20 YEARS
OF
EVIDENCE TO IMPACT

Dedication

To the communities whose courage, ingenuity, and everyday leadership have inspired our path and kept us real.

And to Shiv Kumar and N Raghunathan, whose vision and quiet rebellion sparked what is now Catalysts - a living, growing ecosystem for equity, dignity, and shared futures.

Your spark became a movement.

20 YEARS OF EVIDENCE. 20 YEARS OF IMPACT.

Some books are meant to be read. This one, I believe, is meant to be remembered.

For over two decades, our journey at Swasti has been to bridge the distance between evidence and impact. To remind ourselves and the world that data is not an end in itself. It is a beginning. It is a voice, often quiet, sometimes inconvenient, but always insistent when you learn to listen.

This collection, 20 Years of Evidence to Impact, carries that spirit forward. It is both an archive and a compass, documenting what we've seen, learned, and dared to question, while also pointing us toward the future of health systems that are more inclusive and more deeply human.

I want to pause here to acknowledge the people who have made this possible.

First, to the leadership of the **Centre for Evidence2Impact (E2I)**, under the steady vision of **Dr. Syama B Syam**, who leads it with such clarity, and the foundational stewardship of **Dr. Neha Parikh**, who helped shape its earliest contours. To the **Centre for Strategic Communications for Public Health**, led by **Shrirupa Sengupta**, for ensuring that our science does not sit in silence but finds its way into conversations, policies, and lived change.

To our partners – our communities and their institutions, the universities, research institutions, and collaborators – who walked with us across geographies and disciplines, you have given this work both breadth and depth. To our leaders of programs – **Shankar AG, Shaonli Chakraborty, Shama Karkal, Hareesh BS, Jeyaganesh K, and many others** – thank you for grounding our vision in the pragmatism of everyday action.

And to the professors and mentors who sharpened us with rigour while holding space for curiosity: **Professor Sunil Khanna, Professor Jonathan Garcia, Dr. Mala Rao, Professor Partha Krishnamurthy** – you have been both co-leaders and co-learners in this journey, teaching us what it means to pair hard-core research skills with humility,

This book is, in truth, a collective letter of gratitude to communities who trusted us with their stories, to colleagues who translated those stories into knowledge, and to partners who continue to carry that knowledge forward into impact.

May this not just be a record of what we did, but an invitation to what we can still do. Because evidence, when paired with empathy, is never static. It moves. It reforms. It heals.

With gratitude and conviction,

Dr. Angela Chaudhuri
Chief Executive Officer, Swasti

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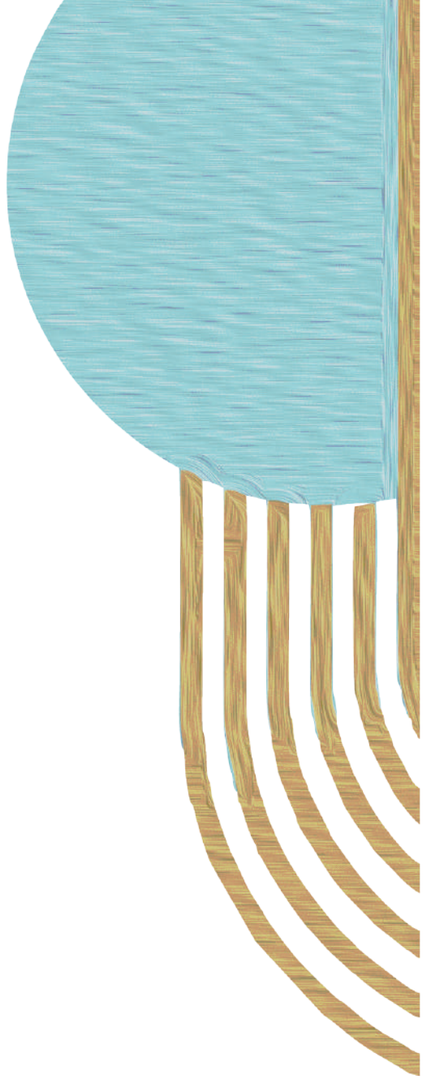


INTRODUCTION

Some people say data does not lie. But we know it often stays quiet until someone knows how to listen.

For over two decades, we at Swasti have been listening-not just to numbers, but to people. Behind every percentage point is a woman working in a garment factory, a peer educator walking alleyways by night, a transgender person gaining access to healthcare, or a nurse trying to breathe through layers of PPE while comforting someone else's child.

This collection isn't just a research compendium. It's a walk through time, across the messy, magnificent terrain of human dignity, resilience, and reform. We've worked with some of the world's finest research institutions, partnered by the quiet courage of community organisations, and together, we've uncovered what works, what fails, and what must never be overlooked again.

At its heart, this body of work is a letter of gratitude to the people who dared to believe change was possible.

Take the women in the Women in Factories programme, who not only almost closed the gender pay gap but demonstrated a 5% rise in productivity after life-skills training. Or the peer educators in Project Pragati, whose persistent outreach shortened the median time to a clinic visit from 330 to 98 days-a 70% acceleration that changed the trajectory of STI detection and treatment. These numbers matter not just because they show success, but because they represent survival, agency, and the growing pulse of equity in health systems.

When COVID-19 hit, we learned again that system readiness is only as strong as its weakest data point. That's when wastewater-yes, the very thing most city planners ignore-became our truth-teller. Our Precision Health platform offered a 30% rise in viral load detection ahead of the clinical curve in Bengaluru, providing the government with timely alerts and the public with life-saving interventions.

These stories show us that good science is not abstract. It's grounded. It's gritty. And when done right, it becomes deeply human.

We don't shy away from the complexities either. Our systematic review of primary healthcare innovations revealed that despite decades of effort, only 3.8% of studies addressed financing mechanisms. That gap isn't just technical. It's a sign that our collective imagination around equity needs stretching.

From maternal health interventions like Manyata, which improved adherence to childbirth clinical standards from 29% to 93%, to community-led financial literacy programmes that helped sex workers improve both savings and self-confidence, each chapter reflects what becomes possible when evidence is paired with empathy.

Even in areas where results were sobering-like vaccine hesitancy driven not by conspiracy but by the raw, visceral fear of side effects -we saw the need for more respectful communication and less top-down persuasion. Our job as communicators is not to overpower resistance but to understand what protects it.

So what should you expect in these pages?

You'll meet people who built bridges-between data and dignity, policy and praxis, science and soul. Each study is a conversation starter. A provocation. A memory. A mirror.

If you work in public health, may this help you hold ground with both rigor and compassion. If you work in governance, may you see the power of co-created, people-first systems. And if you, like us, believe that evidence is not just about impact, but also about justice-then welcome home.

Let's read between the lines. Let's listen to the data. And most importantly, let's remember who it's speaking for.

SWEET SEAMS

A Study on Building Women's Agency in Global Supply Chains

Did you know?

When women working in factories underwent life skills training, their performance didn't just improve-it sustained and soared. While 88% met production targets before training, that shot up to 96% immediately after. Even more striking? 100% of women trained months earlier continued to meet their targets—proving lasting impact and long-term skill retention..

This rigorous randomized and quasi-experimental evaluation, assessed the impact of both foundational (9-hour) and advanced training modules delivered to 11,333 women garment workers across India (7,375) and Bangladesh (3,958) as part of the Walmart Foundation's Women in Factories initiative.

The foundational training significantly reduced tardiness by 62% (from 45 to 17 late days per 100 workers/month) and improved line efficiency by 5% (from 69.5% to 73%). Advanced training further enhanced leadership outcomes: participants were 27% more likely to express confidence in voicing workplace concerns and 22% more likely to understand their rights.

Moreover, 76% of trainees reported improved communication with supervisors, and 68% expressed a desire to mentor peers. Together, these findings offer robust evidence that layered, community-anchored training programs can measurably enhance workplace performance, self-efficacy, and gender-responsive leadership in global supply chains.

Many women working in garment factories across the Global South were already balancing on economic and social tightropes long before the pandemic hit. COVID-19 didn't create those vulnerabilities-it widened them. And in doing so, it also laid bare the urgent need to invest in women's agency, safety, and skill-building at scale.

Since 2014, the Tufts University Labor Lab has been conducting a multi-country impact evaluation of the Women in Factories (WIF) training programme, using randomized controlled trials across El Salvador, Honduras, Bangladesh, and India. In India, the study focused on WIF-an initiative of the Walmart Foundation's Women's Economic Empowerment Initiative (WEEI).

WIF equipped women workers with essential life skills-ranging from communication and hygiene to reproductive health, occupational safety, and negotiating gender norms. Select participants also underwent advanced leadership training, enabling them not just to grow personally but to rise professionally.

But here is one powerful takeaway from the study

There was a clear Gender Pay Gap Reduction: At baseline, women earned $0.86 for every dollar earned by men. Post-training, the pay gap narrowed by $1.35, bringing parity to $0.91 to the dollar.

What these numbers reveal is powerful. But what they represent is even more important: When women are given the tools to lead, they don't just shift their own trajectories-they often lift entire supply chains and communities with them.

This Women in Factories (WIF) study was conducted by Tufts University's Labor Lab in collaboration with Swasti and CARE.

By early 2019, Swasti had taken this evidence to over 200,000 women in more than 250 factories, partnering with over 20 global brands through a constellation of programmes-Walmart's WIF, Levi's Worker Well-Being, GAP's PACE, Debenham's LIFE, BSR's HERproject, Primark's My Life, Inditex's Sakhi, and Swasti's own flagship, Invest4Wellness (i4We).

Citation

Babbitt, L., Brown, D., Toosi, N., Voegeli, E., Djaya, D., Antolin, A., Tatore, A., Ganesh, A., & Woo, J. (2017, July 31). Women in Factories Foundational Training: South Asia Endline Report. Tufts Labor Lab. https://www.researchgate.net/publication/318729862

Link to study

- https://sites.tufts.edu/laborlab/files/2016/06/South-Asia-FT-Endline-Report-31-July-2017.pdf
- https://sites.tufts.edu/laborlab/files/2016/06/South-Asia-AT-Endline-Report-31-July-2017.pdf
- https://acrobat.adobe.com/link/review?uri=urn%3Aaaid%3Ascds%3AUS%3A840e3ab8-632b-4ba8-a405-6a95c751ddac

A PEER-FUL IMPACT

A Study on the utilisation of STI clinic services by Women in Sex Work

Did you know?

When peer visits increased, the median time to a first voluntary clinic visit dropped from 330 days to just 98 days. In fact, 18% of all STIs were detected in clients with no reported symptoms, highlighting the critical role of proactive peer referrals. Robust statistical analysis also confirmed that greater peer outreach consistently leads to improved health-seeking behaviour across models.

A study in collaboration with Public Library of Science (PLOS) to study the utilisation of clinic services by sex workers

This longitudinal observational study, published in PLOS ONE, analyzed the impact of the Pragati programme-a comprehensive HIV prevention and empowerment initiative-on the lives of 20,330 women in sex work in Bengaluru, India, between 2005 and 2010.

Designed collaboratively with the community and implemented by Swathi Mahila Sangha and Swasti, Pragati offered STI treatment, crisis response, de-addiction services, and microfinance.

Over five years, programme contact grew 16-fold (from 10,351 to 167,709 contacts), and condom distribution rose from 140,248 to 4.7 million annually.

The findings underscore the programme's success in enhancing healthcare access, economic resilience, and agency for women in sex work, validating community-driven, multi-sectoral models as critical for long-term HIV prevention and social inclusion.

The transmission of sexually transmitted infections (STIs) in any community hinges on one critical factor: how quickly they're detected and treated. The longer an individual remains infectious, the greater the risk of spread. And for many women in sex work, that window of detection is influenced not just by biology or behaviour-but by trust.

Project Pragati was built on this understanding. It was a collaborative effort between Swathi Mahila Sangha, a sex worker collective, and Swasti, funded initially under the Avahan initiative of the Bill and Melinda Gates Foundation. The aim: to study whether peer-led outreach could influence how soon after contact a woman sex worker would voluntarily walk into a clinic for STI screening or treatment.

The findings speak volumes.

Using data from 2,705 female sex workers enrolled in Pragati between 2008 and 2012, the research team employed an Extended Cox model to track the impact of peer educator visits over a 30-day window. Key variables-like age, client volume, education, and place of solicitation-were controlled for. The primary focus: how soon after meeting a peer educator did a woman choose to visit a clinic on her own.

The answer? Sooner. Much sooner.

Increased peer visits were associated with a 70% reduction in median time to first clinic visit-from 330 days down to just 98 days. More frequent outreach led to an 83% higher likelihood of timely clinic utilisation (HR: 1.83; 95% CI: 1.75–1.91, p < .001). And perhaps most strikingly, 18% of all STIs were detected in women who reported no symptoms at all-their visits prompted entirely by peer encouragement.

This matters because syndromic management-our dominant model for STI treatment-relies on symptoms being visible or reported. Without proactive screening, infections are likely to be missed. The study shows is that peer-led outreach is not just a delivery mechanism-it's a detection strategy. It shortens diagnostic delays, bridges systemic mistrust, and reaches women who would otherwise be invisible to the formal health system.

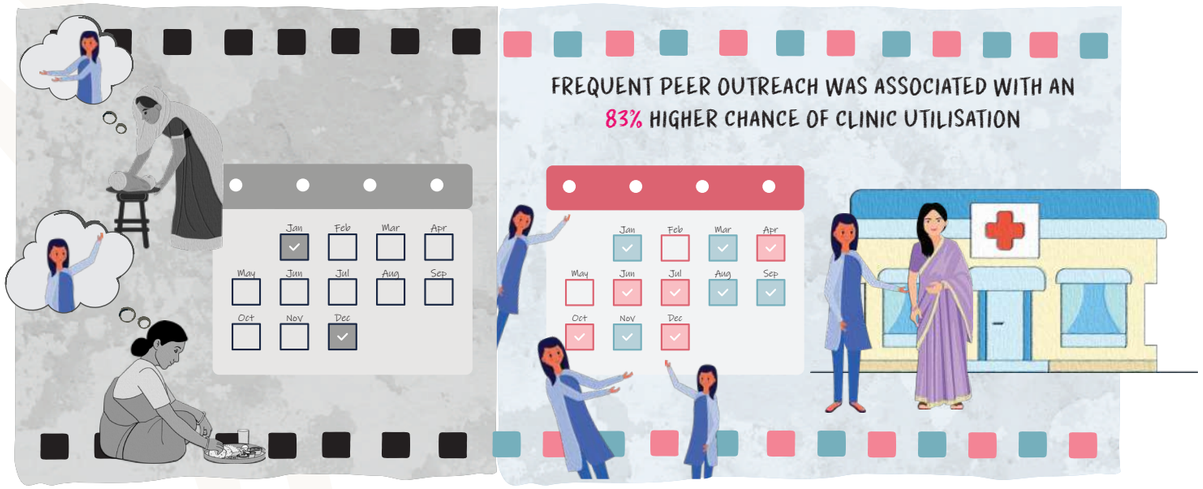
While this is an observational study and cannot claim causation, the consistency of the findings across models suggests a strong and meaningful association-one with real programmatic and staffing implications for clinics serving key populations.

