation team	Avahan's Delhi-based central office staff
FSW	female sex worker
GDP	gross domestic product
IDU	injecting drug user
IP	implementing partner
MSM	men who have sex with men
NACO	National AIDS Control Organization
NACP	National AIDS Control Program
PPP	purchasing power parity
SACS	State AIDS Control Societies
SLPs	state lead partners
SMIS	Strategic Management Information System
STD	sexually transmitted disease
STI	sexually transmitted infection
TB	tuberculosis
TSU	Technical Support Units
UN	United Nations
USD	United States' dollar
VCT	voluntary counseling and testing
WHO	World Health Organization

Appendix B   *Profile of a Commercial Sex Worker*

Praveena's Story

Praveena had been a sex worker for 10 years. She had grown up in a rural village outside of Kolhapur city. Her father passed away when she was 15. Her mother was not able to make enough to support the family on her own, so Praveena began to look for work. At first, she was able to piece together small jobs selling vegetables and wares in the village. But this income was not enough to feed Praveena, her mother, sisters, and brother. She knew that the city had many more customers who could buy from her, so she began traveling to sell her goods. For several months, Praveena sold her vegetables in Kolhapur during the day and returned to her village by bus every night.

While working in Kolhapur, Praveena met an older woman who suggested that Praveena stay in Kolhapur for extended amounts of time to bring more money home to her family. Praveena started spending nights in Kolhapur and returning to her village every eight to 10 days. When selling her wares failed to bring in the money she had hoped, she learned from the woman that there was another way to make even more but that she would need to go with a man and stay with him overnight. Praveena agreed and stayed with a man who the woman introduced her to at a lodge. He paid her 50 Rupees to have sex just once—enough money to pay for at least two meals. Praveena began to see this man regularly, and stood on the street to solicit for more clients in the evenings as she had seen other sex workers do.

On the street one night, Praveena met another young woman from her village who introduced her to a group of friends who were also sex workers. Together they drank and celebrated their earnings, and Praveena found that drinking made the evenings more fun and made it easier to see clients. Many of these women also had families they were supporting with their income. Like Praveena, they kept the source of their income secret.

Praveena continued to visit home to share her earnings with her family, but when her uncle began to act suspiciously about her work in the city, she began to make the trip home less and less. Eventually, she came to live in Kolhapur permanently and practice sex work every night. To earn more from clients, she promoted herself as willing to have sex without a condom. A few times, clients stole from her or would not pay after sex, but she never called the police because she knew they would only force her to have sex with them and take her money as well. Besides, the police were often as violent as the local gang members, who she knew would sometimes abduct sex workers, rape them with their friends, and then leave them in far away villages to find their way home. She tried to stay out of their way and ran whenever she saw them. Sometimes that was not enough.

Praveena began drinking more with her clients and other sex workers and eventually stopped saving money for her family in order to pay for her increasing appetite for alcohol. She knew that drinking was an expensive habit, but she did not see much reason to stop, as she had lost touch with her family and felt less lonely when she was drunk. There were downsides to her drinking—forgetting to save enough money for her own meals or being too drunk to negotiate with clients with whom she felt she should use a condom. It was a part of how she got through the nights, though, and she did not want to stop.

Several months later, Praveena was standing on the street soliciting when she was approached by a sex worker wearing a gold and yellow sari. Praveena had noticed her before while they were both working. The woman introduced herself as a sex worker and chatted with Praveena. She knew that the woman had introduced one of her friends to a place where she could go to freshen up and rest between clients, but she had also heard rumors that the organization the woman worked for stole sex workers' organs to sell them for money. Praveena was not sure what to think at first, but as she saw the woman

more and more, she began to trust her. The woman asked about Praveena's life and told her about things she could do to keep herself healthy as a sex worker.

Eventually, the woman asked if Praveena would go with her to see the drop-in center and clinic that her organization ran. She said that she was a Peer Educator for an organization called MSPSS and that in addition to being a sex worker she was paid a small amount to help other sex workers stay healthy. Praveena went with the woman to the drop-in center and found that the staff there were friendly and helpful. She started going regularly to meet other sex workers, and she enjoyed their discussions about how to improve conditions for themselves in Kolhapur—particularly how to stop acts of violence against their community. After meeting other sex workers who visited the clinic every month and seeing how many of the sick seemed to get better, Praveena agreed to go for a clinic visit as well. She was given a gynecological exam, and the doctor answered her questions and gave her a referral for HIV testing. Eventually, Praveena agreed to go. The peer educator she had met went with her, and when Praveena learned that she was HIV positive, the peer educator counseled her on how to get treatment. Praveena learned that she needed to maintain good nutrition if she was going to take the antiretroviral drugs provided by the government clinic and that she would need to end her addiction to alcohol if she was going to stay healthy.

Today, Praveena still drinks from time to time, but she does so more rarely now. She uses condoms and meets with other sex workers who are living with HIV for support and friendship. She knows that she can have a full and healthy life with HIV, and she is glad for the community she has gained through MSPSS. Praveena hopes to be a peer educator one day so that she can help others in her community improve their lives. She believes that sex workers have rights, and she knows that a better life for herself and her community is possible if they stay together and stay organized.

Source: Compiled by case writers.

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