Peer educators, often women with lived experience, don't just raise awareness.

They save lives.

But here is one powerful takeaway from the study

Higher Likelihood of Screening: Frequent peer outreach was associated with an 83% higher chance of clinic utilisation (HR: 1.83; 95% CI: 1.75–1.91).



Citation

Krishnamurthy, P., Hui, S. K., Shivkumar, N., Gowda, C., & Pushpalatha, R. (2016). Assessing the impact of peer educator outreach on the likelihood and acceleration of clinic utilization among sex workers. PLOS ONE, 11(7). https://doi.org/10.1371/journal.pone.0159656

Link to study

- https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0159656

THERE'S SOMETHING IN THE WATERS

A health system resilience and pandemic preparedness study using wastewater-based epidemiology

Did you know?

Wastewater-Based Epidemiology (WBE) gave a 9-day early warning before Bengaluru's third COVID-19 wave in 2022. The Precision Health platform detected a >30-fold spike in viral load from sewage—well before clinical cases surged. It forecasted the exact peak window weeks in advance, enabling timely response.

Published in Science of the Total Environment, this observational study examined the use of wastewater-based epidemiology (WBE) in Bengaluru, India, as a real-time surveillance tool during the COVID-19 pandemic.

Conducted by researchers from COVIDActionCollab and partners, the study found that a 30% rise in wastewater sample positivity and over 350% increase in cumulative EWMA viral load served as clear early warning signals, preceding the clinically confirmed third COVID-19 wave, marked by a peak of 30,540 new cases.

The data also accurately signalled the de-escalation phase beginning January 31, 2022, as viral loads and case counts declined in tandem.

The findings demonstrate the potential of community-level environmental surveillance as a predictive public health tool for early outbreak detection and recovery mapping in low-resource urban settings.

During the pandemic, we learned something both radical and strangely obvious: the truth doesn't always show up in clinics. Sometimes, it shows up in the drain.

The COVID-19 pandemic marked a turning point for wastewater-based epidemiology (WBE). What was once a niche scientific field quickly became a powerful early warning tool-especially in cities like Bengaluru, where clinical surveillance systems routinely missed those living in informal settlements or low-income neighbourhoods.

In May 2021, the #COVIDActionCollab launched the Precision Health platform, grounded in one core principle: that environmental surveillance could offer a more equitable, inclusive, and timely view of how disease spreads across a population. Rather than waiting for symptomatic individuals to seek help at overwhelmed hospitals, the platform looked directly at wastewater flows-from both networked and non-networked sewage systems-to understand the stage and scale of COVID-19 transmission.

This shift was not just technical. It was ethical.

Where clinical surveillance left many communities out of view, wastewater sampling brought them back into the picture. By building a city-wide map of viral load distribution, the platform helped identify inflection points in the disease curve, giving the government and public a head start on escalation trends. In some areas, wastewater signals began spiking well before clinical cases were officially recorded.

In response, the team built a sense-making tool-a decision-support system that translated viral load data into plain-language alerts and public-facing dashboards. These insights allowed both policymakers and communities to take timely, preventative action.

The platform, which had shared advance signals of disease intensification on December 26, 2021 with the government, had similarly forecast that infection would peak between the period of 16–19 January 2022. This was later borne by both wastewater data—wastewater sample positivity was nearly full and there was a >30-fold increase in the cumulative Exponentially Weighted Moving Average (EWMA) viral load (VL) values from the earlier date to this peak period. Clinical data too endorsed these findings. The government announced the commencement of the third Omicron-led COVID-19 wave on January 5, 2022, as the number of reported cases in the city crossed 4,000. As anticipated, cases peaked on January 20, 2022, with 30,540 total fresh cases being registered on this day. This peak phase lasted till the end of the month in Bengaluru. The primary focus of the government at this time was on managing the disease and tending to the provisioning of adequate diagnostic and medical care at the community level.

The start of this period was critical for Wastewater-Based Epidemiology—its role was to validate the peak phase and provide further signals that an even greater increment of disease numbers was on the anvil in the near future. Additionally, as was done by PPHS, it was important to let the authorities know the time available to them till the disease reaches its maximum peak and the estimated infection prevalence rates during those days. At this time, given that the infection had spread across the entire populace, it is important to share an aggregate city-level trend with the government. However, it was important to critically assess measurable trends in viral load (VL)-specifically using the Exponentially Weighted Moving Average (EWMA), which helps track smoothed changes over time—across both open surface drains and formal sewerage systems, in order to identify geographic areas or population segments that may require heightened public health attention.

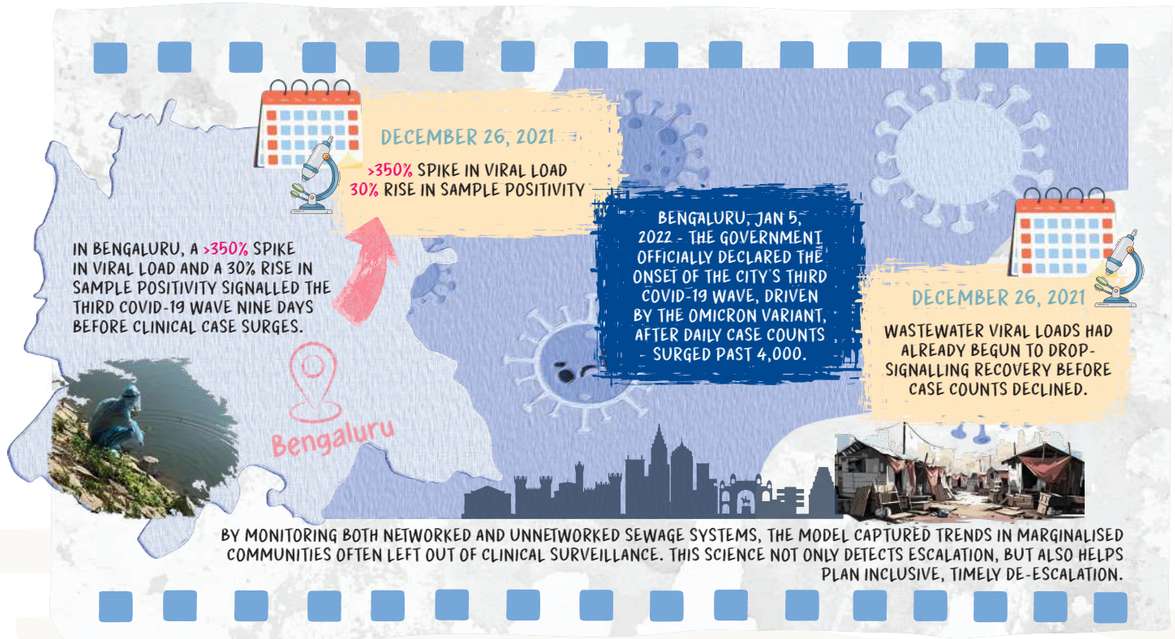
This wasn't just about data. It was about who the data represents.

By using sewage as "signal", the Precision Health platform helped transform how we understand public health surveillance: not as a downstream intervention, but as a real-time equity mechanism. It brought visibility to the invisible, foresight to a reactive system, and trust where it was most fragile.

Wastewater doesn't lie.

It simply asks us whether we're willing to listen.

Here is one powerful takeaway from the study



Citation

Chaudhuri A, Pangaria A, Sodhi C, Kumar V N, Harshe S, Parikh N, Shridhar V. Building health system resilience and pandemic preparedness using wastewater-based epidemiology from SARS-CoV-2 monitoring in Bengaluru, India. Front Public Health. 2023 Feb 24;11:1064793. doi: 10.3389/fpubh.2023.1064793. PMID: 36908428; PMCID: PMC9999730.

Link to study

- https://pubmed.ncbi.nlm.nih.gov/36908428/

NURTURING MOTHERHOOD

An Assessment of Manyata, a Childbirth Quality Program in India's Private Sector

Did you know?

Training can double providers' knowledge (6.3 to 13.2) and strengthen their skills nearly fourfold (8.0 to 34.3). It can raise adherence to safe childbirth standards from 29% to 93% ; sharpen responses to eclampsia, postpartum haemorrhage, and newborn resuscitation- the emergencies that decide life or death. And it can reduce risky referrals, as more mothers and babies receive timely, competent care within the facility itself.

Published in Global Health: Science and Practice, this quasi-experimental study assessed the impact of the Manyata quality improvement program, led by Ariadne Labs , across 466 private maternity facilities in India.

The study evaluated changes in provider knowledge, clinical skills, and adherence to 16 FOGSI-endorsed childbirth-related standards.

Following the intervention, knowledge scores doubled (from 6.3 to 13.2 out of 20) and skill scores more than quadrupled (from 8.0 to 34.3 out of 40). Facility-level adherence to clinical standards rose sharply from 29% to 93%, particularly in areas critical to maternal and newborn survival-including management of eclampsia, postpartum hemorrhage, and neonatal resuscitation.

These findings provide robust evidence that targeted mentorship and standards-based training in private settings can significantly elevate quality of care, even in under-regulated health systems.

When a mother receives safe, respectful, and high-quality care during childbirth, it doesn't just change her life-it reshapes the future of her family, her community, and society itself. The earliest moments of life are shaped by the systems we choose to build around mothers.

While the Government of India has made important strides in improving the quality of maternity care in public health facilities, the private sector-where over 60% of India's hospital beds are housed-remains a critical blind spot. Despite its scale, studies consistently report gaps in quality, training, and consistency in private maternity care.

The Manyata programme, launched by the Federation of Obstetric and Gynaecological Societies of India (FOGSI) with support from MSD for Mothers, Swasti, JHPIEGO among many other partners, was built to change that. Manyata focuses on strengthening private facilities by building provider capacity through structured mentorship, evidence-based clinical standards, and a supportive quality improvement framework.

This study aimed to understand Manyata's role in improving knowledge, clinical skills, and adherence to quality standards among healthcare providers in private maternity settings-and ultimately, its potential impact on maternal and newborn outcomes.

The results speak clearly. From baseline to endline, providers who underwent Manyata training demonstrated significant gains: knowledge scores rose from an average of 6.3 to 13.2 out of 20, skills scores jumped from 8.0 to 34.3 out of 40, and adherence to clinical standards increased dramatically from 29 percent to 93 percent.

The biggest improvements were seen in the identification and management of eclampsia and preeclampsia, postpartum haemorrhage, and neonatal resuscitation-three critical drivers of maternal and neonatal morbidity and mortality.

While the absolute rates of reported complications did not change significantly over the study period, a decline in referrals for preeclampsia and neonatal sepsis suggests growing confidence and capability within the private facilities to handle complex care.

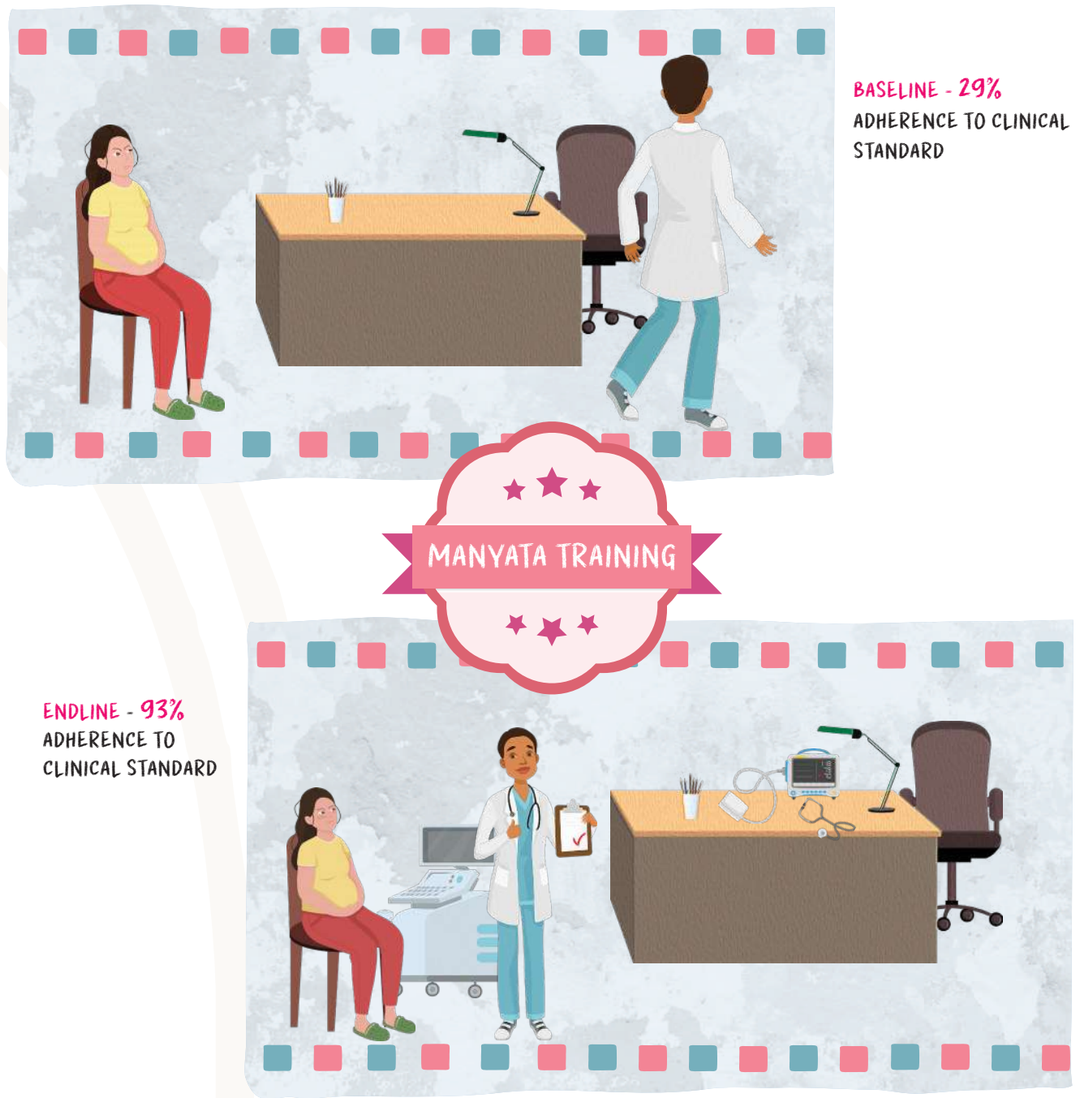
Manyata's early results show that quality improvement in the private sector is possible, measurable, and meaningful. It also reinforces that nurses and frontline workers, when supported with the right tools and training, are capable of closing some of the most persistent gaps in care.

However, challenges remain-especially around ensuring quality in cesarean deliveries, where variability continues to raise concern. The study calls for future research with rigorous evaluation frameworks to measure Manyata's long-term impact on pregnancy outcomes and systems change.

At its core, Manyata is a statement of belief:

- **That every mother-regardless of where she delivers-deserves quality care.**
- **That the private sector is not exempt from accountability.**
- **And that quality can't just be promised. It must be practiced.**

Here is one powerful takeaway from the study



ADHERENCE TO CLINICAL STANDARDS
JUMPED FROM 29% AT BASELINE TO 93% AT ENDLINE

Citation

Delaney, M. M., Usmanova, G., Nair, T. S., Neergheen, V. L., Miller, K., Fishman, E., Bajpai, N., Memon, P., Bobanski, L., Singh, D., Srivastava, V. K., Divakar, H., Pai, H., Semrau, K. E. A., & Pallipamula, S. P. (2022). Does quality certification work? An assessment of Manyata, a childbirth quality program in India's private sector. Global Health: Science and Practice, 10(6), e2200093. https://doi.org/10.9745/GHSP-D-22-00093

Link to study

- (Link to study) - https://www.ghspjournal.org/content/10/6/e2200093

OVERCOMING HESITATION

A cross-sectional multi-state study on vaccine hesitancy among vulnerable populations in India

Did you know?

Fear of vaccine adverse effects was the single strongest driver of vaccine hesitancy-each rise in fear score cut the odds of vaccination by nearly half. Six in ten people also struggled with healthcare access, and more than a third lived with comorbidities that heightened their vulnerability. These insights highlight the urgent need for segment-specific communication and better frontline worker support to address fear and build trust.

This conjoint study examined COVID-19 vaccine hesitancy among 893 people from vulnerable communities in five Indian states. It found that fear of vaccine side effects-not misinformation or access-was the most powerful barrier: each rise in fear score was linked to a 47% drop in vaccination odds. Certain groups were even less likely to vaccinate, including older women (40% lower odds) and men from certain subgroups (82% lower odds), though the reasons for this remain unclear and call for further research.

The findings point to a clear direction: communication must focus on reducing fear, tailoring messages for different groups, and equipping frontline workers (FLWs) to handle emotional and social barriers in real time.

Vaccine hesitancy is not always about misinformation. Often, it is about fear—deep, bodily fear. And no amount of posters or announcements can overcome that unless we meet people where they are: emotionally, culturally, and structurally.

During the COVID-19 pandemic, FLWs were the human face of India's vaccination drive. They went door to door, urging vulnerable individuals to get vaccinated, patiently addressing doubts-yet often facing repeated refusals. Why?

To answer this, researchers from the University of Houston, University of Ottawa, Swasti, and Catalyst Management Services conducted a cross-sectional study across five states. Participants were asked about 15 barriers identified earlier by FLWs, as well as their vaccination status, intent, health conditions, and demographics.

The analysis yielded clear results. Fear of adverse effects was the single strongest predictor of vaccine hesitancy. Factor analysis grouped barriers into two themes:

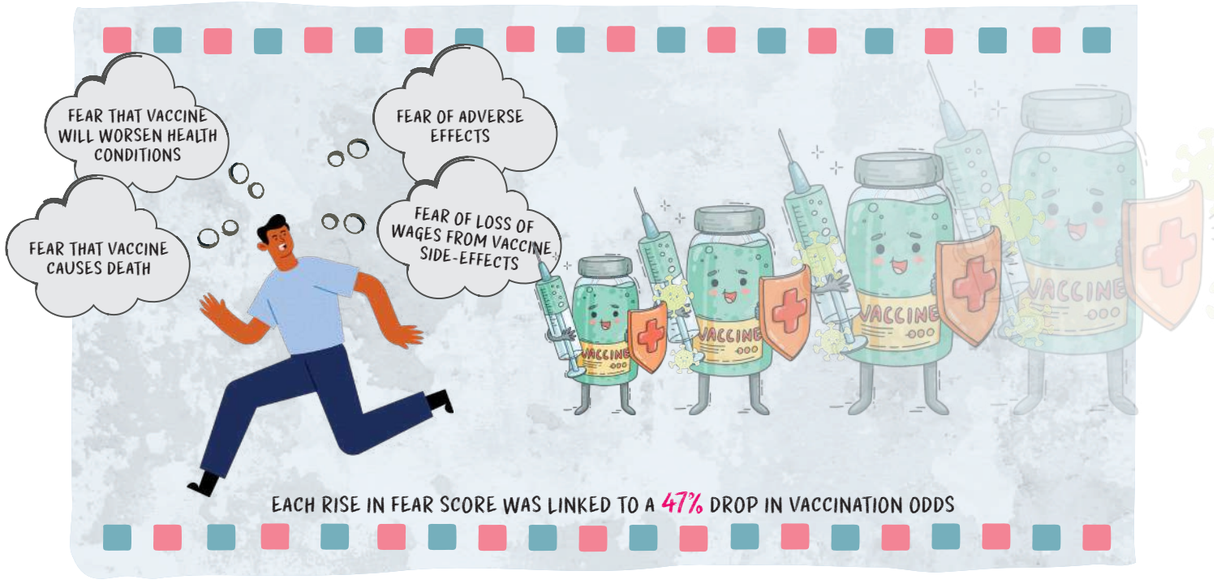
- Fear of side effects (death, infertility, long-term illness, loss of wages).
- Peripheral concerns (religious beliefs, doubts about COVID, rumours, logistics).

Only the first reliably predicted whether someone was vaccinated. Additional modelling showed that health access, financial strength, and demographic traits shaped the broader context of hesitancy, but none reduced the overwhelming role of fear. One exception emerged: young men from certain sub groups, for whom fear was not significantly linked to hesitancy, suggesting a distinct pathway requiring culturally sensitive approaches.

These insights carry important implications. Vaccine communication must go beyond facts and logistics to **directly address fear**, using empathy, evidence, and lived experiences. FLW training should be expanded to include these skills. Communication strategies must also be more nuanced, with targeted approaches for groups who remain statistically less likely to vaccinate.

This isn't only about vaccines-it's about trust. Unless we learn to listen for what people are truly afraid of, we risk building systems that talk but never connect.

Here is one powerful takeaway from the study:



Citation

Krishnamurthy, P., Mulvey, M. S., Gowda, K., Singh, M., Venkatesan, N. K., Syam, S. B., Shah, P., Kumar, S., Chaudhuri, A., Narayanan, R., Perne, A. L., & Pangaria, A. (2023). Drivers of vaccine hesitancy among vulnerable populations in India: A cross-sectional multi-state study. Frontiers in Public Health, 11. https://doi.org/10.3389/fpubh.2023.1177634

Link to study

- https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2023.1177634/full

PROGRESS BY DESIGN

A study on an empowerment programme of women in sex work in Bangalore

Did you know?

If women in sex work get access to only condoms and clinics in HIV programming, risks like violence and poverty still hold power. When crisis support, de-addiction, and microfinance are added, women gain safety and control; condom use rises, health access improves, and resilience grows. Globally, HIV programmes must shift to community-led empowerment.

This longitudinal descriptive study evaluated the empowerment approach of the Pragati programme, which reached more than 20,000 women in sex work in Bengaluru, India, between 2005 and 2010. The analysis tracked a steep rise in programme contacts (from 10,351 in 2005 to 167,709 in 2010) and in condom distribution (from 140,248 to 4.75 million annually), alongside growing engagement with crisis response, de-addiction services, STI care, and microfinance initiatives.

Rather than isolating single interventions, the study examined the combined effects of a broad empowerment model, one that sought to build the capacities of women in sex work to confront violence, economic precarity, and health risks that undermine their lives and livelihoods.

In global perspective, this study contributes to the growing evidence base that community-driven, empowerment-centred programming is critical to HIV prevention and sexual health promotion. Similar evaluations in diverse settings reinforce that addressing HIV risk requires more than biomedical services: it demands integrated approaches that reduce vulnerability, build resilience, and expand agency among the most marginalised.

By documenting outcomes over a five-year period, this study not only illustrates Pragati's impact but also offers a replicable framework for public health research worldwide: evaluating empowerment as both a process and an outcome in HIV prevention.

Commercial sex has long been recognised as one of the primary drivers of the HIV epidemic in India. With an estimated 1.26 million female sex workers (FSWs) across the country, the public health response has traditionally focused on prevention through condom use promotion and STI treatment. But for many women in sex work, safety is not just a behavioural outcome-it's a function of power, dignity, and support.

That's where Pragati-meaning "progress" in Kannada-offered a new way forward.

Launched in 2005, Pragati is an at-scale, community-led programme designed not just to prevent HIV, but to address the deeper conditions that shape vulnerability. Reaching 10,000 to 12,000 FSWs in Bangalore each year, the programme goes beyond health service delivery. It creates an ecosystem of care-one that includes STI prevention and treatment, crisis-response services, de-addiction support, financial access, and social empowerment.

What sets Pragati apart is that it was co-designed with the sex worker community. This means that every service, every intervention, is shaped by the lived realities of the women it serves.

Between 2005 and 2010, the programme reached a total of 20,330 individual FSWs, with a median age of 28 years. What began as outreach to 2,307 women in 2005 scaled dramatically to 13,392 by 2010. Over the same period, programme interactions jumped from 10,351 to 167,709-a clear sign not just of reach, but of deepening engagement.

Peer educators played a crucial role in this scale-up, providing both a bridge and a buffer between institutional support and lived stigma. The programme's condom distribution efforts tell a similar story: from 140,248 condoms distributed in 2005 to over 4.7 million in 2010, reflecting both behavioural change and increased access.

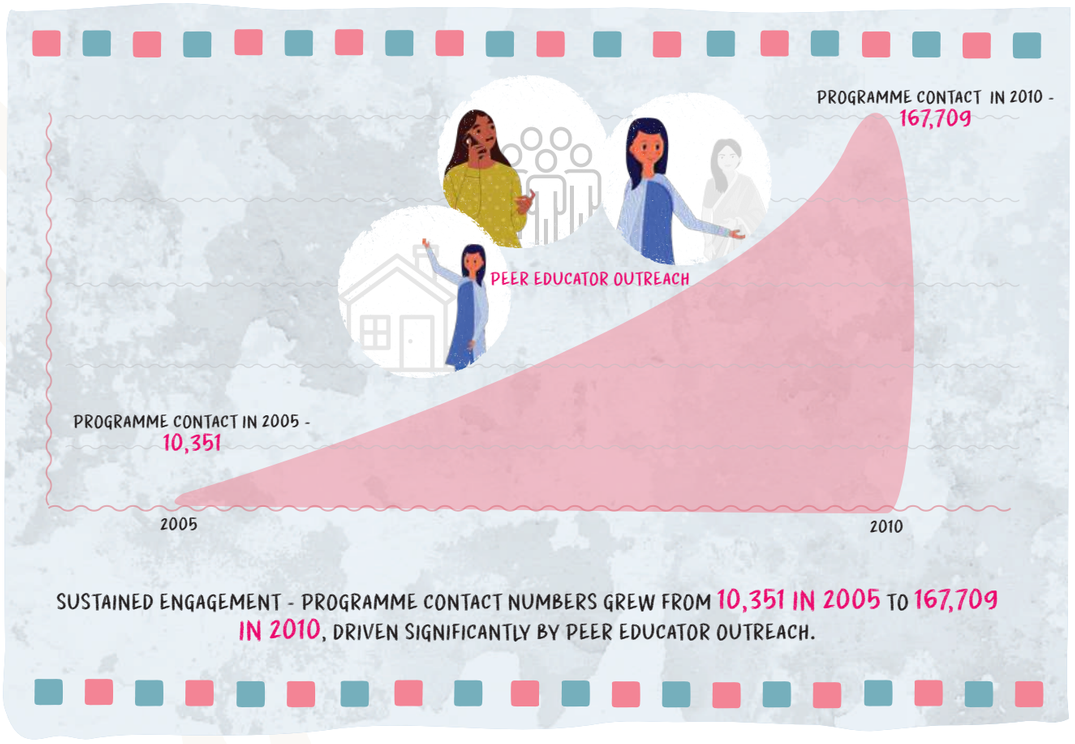
And Pragati didn't stop at prevention. Women accessed crisis support, de-addiction services, and microfinance opportunities, building not just resistance to HIV, but resilience in life.

This is what a systems-level intervention looks like: One that recognises sex workers not as passive recipients of aid, but as experts in their own survival and active participants in reshaping the systems that too often fail them.

At its core, Pragati is about more than public health.

It is about progress on the terms of those who have long been left behind.

Here is one powerful takeaway from the study:



Published in Global Health Action, this longitudinal descriptive study was conducted by a multi-institutional team from the Regional Public Health Laboratory Kennemerland (The Netherlands), Swathi Mahila Sangha, Swasti, The Health Catalyst, Karnataka Health Promotion Trust, and Françoise Jenniskens HIV and Health Advice.

Citation

Euser SM, Souverein D, Rama Narayana Gowda P, Shekhar Gowda C, Grootendorst D, Ramaiah R, Barot S, Kumar S, Jenniskens F, Kumar S, Den Boer JW. Pragati: an empowerment programme for female sex workers in Bangalore, India. Glob Health Action. 2012 Nov 27;5:1-11. doi: 10.3402/gha.v5i0.19279. PMID: 23195516; PMCID: PMC3509426.

Link to study

- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3509426

STRENGTH IN NUMBERS

A longitudinal survey on enhancing financial security of women in sex work through a community-led intervention

Did you know?

HIV prevention works best when paired with economic empowerment and strong community organisations.

This study unpacks the impact of community-led interventions on the financial security and individual empowerment of female sex workers (FSWs) in India.

Based on longitudinal data from over 2,000 FSWs across five Indian states, the research found that stronger community organizations (COs), built through structured capacity-building efforts by Swasti, were associated with significantly improved financial outcomes. Between 2015 and 2017, the likelihood of having financial security among FSWs rose from 49% to 82%, with those linked to high-strength COs having more than twice the odds of financial improvement. Community organizations with greater strength in governance, peer structures, and outreach were 2.5 times more likely to improve financial outcomes among members (95% CI: 1.5–4.1).

Women showed notable gains in financial inclusion and resilience: investment participation rose by 31%, savings scheme uptake by 28%, savings account ownership by 14%, and engagement in income sources beyond sex work by 18%. Importantly, enhanced financial security was strongly linked with greater self-confidence, self-efficacy, and individual agency, i.e., key dimensions of empowerment. Using multilevel regression analysis, the study highlights how institutional strengthening and collective efficacy contribute to resilience among marginalized communities.

For practitioners, these findings reinforce the value of investing in community-driven structures to address economic vulnerability and advance holistic empowerment outcomes among hard-to-reach populations.

For women in sex work in India, vulnerability has never been just about HIV. It is about control-who dictates their time, who guarantees their safety, and whether they have the financial independence to walk away from harm. That is why the most effective HIV prevention efforts have moved beyond clinics and condoms, to the deeper question of power.

The Avahan programme, one of the world's largest HIV prevention initiatives, understood this early. In its first two phases (2003–2013), funded by the Bill & Melinda Gates Foundation, Avahan not only expanded condom use and access to HIV services but also dismantled structural barriers through collective action. By its third phase (2014–2017), designed and implemented by Swasti, the focus shifted decisively toward financial security-helping women open bank accounts, build savings, and invest through community organisations (COs). The bet was simple but bold: stronger COs would create stronger women.

This study, conducted during Phase 3, followed 2,085 women from 38 COs across five states. Between 2015 and 2017, the proportion of women with high financial security rose from 49% to 82%, alongside sharp gains in investment participation (+31%), savings scheme uptake (+28%), bank account ownership (+14%), and income diversification (+18%). And with that financial stability came power: women with sustained or improved security reported markedly higher levels of self-confidence, self-efficacy, and agency than their peers.

The engine behind this transformation was collective strength. Stronger COs-those with deeper peer networks, integrated services, and accountable governance-were 2.5 times more likely to enable financial security for their members. In turn, that security unlocked the confidence to speak up, plan ahead, and act in one's best interest.

The lesson is clear. By investing in ecosystems of care-peer solidarity, financial systems, and community governance-programmes like Avahan didn't just reduce HIV risk. They redefined what safety and empowerment look like. Collectivisation is not merely a strategy; it is a safety net and when done right, a springboard.

Published in PLOS ONE and conducted by researchers from Population Council and Bill and Melinda Gates Foundation based on the third phase of the Avahan program led by Swasti.

Citation

Patel SK, Mukherjee S, Mahapatra B, Battala M, Jayaram M, Kumta S, et al. (2019) Enhancing financial security of female sex workers through a community-led intervention in India: Evidence from a longitudinal survey. PLoS ONE 14(10): e0223961. https://doi.org/10.1371/journal.pone.0223961

Link to study

- https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0223961#sec011

HELPING THOSE THAT HELP US

A study to foster resilient health systems among health care workers during COVID-19

Did you know?

Even in the face of burnout, risk, and scarce support, HIV care providers sustained care through teleconsultations, home delivery, and solidarity-showing that when formal systems falter, values and community resilience step in, pointing to the urgent need for long-term protections and policies for health workers.

This study explores the lived experiences of HIV care providers across five Indian states during the first wave of the COVID-19 pandemic.

Based on interviews with 19 providers — including doctors, nurses, counselors, field workers, and program staff — the study highlights the multi-level challenges they faced: reallocation of staff and labs to COVID duty, transport breakdowns, lack of PPE, stigma in communities, and delayed remuneration. Providers also experienced high stress and burnout, exacerbated by fear of infecting their families and lack of mental health support.

Despite these barriers, providers adapted with resilience. They ensured continuity of ART services through doorstep medicine delivery, teleconsultations, and community-level outreach, often using NGO vehicles and leveraging strong local networks. Beyond formal care, many offered emotional support and food supplies to PLHIV, even from personal funds. At the individual level, providers relied on meditation, peer support, and strong relationships with their patients to stay motivated.

The study reinforces the critical role of community-rooted health workers in crisis response and calls for institutionalizing their resilience-through mental health services, timely compensation, social protection, and integrated emergency preparedness in HIV care systems.

While the world scrambled to upgrade ventilators and stockpile PPE, one silent emergency continued to unfold-unacknowledged and under-supported: the wellbeing of healthcare workers (HCWs).

During the COVID-19 pandemic, healthcare providers (HCPs) stood on the frontlines-not just against the virus, but against exhaustion, grief, stigma, and isolation. Among them were HIV care providers, navigating already-fragile service delivery ecosystems now destabilised by lockdowns, fear, and systemic uncertainty.

This study explored how HIV care providers across five Indian states experienced and adapted to the first waves of the pandemic, using an empirical phenomenological approach. Through in-depth qualitative interviews with 19 participants, the study traced not just the pressures of the pandemic, but the resilience that emerged in response.

Interviews were conducted by phone, transcribed, and analysed using inductive thematic analysis supported by Dedoose software. Three key themes emerged:

❖ The Invisible Load

Providers described heightened vulnerability, especially early in the pandemic when exposure risks were poorly understood and protective measures were limited. Many worked in contaminated environments without adequate PPE, while simultaneously dealing with the emotional toll of treating immunocompromised clients and fear of infecting their own families.

❖ Remodelling Care Delivery

Despite severe disruptions, HIV care teams displayed extraordinary adaptability. From shifting to teleconsultations, coordinating doorstep delivery of antiretroviral medications, to devising innovative triaging protocols, providers redesigned how care was delivered-often with limited resources and little formal guidance.

❖ Resilience in Action

What held the system together wasn't just policy-it was people. Providers leveraged personal values, peer support, and deep community relationships to keep services afloat. Their efforts were driven not by institutional mandates, but by a sense of duty, solidarity, and care for those most at risk of being forgotten.

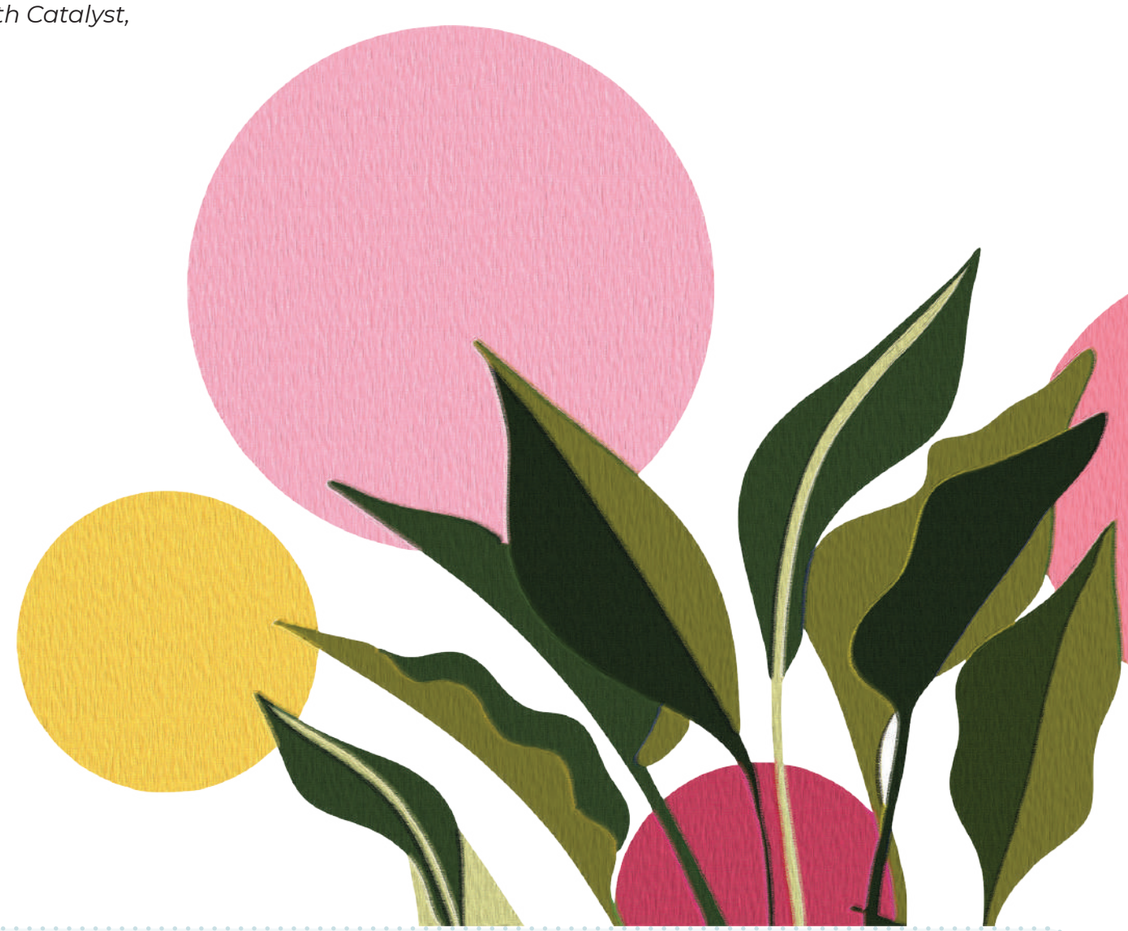
This study highlights an uncomfortable but critical truth: we cannot build resilient health systems by only focusing on equipment and infrastructure. We must also invest in the wellbeing of the people who hold those systems up.

To protect and sustain frontline workers-especially during crises-we need:

- ❖ Formal social protection systems
- ❖ Integrated primary healthcare support
- ❖ Structured self-care and mental health interventions
- ❖ Preparedness training and flexible care models

Because resilience is not just about surviving the next wave. It's about making sure those who carry the system don't collapse under its weight.

Published in Frontiers in Public Health and authored by researchers from Swasti, The Health Catalyst,



Citation

Parikh, N., Chaudhuri, A., Syam, S. B., & Singh, P. (2022). Fostering Resilient Health Systems in India: Providing care for PLHIV under the shadow of covid-19. Frontiers in Public Health, 10. https://doi.org/10.3389/fpubh.2022.836044

Link to study

❖ https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2022.836044/full

GRAMS OF HOPE

A Study on Protein Supplementation Using Fish Bycatch to Address Child Malnutrition in Bengaluru, India

Did you know?

A simple daily dose of 10 grams of protein powder made from discarded fish bycatch helped children in Bengaluru slums grow taller, stronger, and more attentive within just three months-turning waste into nourishment, their futures regained.

A 90-day community-based mixed-methods study in Bengaluru, India, evaluated the efficacy of Advanced Protein Powder (APP)-a supplement derived from underutilized fish bycatch-in addressing child malnutrition. Forty-six malnourished children aged 3–6 years were enrolled and allocated either to a control group receiving caloric support or to an intervention group receiving a daily 10 g APP supplement through the Sustainable Community Partnership and Empowerment (SCOPE) model.

Findings demonstrated statistically significant improvements in growth outcomes among the intervention group: weight-for-age percentiles increased by 7.59% compared to 0.59% in controls ($p = 0.02185$); mid-upper arm circumference and muscle mass gains were notable ($p < 0.05$); and height increased by 1.86 cm within the first month ($p < 0.001$).

Cognitive assessments indicated enhanced visual processing, short-term memory, and planning ability, corroborated by caregiver reports of improved vitality, appetite, and social engagement.

These results provide early but compelling evidence that APP supplementation can deliver dual benefits-physical catch-up growth and cognitive gains-within a short intervention window.

While the pilot sample was modest, the findings highlight the potential for scalable, sustainable protein supplementation strategies that leverage locally available resources to advance both nutrition security and child development outcomes.

In the crowded lanes of Bengaluru's slums, malnutrition has long meant more than an empty stomach-it has meant futures held back. Children may survive, but too often they struggle to thrive, their growth stunted and their learning dulled by a simple lack of good protein

This study shows that change is possible. A daily 10 grams of Advanced Protein Powder (APP)-made from fish bycatch that would otherwise go to waste—helped children grow taller, stronger, and more alert in just three months. They did not simply put on weight; they gained muscle, focus, and energy. Parents noticed the difference: sharper attention, brighter moods, and greater willingness to learn and play.

What made this work was the Sustainable Community Partnership and Empowerment (SCOPE) model. Instead of an outside program dropping in, SCOPE placed community members at the center: caregivers were engaged, local health workers built trust, and delivery was done through familiar community structures. By anchoring the intervention locally and sourcing a supplement that was low-cost and sustainable, SCOPE turned evidence into ownership.

The lesson is clear. What worked in Bengaluru can work across India—and beyond. With evidence and community partnership in hand, we can reimagine nutrition programs not as stopgaps, but as springboards for children's growth, learning, and lifelong potential.

What began as an experiment in transforming discarded fish into a source of nourishment has revealed something larger-a pathway where science, sustainability, and community strength converge.

In Bengaluru's slums, ten grams of protein a day became ten grams of hope: children grew taller, thought clearer, laughed louder. Their parents witnessed not just survival, but the stirrings of potential. This is the promise of innovation grounded in dignity-where waste becomes wisdom, communities become partners, and every child is given the chance to rise. The evidence is here. The opportunity is now.

And the impact, if scaled, could ripple far beyond one city, reshaping how the world fights malnutrition.

Citation:
Yang, K. P., Khanna, S. K., Chaudhuri, A., Syam, S. B., & Bray, T. M. (2025). A community-based mixed-methods study: Fish bycatch protein supplementation as a sustainable solution for child malnutrition in Bengaluru, India. Nutrients, 17(11), 1751. https://doi.org/10.3390/nu17111751

Link to study

- https://www.mdpi.com/2072-6643/17/11/1751/pdf

PROTEIN AT THE MARGINS

A Study on Caregiver Voices and Protein Gaps Through the Social-Ecological Model

Did you know?

Caregivers in Bengaluru's slums said their children eat more willingly at anganwadis than at home-because eating together with peers makes them finish their meals

This community-based qualitative formative study using focus group discussions, grounded theory analysis, and the Social-Ecological Model framework captures caregiver voices from Bengaluru slums to reveal the hidden hunger behind undernutrition-specifically, the pervasive lack of protein in children's diets.

In a grounded-theory qualitative analysis of focus groups with 21 primary caregivers of 24 malnourished preschoolers (aged 3–6), barriers emerged across levels: preference for "junk" foods and child pickiness at the individual level; economic constraints and sparse household support; constrained institutional access; and gaps in community and systemic delivery.

Caregivers favored school and community partnerships as trusted channels for reliable, affordable protein-rich feeding.

By layering insights through a Social-Ecological Model, this formative work lays the foundation for a co-designed, scalable intervention. Its findings point researchers toward protein-focused, context-sensitive strategies that blend community empowerment with nutrition science—an approach ripe for rigorous pilot testing.

In Bengaluru's slums, caregivers voiced how protein insecurity quietly erodes child health. Meals often revolve around rice, leaving children to demand snacks instead of nutritious foods. As one mother shared, "My son refuses to eat dal or vegetables but asks for chips and biscuits all the time." This shows how low-cost, accessible junk foods displace essential protein in the diets of vulnerable children.

At the household level, economics and family dynamics sharpen the challenge. A caregiver explained: “If we buy eggs for the children, then there is less money left for rice for everyone. It becomes a fight.” Others described how husbands or elders resisted prioritizing special foods: “He says, children will grow anyway, why waste extra money?”

Such dynamics reveal that interventions cannot focus only on mothers-they must also engage fathers, grandparents, and decision-makers in the household.

Caregivers were clear that schools and anganwadis could change this story. One reflected: “When the anganwadi gives eggs, my daughter eats happily. At home she refuses, but at school she joins others and finishes.”

The collective environment, peer influence, and institutional trust create conditions where children not only accept protein-rich foods but enjoy them.

The study also uncovered an aspirational thread. Despite constraints, mothers felt pride when their children consumed protein: “I feel happy when my son eats an egg; I know it will make him strong.” This underscores that nutrition programming must not only counter deficits but also amplify positive aspirations-framing protein as strength and pride rather than as medicine for the sick.

By layering these voices through the Social-Ecological Model, the study shows barriers stack across levels—child preference, household economy, family norms, and systemic gaps. For practitioners, the path forward is equally layered: integrate protein-rich menus into anganwadis and schools, build affordable supply chains, engage household decision-makers, and design messages that celebrate caregivers’ aspirations. From evidence to impact, this is a roadmap shaped not in theory, but in the lived realities of families themselves.

The voices of Bengaluru’s caregivers remind us that undernutrition is not a statistic-it is the quiet negotiation at a dinner table, the tear-streaked face of a child demanding chips, the weary calculation of a mother choosing between rice for all or an egg for one. Yet in these same voices lies hope: trust in schools, pride in a child finishing an egg, and the belief that food can mean strength, dignity, and a future.

For practitioners, the call is unmistakable-programs must not only deliver nutrients, but also restore confidence to families and communities. By centering protein in the everyday plate and empowering caregivers as partners, we can shift from scarcity to resilience, and from survival to growth.

Citation:
Yang, K. P., Bray, T. M., Chaudhuri, A., Syam, S. B., & Khanna, S. K. (2025). Understanding child undernutrition in urban slums through the Sustainable Community Partnership and Empowerment (SCOPE) strategy: A qualitative study of caregiver perspectives on barriers to community-based nutrition. Evaluation and Program Planning, 111, 102612.

Link to study

❖ https://doi.org/10.1016/j.evalprogplan.2025.102612

BRIDGING THE FIRST MILE

Synthesis from a systematic review of Primary Healthcare innovations in India

Did you know?

Nearly one-third of India's PHC innovations centre on lay health workers—showing that redistributing tasks to local workers can unlock huge gains in access and trust.

This systems-level analysis, conducted by members of the Lancet Citizens' Commission on Reimagining India's Health System, explores how strategic workforce design can accelerate progress toward Universal Health Coverage (UHC).

Using a Theory of Change (ToC) approach, the study synthesizes findings from multi-stakeholder consultations and policy reviews to propose a four-tiered health workforce model supported by nationally recognized certifications and training pipelines.

It emphasizes the urgent need for task redistribution, local employment generation, and well-defined career pathways to address India's dual crisis of unemployment and health worker shortages.

The study presents an actionable framework to build a resilient, people-centred primary healthcare system by leveraging India's demographic dividend through inclusive workforce reforms.

Primary healthcare (PHC) is the first door we knock on when we're unwell. It's where care begins-and where trust in the health system is built or broken. However, this first door often opens into a system under pressure: facing multiple disease burdens, chronic staff shortages, and fragmented delivery mechanisms, especially in rural and marginalised communities.

The 2018 Astana Declaration reframed PHC as not just a service but a person-centred foundation for resilient, inclusive healthcare systems. And yet, while India has made progress, particularly through the development of Health and Wellness Centres (HWCs) under the Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), several untapped opportunities remain.

To better understand what's working and where we need to pivot, a systematic review of PHC innovations in India was conducted using PRISMA guidelines. This landmark review offers a sweeping yet granular look at the landscape of health innovations from 1990 to 2019, helping policymakers, practitioners, and funders identify what can scale and what needs redesign.

The review developed a theoretical PHC framework, designed comprehensive search strategies across databases like MEDLINE, OVID, and CINAHL, and screened studies that aligned with core metrics of PHC performance: efficiency, quality, effectiveness, sustainability, and cost-efficiency.

The final review included 239 impact evaluations-primarily peer-reviewed journal articles-with 24 randomised controlled trials (RCTs). Most studies focused on single innovations, though a few explored multi-layered interventions or had multiple study arms.

Several patterns emerged:

- Rural communities were the primary focus (53%), with significant representation from mixed urban-rural areas, urban pockets, and tribal regions.
- Community health worker-delivered interventions, digital innovations, and mentoring programmes featured heavily, reflecting both feasibility and frontline impact.
- Foundations funded the majority of studies (35.6%), revealing philanthropic interest in early-stage, community-level innovation.

Still, some untapped opportunities stood out. Less than 4% of primary healthcare innovations in India have tested financing or governance models, two of the biggest levers for systemic change. Only 3.8% of the studies addressed financing mechanisms, and governance-focused innovations were notably rare, highlighting areas where bold experimentation and policy attention are needed. While 31% of the studies focused on workforce development, especially through lay health workers, digital innovations accounted for just 13.8%, although interest is growing, particularly in rural India.

The review underscores a critical truth: India's path to Universal Health Coverage (UHC) will rise or fall on the strength of its primary care systems. Innovations in health education, behaviour change, and community engagement are already showing promise-but unless we unlock these untapped opportunities in governance, financing, and workforce retention, the burden will continue to fall on already-stretched secondary and tertiary systems.

PHC is not the last mile of care-it is the first act of justice.

And our innovations must begin there.

Citation

Chaudhuri, A., Yellappa, V., Parikh, N., Rao, R. N., Biswas, N., Agarwal, N., Cove, C., & Nanda, B. (2023). Primary Healthcare Innovations in India: Synthesis from a systematic review [Preprint]. medRxiv. https://doi.org/10.1101/2023.07.13.23292645

Link to study

- https://www.medrxiv.org/content/10.1101/2023.07.13.23292645v1.full.pdf

CERTIFY TO FORTIFY

A study to identify certification gaps for Human Resources in Primary Healthcare in India

Did you know?

Structured training and national certification for just four categories of health workers could simultaneously solve India's provider shortage and rural unemployment crisis-while powering Ayushman Bharat and Universal Health Coverage.

This policy analysis outlines a bold vision for transforming India's primary healthcare (PHC) workforce through structured training and nationally recognized certification pathways.

The paper identifies four key health worker categories-each suited to specific functions across prevention, screening, referral, and chronic care-and argues that empowering these cadres with role-specific skilling could address the dual challenge of provider shortages and rural unemployment.

The study advocates for blended curricula, practical skills training, and mobility-linked career tracks, emphasizing that a robust certification ecosystem is essential to operationalize the goals of Ayushman Bharat and advance Universal Health Coverage in India.

Health systems that act early-addressing the root causes of ill-health and catching disease in its earliest stages-deliver better outcomes at lower cost. Yet far too often, the system waits until people are seriously unwell before it intervenes. That delay costs lives, and it costs trust. At the heart of this inefficiency is a design flaw: our health systems are only as strong as the people we equip to care.

This study examines the critical role of human resources in primary care, and how the thoughtful design of workforce roles, training, and certification can unlock stronger health outcomes while also creating pathways to better livelihoods, especially for women, youth, and underserved populations. Effective primary care rests on a diverse, multi-tiered workforce where different health workers are trained and deployed to do what they do best. Evidence from across India shows that narrowly trained workers can either take on highly specialised tasks, such as emergency surgery, or provide a wide range of low-complexity, high-frequency services-often delivering results on par with, or even better than, more extensively trained professionals.

India already has a wide range of regulatory frameworks and organisations, both governmental and non-governmental, engaging with this diversity of health workers. But significant gaps remain, especially in scaling training, ensuring standardisation, and creating meaningful pathways for career progression. This study identifies four distinct role categories within the primary care workforce and proposes a blueprint for each, with nationally recognised certification, training that blends academic knowledge with hands-on practice, and a roadmap for career growth, fair pay, and professional dignity.

By addressing training gaps through integrated certification and practical skill-building, the study lays out how health worker capacity can be strengthened across all four role types. By designing pathways for local, gainful employment, particularly for women and youth, the approach simultaneously expands access to care and empowers communities. The findings carry important policy implications, reinforcing the need for strategic partnerships, national workforce planning, and advocacy for certification-based professionalisation-steps that can drive systemic reform and sustainable scale-up.

The ultimate impact is lasting and transformative: when frontline providers are well-trained, fairly compensated, and supported in their roles, health systems become more resilient, more responsive, and more people-centered.

With India's young demographic profile, high unemployment, and low female labour force participation, this approach offers more than health system reform. It offers a nation-building opportunity.

If done right, these roles won't just deliver better healthcare. They will create sustainable local employment, especially in rural and peri-urban areas. They will formalise care work, which has long gone underpaid or unpaid. And they will build a healthcare provider network that is trusted, trained, and thriving.

Because ultimately, care begins with carers. And we must invest in them-not just as a workforce, but as the foundation of our collective wellbeing.

Citation

Mor, Nachiket & Bang, Anand & Chaudhuri, Angela & Brahmawar Mohan, Sanjana & Ravikanth, Lakshmi. (2020). Human Resources for Primary Healthcare in India: Training & Certification. 10.13140/RG.2.2.10335.00167/2.

Link to study

❖ http://dx.doi.org/10.13140/RG.2.2.10335.00167/2

OF DISEASES AND DISPARATIES

A study on the impact of COVID-19 on sexual and reproductive health services among the HIV community in India

Did you know?

During COVID-19, people living with HIV in India faced life-threatening gaps in treatment access-not because medicines weren't available, but because health systems lacked flexibility and ready avenues of community-centered dignified support.

This study investigated the impact of the COVID-19 pandemic on sexual and reproductive health (SRH) service access for people living with HIV (PLHIV) in India.

Based on 150 in-depth telephonic interviews across five states, the study identified five core disruptions: reduced access to care, diminished care quality, increased socio-economic strain, weakened health system resilience, and unmet gender-specific needs.

Despite ART services continuing formally, PLHIV experienced profound disruptions.

The study underscores the urgency of embedding community-centered, gender-responsive SRH services within health system strengthening and pandemic preparedness strategies.

For people living with HIV (PLHIV), healthcare access has never been straightforward. But when COVID-19 struck, the fragile pathways they relied on shattered. What had long been a struggle for continuity became, overnight, a crisis of survival. India's commitment to free antiretroviral therapy (ART) and HIV services remained in place on paper, yet lockdowns, overwhelmed facilities, and system-wide confusion meant that treatment in practice was suddenly out of reach. At the very moment when consistency mattered most, PLHIV encountered closed doors, unanswered calls, and a health system preoccupied with a single emergency.

This study sought to understand what that disruption meant-not as an abstraction, but through the lived realities of those navigating it. Using purposive sampling with maximum variation, researchers conducted 150 in-depth telephonic interviews across Karnataka, Tamil Nadu, Maharashtra, Andhra Pradesh, and Telangana, speaking with both PLHIV who had been accessing ART or sexual and reproductive health (SRH) services for at least

six months prior to the pandemic, and HIV care providers (HCPs) with over two years' experience on the frontlines. Their voices reveal a complex picture of interrupted rights, widening inequities, and community resilience under strain.

Even though treatment was technically available, participants described severe disruptions in access and continuity. With transportation suspended and facilities redirected to COVID-19 response, ART refills and SRH services became irregular or impossible. Structural barriers-poverty, stigma, gender identity-deepened the crisis, with women and transgender clients bearing the brunt of exclusion. Even when care was accessible, its quality had diminished: fear of exposure, long wait times, and staff burnout undermined engagement and follow-up, especially in SRH contexts where dignity and sensitivity were most needed.

Beyond the clinic walls, the pandemic also magnified the social determinants of health. Participants reported loss of income, food insecurity, and housing instability-pressures that stretched wellbeing far beyond the clinic visit and turned healthcare disruptions into life crises. Yet, against this backdrop of institutional breakdown, resilience surfaced from unexpected places. Community-led organisations, peer navigators, and informal networks stepped in to fill the void, delivering ART, offering psychosocial support, and reducing harm. These contributions often went unrecognised, but they highlighted the vital role of decentralised, peer-anchored systems during emergencies.

The study also underscored how one-size-fits-all approaches failed. Women, transgender persons, and serodiscordant couples spoke of services that did not reflect their realities. Their needs were urgent, but their pathways to care were absent. What emerged was not just a story of service disruption but of systemic blind spots: the inability to adapt quickly, to deliver tailored solutions, and to protect the dignity of those most vulnerable.

Through interpretative phenomenological analysis, five themes became clear-access, quality, social determinants, resilience, and population-specific vulnerabilities. Together, they point to a single lesson: inclusive health systems must be designed with flexibility, dignity, and community at their core. If healthcare continues to be built only for stable times, it will always falter in crises. For PLHIV during COVID-19, the stakes of that failure were devastatingly clear. And yet, their resilience-and that of the communities who stood beside them-offers a blueprint for how systems can transform if they choose to listen.

This study affirms what community health advocates have long argued: crisis response must be equity-centred and community-driven. Health systems built for the average person fail those furthest from the centre. In pandemics-and beyond-resilience must be designed, not expected.

Because the cost of closure isn't just service disruption.

It's lives derailed, trust broken, and gains reversed.

Published in the Archives of Sexual Behavior, this qualitative study-authored by researchers from Swasti, The Health Catalyst, the Institute of Development Studies (IDS), University of Sussex, and PCMH Restore Health, Bangalore

Citation

Parikh, N., Chaudhuri, A., Syam, S.B. et al. Diseases and Disparities: The Impact of COVID-19 Disruptions on Sexual and Reproductive Health Services Among the HIV Community in India. Archives of Sexual Behavior 51, 315–329 (2022). https://doi.org/10.1007/s10508-021-02211-5

Link to study

- https://link.springer.com/article/10.1007/s10508-021-02211-5

TOWARDS A BRIGHTER TOMORROW

A study on the uptake of social protection schemes by transgenders

Did you know?

Nearly half a million transgender people in India are eligible for entitlements and social welfare schemes-yet most remain excluded due to stigma, poor design, and weak delivery. Real inclusion begins when policies are trans-led, trusted, and accessible.

This mixed-methods study examined the uptake, accessibility, and gaps in social protection schemes for transgender individuals across five Indian states-Tamil Nadu, Karnataka, Maharashtra, Gujarat, and Uttar Pradesh.

Through secondary analysis, focus group discussions, and key informant interviews, the study assessed the effectiveness of existing government schemes and the role of State Transgender Welfare Boards.

Findings revealed widespread exclusion due to lack of awareness, bureaucratic hurdles, and limited targeting.

The study calls for trans-specific schemes, improved data systems, stronger implementation frameworks, and inclusive governance-laying a data-driven foundation for policy reform that upholds dignity, equity, and access for transgender communities in India.

For India's transgender communities, exclusion is not simply a social condition-it is a systemic outcome. With an estimated 490,000 transgender persons nationwide, the statistics are stark: literacy rates stand at just 46 percent, formal employment at 38 percent, and barriers to education, healthcare, housing, and public benefits remain pervasive. Discrimination operates on multiple, overlapping fronts-based not only on gender identity but also on HIV status and assumed associations with sex work-leaving many transgender persons locked out of opportunity and dignity.

Although government-run social protection schemes exist, transgender individuals are rarely able to access them. Information gaps, poor implementation, and policy designs that fail to account for lived realities mean that many remain excluded. In fact, numerous transgender persons are not even reflected in baseline beneficiary data, rendering them statistically invisible. To bridge this gulf between policy intent and lived experience, Swasti supported a landmark study conducted by UNDP and NACO, which produced a compendium of good practices mapping the landscape of social protection for transgender communities in India.

The study critically examined whether current government schemes are effectively reaching and serving transgender people. It catalogued central and state-level programs, analysed patterns of uptake, and investigated the structural barriers that block access-particularly through State Transgender Welfare Boards and livelihood interventions. Using a mixed-methods design, the research combined secondary data analysis with focus group discussions involving transgender individuals, and key informant interviews with implementing agencies and community leaders. Fieldwork spanned five diverse states-Tamil Nadu, Karnataka, Maharashtra, Gujarat, and Uttar Pradesh-to capture regional variation in both access and innovation.

The central questions were clear: are transgender individuals aware of the schemes available to them? What bottlenecks prevent access? How inclusive and gender-responsive are existing policies? And what does it take for someone to move from eligibility on paper to actual benefit delivery in practice?

The findings reveal both critical gaps and opportunities. While states like Tamil Nadu have pioneered supportive frameworks, most others continue to lag, lacking the institutional infrastructure, outreach systems, and empathy required to close the inclusion gap. Many transgender individuals remain unaware of schemes or unable to claim benefits due to stigma, unclear documentation requirements, or mistrust of service delivery. Variation across states underscores the absence of national benchmarks and the urgent need for cross-learning.

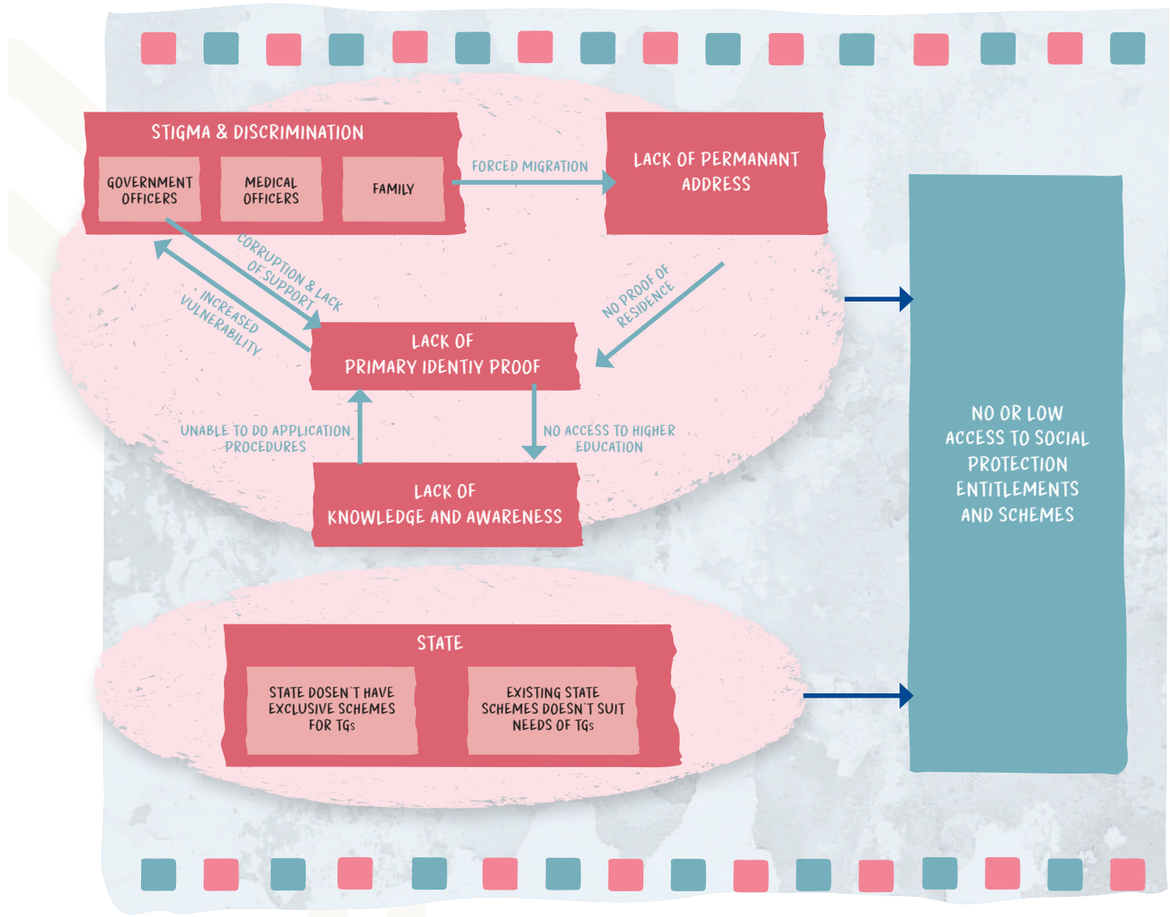
The study makes a compelling case for reform. It calls for social protection schemes that are designed specifically for transgender communities, not retrofitted as exceptions. It urges stronger implementation pathways, community participation in planning and delivery, and robust grievance redressal mechanisms. Crucially, it highlights that uptake is directly tied to awareness and trust: without intentional outreach and trusted intermediaries to guide individuals through complex systems, even the best-designed schemes will remain inaccessible. Closing the gap requires not only inclusive policies but also delivery systems that place transgender voices and experiences at their core.

At its heart, this study argues for a data-driven, dignity-first approach to social protection-one that doesn't just count transgender lives, but invests in them.

Because when people are pushed to the margins, it isn't enough to build schemes that "allow" inclusion.

We must design from the margins outward-ensuring that systems work because they include those who've long been left out.

Here is one powerful takeaway



Published by the United Nations Development Programme (UNDP) India in partnership with National AIDS Control Organization, India and with technical expertise from Swasti, The Health Catalyst.

Citation

UNDP India & NACO. (2017). Uptake of Social Protection Schemes by Transgenders in India: Good practices and insights for reform. United Nations Development Programme. https://www.undp.org/india/publications/uptake-social-protection-transgenders

Link to study

- https://www.undp.org/india/publications/uptake-social-protection-transgenders

MAKING WAVES BY GOING WITH THE FLOW

A study on how wastewater monitoring can anchor global disease surveillance systems.

Did you know?

Wastewater monitoring can detect outbreaks days before clinical systems-yet while 59% of high-income countries track variants this way, only 13% of low-and middle-income countries do, exposing a critical gap in global pandemic preparedness.

This cross-country landscape study-authored by an international team of public health researchers-surveyed wastewater-based disease monitoring programs in 43 countries to understand global readiness for early outbreak detection.

The survey revealed stark contrasts in implementation. In HICs, composite sampling from centralized wastewater treatment plants was the norm (96%), while grab sampling from surface waters, open drains, and pit latrines dominated in LMICs (75%). Additionally, HICs monitored roughly twice as many samples and had shorter processing times (average 2.3 days vs. 4.5 in LMICs).

Regular monitoring for SARS-CoV-2 variants was conducted by 59% of HICs but only 13% of LMICs. Data-sharing practices were similarly fragmented: although most programs shared data internally or with partners, only around one-third shared data publicly, limiting broader situational awareness.

The findings highlight a fragmented but rich monitoring ecosystem with vast potential-calling for global coordination, funding, and strategic leadership to transform scattered efforts into a sustainable, integrated early warning network for pandemic preparedness.

Despite decades of infectious-disease surveillance, COVID-19 still caught the world off guard-not for lack of data, but for lack of coordination, agility, and early-warning systems grounded in everyday community health.

Wastewater monitoring has emerged as a cost-effective, non-invasive bridge: by anonymously sampling what communities flush away, it offers a real-time snapshot of circulating pathogens-from SARS-CoV-2 to potential novel threats-but global infrastructure to support it remains fragmented and underused.

A cross-country survey of 43 countries maps this patchwork: most programmes are concentrated in urban areas; in high-income countries (HICs) sampling typically occurs at centralised treatment plants using composite techniques, while in low- and middle-income countries (LMICs), where such plants may be absent, teams rely on grab samples from surface water, open drains, and pit latrines.

Turnaround times differ in ways that matter for outbreak control-an average lag of 2.3 days in HICs versus 4.5 days in LMICs-and the gap is starkest in variant surveillance: 59% of HICs routinely test wastewater for SARS-CoV-2 variants compared with 13% of LMICs. Data is usually shared internally or with partner organisations, but rarely with the public, limiting transparency, coordination, and community engagement.

The picture is clear: a technically capable, locally adaptive ecosystem already exists; what's missing isn't innovation but leadership, long-term financing, and an implementation blueprint. To unlock impact at scale, multilateral actors (WHO, UNICEF, the World Bank) should drive multi-year strategic plans, set global frameworks for quality, standards, and interoperability, and secure national buy-in through aligned incentives and technical support.

When done right, wastewater surveillance becomes real-time public health monitoring-giving anonymous, community-level insight into disease spread and variant detection without individual testing-while also addressing inequities in capacity, where variant monitoring is standard in many HICs but rare in LMICs that often bear the brunt of emerging threats.

This demands transformative leadership: cross-country coordination, dedicated budgets, and comprehensive capacity building to earn trust and ensure sustainability. With global alignment, wastewater monitoring can anchor pandemic preparedness, contain outbreaks earlier, and guide local responses-especially where clinical infrastructure is thin-because the best time to act is before the emergency, and sometimes what lies beneath is the signal that saves lives.

If done right, wastewater monitoring could become a cornerstone of resilient public health surveillance-particularly for underrepresented and vulnerable populations.

Because the best time to act is before the emergency.

And sometimes, what lies beneath is the signal that can save lives.

Published in The Lancet Global Health

Citation

Keshaviah, A., Diamond, M. B., Wade, M. J., Scarpino, S. V., Ahmed, W., Amman, F., Aruna, O., Badilla-Aguilar, A., Bar-Or, I., Bergthaler, A., Bines, J. E., Bivins, A. W., Boehm, A. B., Brault, J.-M., Burnet, J.-B., Chapman, J. R., Chaudhuri, A., de Roda Husman, A. M., Delatolla, R., ... Zanoli Sato, M. I. (2023). Wastewater monitoring can anchor Global Disease Surveillance Systems. The Lancet Global Health, 11(6). https://doi.org/10.1016/s2214-109x(23)00170-5

Link to study

❖ https://doi.org/10.1016/S2214-109X(23)00170-5

SAFE CITY

An analysis of services for gender-based violence in Bengaluru, India

Did you know?

While most gender-based violence responses manage harm after it happens-real safety means investing in prevention, dismantling structural inequalities, and building systems that stop violence before it starts.

This exploratory study examined the fragmented landscape of gender-based violence (GBV) response systems in Bengaluru, India.

Drawing from a purposive stakeholder mapping and 87 informal interviews, the study found that most interventions are reactive, focused on survivor support, with minimal investment in prevention.

Services spanned both public and private spheres but lacked coordination, consistent funding, or clear accountability mechanisms.

The study calls for a consortium-led shift toward violence prevention, backed by structured investments, system-wide alignment, and long-term evaluation. It offers a critical reframing: that sustainable urban safety for women requires dismantling structural inequalities-not just lighting streets.

In India, violence isn't just a private matter-it's a structured expression of control, rooted in historical and ongoing gendered power. For centuries, violence against women remained hidden, dismissed as personal or domestic. It wasn't until the 1980s, spurred by feminist movements spotlighting dowry deaths, sexual violence, and custodial rape, that this silence began to rupture.

The 2012 Delhi gang rape became a national inflection point-catalyzing mass protests and demands for state accountability. But despite new laws, fast-track courts, and police

reforms, the violence hasn't stopped. Many incidents go unreported, swallowed by a culture of shame, fear, and disbelief. And when responses do come, they are often reactive, not preventive.

This study, situated within the larger discourse of gender and urban space, explores how violence against women is addressed in Bengaluru, India. Through a mapping exercise of key stakeholders and 87 informal interviews, the study examines the fragmented landscape of gender-based violence response and the absence of systemic prevention frameworks.

One of the core insights? When we talk about violence in cities, we fixate on women's "safety" on the streets-while overlooking that violence cuts across both public and private spheres, from homes to police stations, workplaces to hospitals. Safety cannot be reduced to lighting and surveillance; it requires dismantling the structures that produce and excuse violence.

Findings from the interviews point to:

- Resource scarcity
- Siloed operations
- Over emphasis on post-violence response (survivor support, legal aid, shelter), rather than violence prevention
- A lack of training and infrastructure among service providers to proactively intervene
- A prevailing mindset-both locally and globally-that prevention is idealistic, rather than actionable

The study argues that this mindset must shift.

Prevention isn't a luxury-it's the foundation of justice. And it will require:

- **Consortium-based action across government, NGOs, and private actors**
- **Dedicated budgets for long-term, community-based prevention**
- **Capacity building that moves beyond crisis management**
- **Policy frameworks that mandate evaluation and accountability for prevention outcomes**

It also requires that we listen to the lived realities of women, transgender, and non-binary people navigating violence-and include them in the design of solutions.

Because if we only act after harm has occurred, we aren't building safety.

We're just managing the consequences of its absence.

Published in International Sociology and authored by researchers from Swasti, The Health Catalyst and Purdue University, USA.

Citation

Chakraborty, S., Kumar, S., & Subramaniam, M. (2017). Safe city: Analysis of services for gender-based violence in Bengaluru, India. International Sociology, 32(3), 299-322. https://doi.org/10.1177/0268580917696386 (Original work published 2017)

Link to study

- https://doi.org/10.1177/0268580917696386

DETECTION IS BETTER THAN CURE

Understanding the Effectiveness of Peer Educator Outreach on Reducing Sexually Transmitted Infections

Did you know?

Peer educator outreach doesn't prevent STI infections amongst the HIV key population, but it transforms early detection and speeds up access to care.

This study used Bayesian network modeling and machine learning algorithms to evaluate how peer educator outreach (PEO) programs influence sexually transmitted infection (STI) outcomes among women in sex work in India. The findings suggest that PEO does not directly prevent new STI infections, but it plays a critical role in early detection and timely care-seeking.

The data showed no significant effect of safe-sex education delivered through PEO on reducing the likelihood of contracting an STI ($\theta = 0.004$; 95% CI: −0.017 to 0.025). However, peer educator visits were highly effective in increasing women's awareness of STI symptoms ($\gamma = 0.413$; 95% CI: 0.380 to 0.449), making them more likely to recognize early warning signs and act on them. In other words, while prevention through education alone showed limited impact, outreach visits substantially improved sensitivity to symptoms and thus accelerated detection.

The study also found that peer outreach significantly increased the likelihood of sex workers visiting clinics when symptomatic. Simulation models demonstrated that a 10 percent increase in PEO efforts resulted in a 1 percent rise in clinic visits and a 3 percent reduction in STI prevalence. Scaling efforts further, a 50 percent increase in PEO was linked to a 4.9 percent increase in clinic visits and a 15 percent drop in prevalence. These results underscore how incremental investments in peer outreach can translate into meaningful population-level health impacts.

Even low-intensity interventions such as phone-based peer outreach produced significant results. In a randomized field experiment involving 147 sex workers, those who received a phone call from a peer educator were 67 percent more likely to visit a clinic compared to the control group. Specifically, 35.2 percent of women in the treatment group sought care versus 21.1 percent in the control group. This demonstrates that even minimal engagement from peer educators can create a measurable shift in care-seeking behavior.

Taken together, the study reveals that the primary value of PEO lies not in direct prevention, but in enhancing early detection and rapid clinical engagement. By combining probabilistic modeling with machine learning, the research offers strong evidence that community-based outreach is an efficient and effective way to accelerate diagnosis, reduce prevalence, and strengthen the overall impact of STI programs in high-risk populations.

More than one million new sexually transmitted infections (STIs) occur every day across the world. The scale of this challenge demands more than broad awareness-it requires targeted, timely, and tactical detection.

In India, peer educator outreach (PEO) programs are a cornerstone of community-based STI response. Often led by former sex workers, these programs recruit and train peers to engage current sex workers-offering support, information, and a bridge to services.

While previous research has shown that PEOs reduce STI rates, this study asked a sharper question: Are these reductions happening because of prevention-or because of detection?

To find out, researchers built a Bayesian statistical model to disentangle the effects of behavioral prevention (i.e., increased condom use) from early detection (i.e., timely clinic visits after symptom recognition). They supplemented this with data from across India and a randomized controlled trial to validate the model's predictions.

The answer was clear.

PEOs do not significantly reduce transmission rates through prevention alone. Instead, they excel at helping women detect infections early, by improving symptom literacy and encouraging faster treatment-seeking behavior. The difference may seem subtle, but the programmatic implications are significant.

According to model simulations a 10% increase in PEO intensity leads to a 1% increase in clinic visits and a 3% reduction in STI prevalence. This means that peer educators are not merely public health messengers. They are detection accelerators-quietly transforming outcomes by empowering sex workers to recognize when something is wrong and get help before it's too late.

The randomized controlled trial reinforced these findings, showing that increased peer visits directly correlate with more clinic visits-without necessarily reducing reported risk behavior.

For health systems, this is a strategic insight. It suggests that rather than relying solely on behavior change messaging, investing in community-led detection systems-through trusted peers-could yield quicker wins in outbreak control, especially in hard-to-reach populations.

Because when it comes to STIs, what gets caught early can be cured.

And no one catches things sooner than those who've lived the life, know the signs, and walk alongside the most vulnerable.

Here is one powerful takeaway

Published in Marketing Science and authored by researchers from the Bauer College of Business, University of Houston,USA; Swasti, The Health Catalyst, and Catalyst Management Services, India.

Citation
Sam Hui, Parthasarathy Krishnamurthy, Shiv Kumar, Hareesha B. Siddegowda, Prachi Patel (2019) Understanding the Effectiveness of Peer Educator Outreach on Reducing Sexually Transmitted Infections: The Role of Prevention vs. Early Detection. Marketing Science 39(3):500-515.

Link to study

❖ DOI:https://doi.org/10.1287/mksc.2019.1168

NOT JUST ONE WOUND

A study on the polyvictimization, sex work, and depressive symptoms among transgender women and men who have sex with men.

Did you know?

Each additional form of abuse faced by transgender women and MSM in India sharply increases the odds of depression, showing how violence compounds trauma and demands trauma-informed, gender-affirming care.

This cross-sectional study examined the relationship between polyvictimization, sex work, and depressive symptoms among 1,366 transgender women and 2,182 men who have sex with men (MSM) across five states in India. The findings reveal that transgender women and MSM engaged in sex work were significantly more likely to experience multiple forms of violence, including verbal, physical, sexual, and property-related abuse. In the past six months alone, 30 percent of transgender women and 17 percent of MSM reported at least one form of abuse. Among those engaged in sex work, transgender women were especially vulnerable to sexual violence, while MSM reported heightened risk across every form of abuse. Regression analyses demonstrated that both polyvictimization and sex work were independently associated with higher odds of depressive symptoms, even after adjusting for age, marital status, gender transition status, and identity typology. Each additional form of abuse reported was linked to a sharp increase in the likelihood of depression, highlighting the cumulative toll of trauma. Taken together, the results underscore the urgent need to integrate trauma-informed mental health care, gender-affirming services, and violence prevention into HIV and public health programs for key populations living at the intersection of stigma, vulnerability, and structural disadvantage.

Violence is rarely a one-time event for India's transgender women and men who have sex with men (MSM). Instead, it layers-across time, space, and identity-compounding until what's left is a life shaped by trauma and exclusion. The mental health toll is severe, but often ignored.

This study set out to examine how multiple forms of victimization-polyvictimization-intersect with sex work and contribute to depressive symptoms among transgender women and MSM in India. The aim was not only to document prevalence, but to understand how overlapping vulnerabilities deepen disparities in mental health.

Drawing on data from a cross-sectional epidemiological study, the research covered:

- 1,366 transgender women across three states
- 2,182 MSM across five states

Using multivariate regression models, the study explored how polyvictimization (experiencing multiple types of abuse) and sex work status related to depression.

The results are both painful and predictable. The intersection of identity-based stigma, economic precarity, and structural violence produces a compounded risk for poor mental health-one that cannot be addressed through HIV risk reduction alone.

The study urges national HIV programs to move beyond narrow biomedical models and integrate:

- **Routine screening for violence and trauma**
- **Crisis management and safety planning**
- **Gender-affirming mental health services**
- **Support for transitioning and identity expression**
- **Targeted interventions for sex workers within these populations**

This isn't just about care. It's about justice.

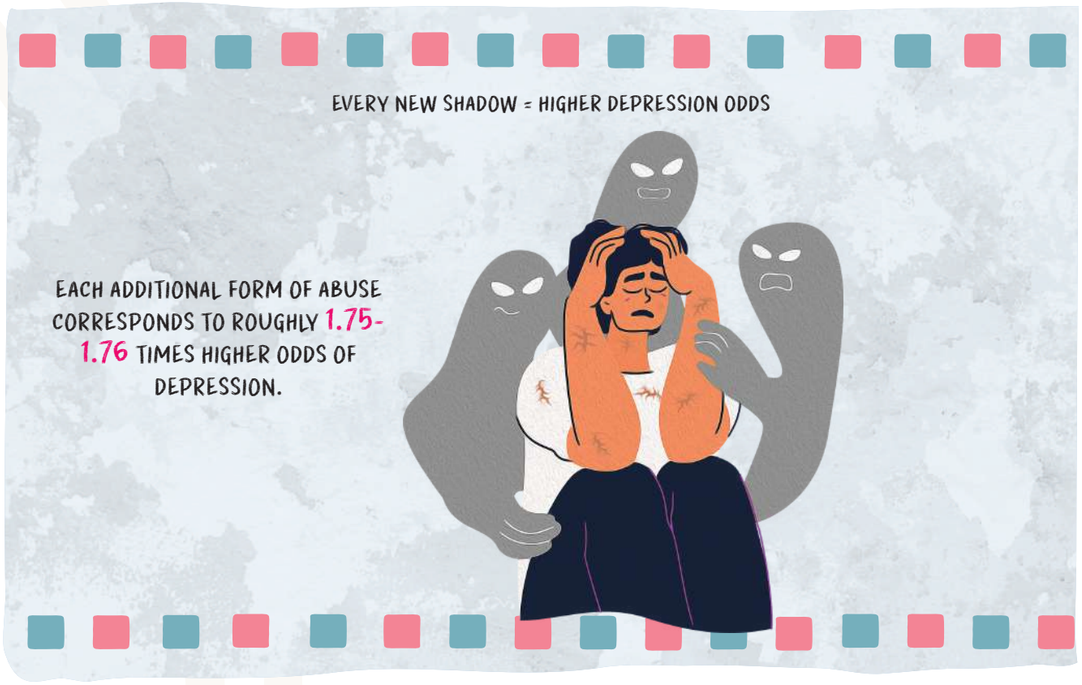
Because no one should have to navigate layers of harm just to exist.

And no health program is complete until it also heals what violence breaks.

Here is one powerful takeaway

Polyvictimization Predicts Depression

- Each additional form of abuse reported was associated with a significant increase in the odds of depressive symptoms, underscoring the cumulative toll of trauma.
- Among transgender women, each additional type of victimization was associated with a **75% increase in the odds of reporting depressive symptoms** (OR = 1.75).
- Among MSM (men who have sex with men), each additional victimization type was linked to a **76% increase in the odds of depressive symptoms** (OR = 1.76).



Published in Journal of Interpersonal Violence and authored by researchers from the University of Southern California, Catalyst Management Services, and Swasti, The Health Catalyst

Citation

Srivastava, A., Davis, J. P., Patel, P., Daniel, E. E., Karkal, S., & Rice, E. (2021). Polyvictimization, Sex Work, and Depressive Symptoms Among Transgender Women and Men Who Have Sex With Men. Journal of Interpersonal Violence, 37(13-14), NP11089-NP11109. https://doi.org/10.1177/0886260521990840 (Original work published 2022)

Link to study

- https://journals.sagepub.com/doi/10.1177/0886260521990840
- DOI - https://doi.org/10.1177/0886260521990840

PATTERNS, NOT ASSUMPTIONS

Learning explainable interventions to mitigate HIV transmission in sex workers across five states in India

Did you know?

Financial literacy-rarely prioritized in HIV programs-emerged as the strongest predictor of consistent condom use among women in sex work.

This study used Bayesian network modeling and ensemble machine learning to identify the most influential drivers of condom use behavior among women in sex work across five Indian states.

Analyzing data from phase three of the Avahan program, the study found that financial literacy training was the single most powerful predictor of safe-sex practices-outperforming conventional behavioral or awareness-based indicators.

Having at least one financial investment (e.g., recurrent deposit, fixed deposit, or chit fund) increased the probability of condom use with clients by as much as 6%

The paper also noted other notable influences: depressive symptoms reduced the likelihood of a FSW buying a condom on her own by about 14%, and legal education and creation of a personalized financial plan increased the probability of HIV testing by 16% and 12% respectively

Model simulations showed that incorporating financial literacy into program design could significantly increase condom use, offering a data-driven pathway for HIV prevention.

By combining structure learning (which maps complex causal relationships) with predictive modeling, the study demonstrates the potential of explainable AI in refining and prioritizing community health interventions in resource-constrained settings.

For women in sex work, the risks of HIV aren't rooted solely in behavior-they are shaped by stigma, marginalization, and fractured access to care. While interventions like condom promotion and regular testing are widely known, the factors that truly influence behavior are far more complex-and less understood. The Avahan III program was designed with the hypothesis that financial literacy training can be the primary influence and predictor of condom use among female sex workers.

This study turns to data science and community expertise to uncover and prioritize the real drivers of condom use among female sex workers (FSWs) in India. By combining machine learning with insights from grassroots programs like Avahan, the research goes beyond assumption to ask: What actually works, and why?

Drawing on field data across five Indian states, the study used a two-pronged approach:

- Structure learning to discover hidden relationships in the data
- Discriminative modeling using machine learning algorithms XGBoost and Random Forest to predict condom use behavior

The most influential, non-obvious factor driving condom use behavior was financial literacy training

These findings confirm that economic empowerment, especially through financial literacy, significantly boosts self-efficacy, condom access, and consistent use. While prior Avahan phases had shown that community organization (CO) engagement improved confidence and procurement behaviors, this study brings granular, predictive precision to the strategy table.

What makes this work stand out is its transparency. In a field as sensitive as sex work and HIV prevention, explainable models-grounded in community validation-are essential. They do more than just predict behavior; they guide program design, optimize resource allocation, and invite buy-in from both policymakers and peer leaders.

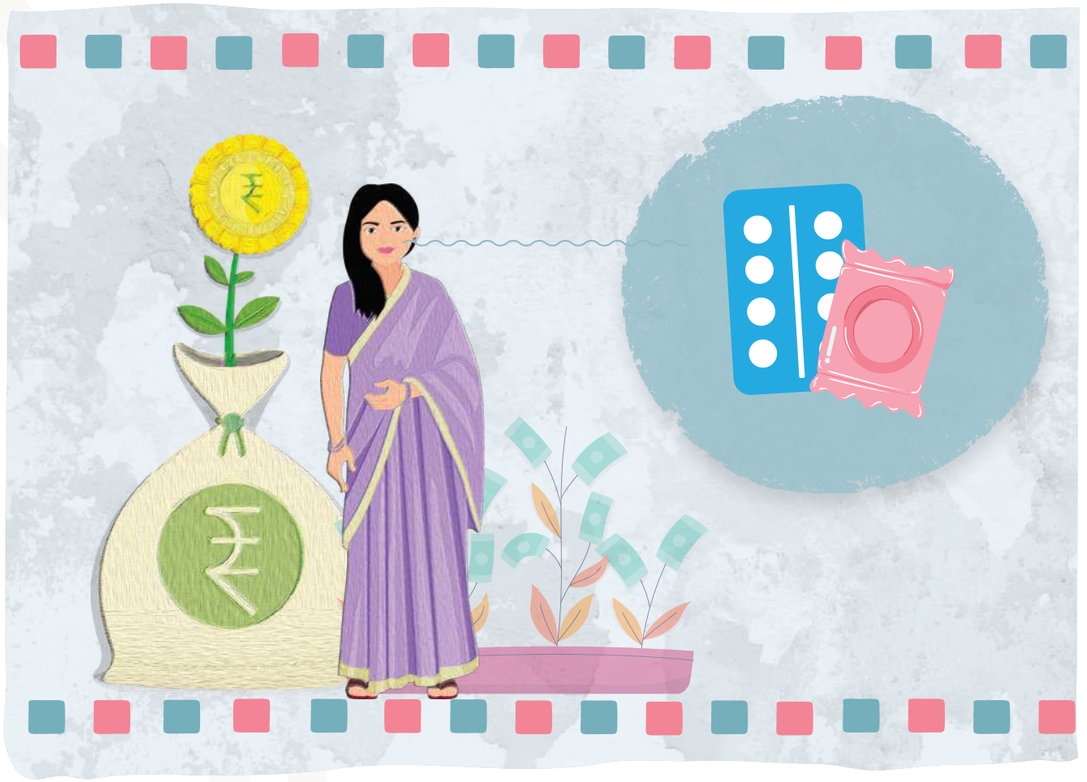
The study's insights have already led to a real-world field trial, testing how financial literacy can serve as a backbone to HIV prevention efforts.

Because when it comes to public health, pattern recognition isn't just predictive-it's protective.

And the best way to safeguard lives is to move from guesswork to grounded, explainable action.

Here is one powerful takeaway

Financial literacy drives safer sex practices: Among women in sex work in India, those with at least one financial investment (such as a savings deposit or chit fund) were 6% more likely to use condoms with clients.



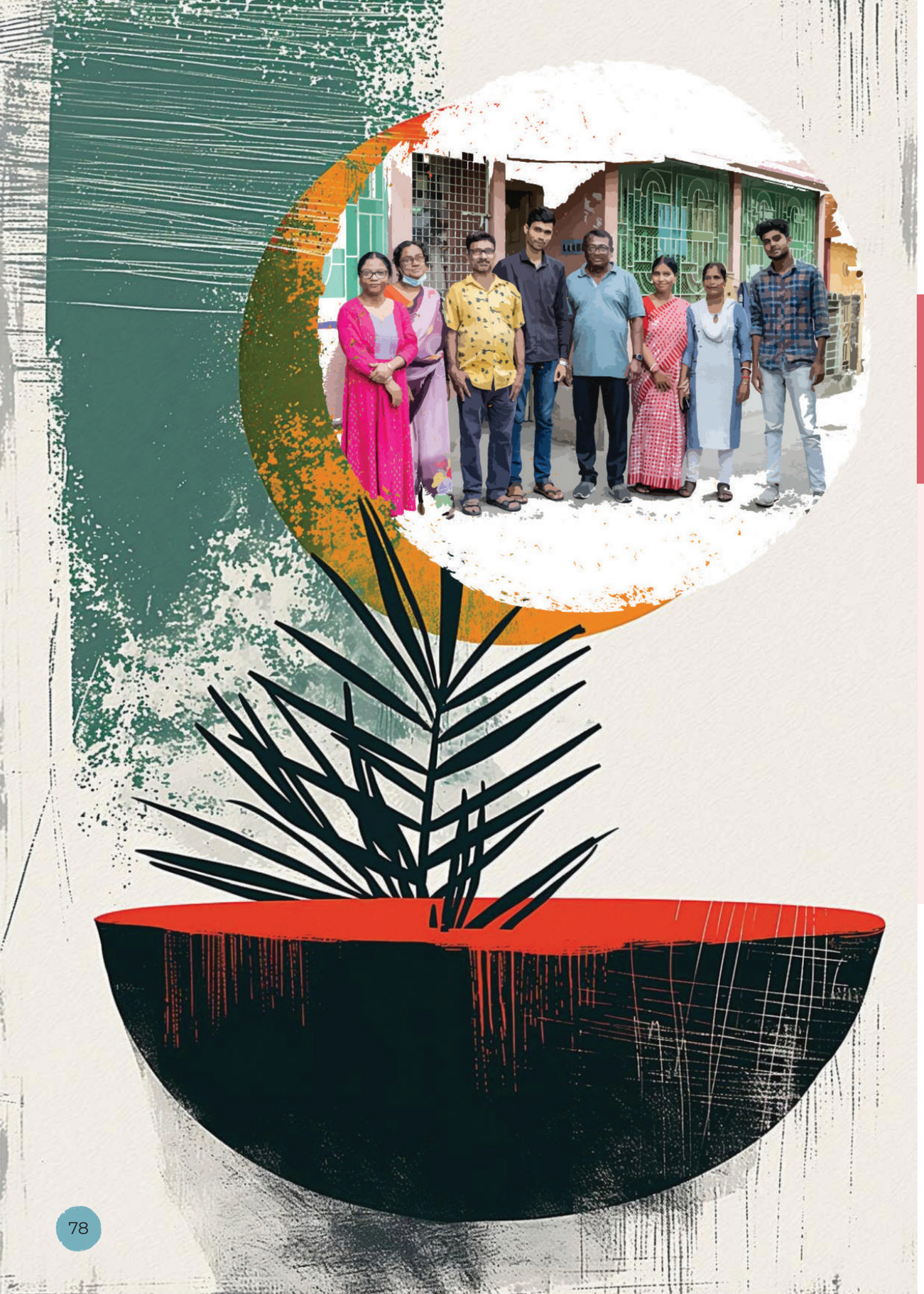
Published on arXiv, an open-access platform for early-stage research dissemination, this study was authored by researchers from the Indraprastha Institute of Information Technology (IIIT) Delhi, Catalyst Management Services, and Swasti, The Health Catalyst.

Citation

Awasthi, R., Patel, P., Joshi, V., Karkal, S. and Sethi, T. (2020) Learning Explainable Interventions to Mitigate HIV Transmission in Sex Workers Across Five States in India. arXiv. 10.48550/arXiv.2012.01930

Link to study

- https://arxiv.org/abs/2012.01930
- https://doi.org/10.48550/arXiv.2012.01930



A PEEK AT PERFORMANCE

A study on performance management for human resource development of health systems in India

Did you know?

When performance management in health systems goes beyond checklists-building role clarity, feedback loops, and career pathways while aligning with policy realities-it not only improves employee satisfaction but also strengthens health outcomes and long-term system resilience.

This multi-sectoral study analyzed performance management (PM) systems across public, private, and NGO-managed healthcare facilities in India.

Covering institutions like the Department of Health & Family Welfare (Madhya Pradesh and Kerala), Indian Railways, Chirayu Medical College, Jawaharlal Nehru Cancer Hospital, Aravind Eye Care, and Karuna Trust, the study assessed PM practices including feedback systems, goal setting, incentives, and supervisory structures.

It found that effective PM improved accountability, communication, staff motivation, and service delivery outcomes, but was hindered by inadequate resourcing, lack of formal training, and unclear role expectations.

The study offers actionable recommendations to strengthen human resource systems across India's diverse health ecosystem.

Behind every health outcome is a human decision, a human skill, and a human system. And yet, in India's healthcare sector, performance management (PM)-the very tool meant to nurture and strengthen those systems-remains underutilized and unevenly implemented across public, private, and NGO-run institutions.

This study, conducted under the People for Health (P4H) initiative by Swasti in collaboration with the Public Health Foundation of India (PHFI), explores how PM systems are designed and experienced across government, private, and non-profit healthcare institutions. The goal: to uncover what works, where gaps exist, and how human resources (HR) in healthcare can be supported to thrive.

The research gathered insights from:

- Government health departments in Madhya Pradesh, Kerala, and the Indian Railways
- Private hospitals including Chirayu Medical College, Jawaharlal Nehru Cancer Hospital, and Kerala Institute of Medical Sciences
- NGO-managed organizations like Aravind Eye Care and Karuna Trust

What emerges is a nuanced, cross-sectoral view of how performance management plays out on the ground-and what it takes to get it right.

The report outlines clear, measurable advantages when PM systems are designed with intention:

- Organizations gain improved performance, higher employee retention, and greater transparency
- Managers benefit from clarity of expectations, more strategic oversight, and better team alignment
- Employees receive structured feedback, growth opportunities, and a stronger sense of purpose and self-assessment

When aligned with HR strategy, these systems drive not only individual performance but also institutional effectiveness-translating to better service delivery across the health system.

- The study mapped how PM systems function in each setting, analyzing:
- Information flow and communication frequency
- Assessment methods-individual and team-based
- Use of formal job descriptions and role clarity
- Feedback practices and their links to career progression, incentives, and recognition

Across the board, the most successful systems were adaptive, collaborative, and supported by training, mentorship, and clear accountability pathways.

Even with the best intentions, organizations face several constraints:

- Limited resources and HR capacity
- Lack of PM training among supervisors
- Low autonomy in decision-making and incentives

To counter these, some institutions introduced supportive strategies such as:

- Strengthened communication channels
- Balanced incentive frameworks
- Continuous supervision and coaching
- Flexible adaptation of PM systems to local needs

This study positions performance management not as a bureaucratic exercise, but as a strategic lever for public health reform. When HR systems are nurtured-when people are supported to grow-the ripple effect is felt throughout the system.

Healthcare doesn't just need more workers.

It needs systems that grow people.

Published by Swasti Health Resource Centre in collaboration with the Public Health Foundation of India (PHFI) under the People for Health (P4H) project and funded by the European Union

Citation

Swasti, The Health Catalyst & Public Health Foundation of India. (2022). Performance Management for Human Resource Development: Cross-sector insights from India's healthcare sector. https://swasti-prod.s3.ap-south-1.amazonaws.com/Performance-Management-for-Human-Resource-Development-1.pdf

Link to study

- https://swasti-prod.s3.ap-south-1.amazonaws.com/Performance-Management-for-Human-Resource-Development-1.pdf

END NOTE:
BEYOND THE PAGES, THE PEOPLE

If you've read every chapter in this collection, thank you. You've not just read data. You've walked beside women in factories reclaiming their agency, peer educators changing the rhythm of STI detection, mothers demanding safer births, and transgender persons still knocking at doors too slow to open.

Each study was designed to answer a question-but what it really did was make the questioner accountable to the people behind the data.

You've seen how wastewater became a public health oracle, sending early warning signals when clinical surveillance lagged behind. How fear, not ignorance, drives vaccine hesitancy in India's most vulnerable communities. How financial literacy quietly but powerfully influences condom use in sex workers across five states, and how community ownership is not a footnote in public health but the headline.

You've read about the Manyata programme, where adherence to clinical standards jumped from 29% to 93% in private facilities, transforming maternal care in some of India's most underserved regions. About the COVID-era mental health burdens faced by healthcare workers, and their extraordinary, improvised acts of resilience. And about performance management systems that, when done well, don't just increase efficiency-they improve self-worth.

You've followed frontline outreach across peer-led HIV testing, where comfort, trust, and dignity determined uptake, and witnessed the layered pain of polyvictimization experienced by transgender persons and MSM, where depression is not a mental illness alone but a social response.

You've entered garment factories where women, once seen as just labour, became leaders. You saw the math-yes-but more importantly, you saw the movement.

Across this catalogue, a few things repeat:

- That community-led doesn't mean community-burdened. It means community-informed, community-owned, and community-celebrated.
- That gender isn't a demographic box-it's a pressure point, a possibility, a pattern.
- That universal health coverage isn't a utopia. It's a design challenge, being mapped with care through citizen-led theory of change roadmaps.

You saw opportunities-in PHC governance, financing, and digital health equity. You saw certification voids that limit primary healthcare capacity. You saw how even sexual and reproductive health among PLHIV fell through the cracks during COVID. And you saw the hard truth that gender-based violence services, while urgent, remain fragmented, reactive, and grossly under-resourced.

But you also saw what's possible. In Pragati's scale and persistence. In the trans community's fight for dignity. In the hidden strength of peer educators, whose outreach shortened time to STI clinics by nearly 70%.

So maybe the question now isn't "What did we find?"

Maybe it's "What will we do with what we found?"

Because the people in these pages? They're still showing up. Still fighting. Still hoping.

Let's not leave them behind.

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