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Rethinking communication for maternal and child health
Lessons from the Shaping Demand and Practices project in Bihar, northern India

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The village gathers to watch street theatre on birth preparedness.
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Between 2011 and 2015, BBC Media Action and its partners implemented an ambitious project to improve family health in Bihar, one of the poorest and most populous states in India. Called Shaping Demand and Practices (SDP), the initiative formed part of the larger Ananya programme, a collaboration between the Bill & Melinda Gates Foundation, the government of Bihar and other partners.

SDP’s aim was to tackle the appallingly high maternal, newborn and child mortality rates in Bihar, using several different forms of communication to help shape health behaviour and social norms. While the project originally targeted eight districts, with a mandate to scale up successful communication solutions to the rest of the state, there was also a clear intention to see the project as a “laboratory” in which to test approaches that could be extended across India’s vast and diverse geography. Indeed, the SDP project succeeded in designing certain health communication tools that, although initially rooted in in-depth research into of family life in Bihari villages, are now also being rolled out by the government of India to encourage healthy behaviour across the entire nation.

This briefing tells the story of the SDP project and its impact. It documents a particular approach to project design and implementation that proved effective both in achieving change in the highly challenging environment of Bihar and in developing health communication solutions that could be scaled up nationally. The briefing finds that there were five intertwined success factors underpinning the project, namely:

- Employing fresh thinking about potential communication platforms to ensure that all possible opportunities for audience interaction were exploited
- Using a human-centred design approach that involved immersive research into people’s lives and the testing and refinement of communication solutions to ensure impact
- Maintaining a rigorous focus on the “art and craft” of designing health communication outputs, drawing on creativity and experiences drawn from working with mass media to maximise audience engagement
- Devising new tools and approaches to reinvigorate the role that frontline health workers play in driving population-level behaviour change
- Commitment to partnerships with state and national government, rooted in the co-design of project outputs, to ensure that the results were sustained after the lifetime of the project
I. Time for change

A balance sheet for the state of Bihar drawn up in 2010 might have shown more negatives than positives. Bihar was one of the most populous states in India and one of the least developed. Abject poverty, illiteracy, poor infrastructure, caste-based politics and poor governance for over four decades had outweighed the potential benefits of its rich history, natural reserves and fertile soil. Access to information in the state was limited, with data suggesting that, in rural areas, TV and radio penetration stood at 26% and 33% of the adult population respectively.

Health in Bihar

Data from 2011 indicated that Bihar had some of the worst maternal, neonatal and infant mortality rates in India and the world. The maternal mortality ratio was 305 per 100,000 births and the infant mortality rate stood at 55 per 1,000 live births. The percentage of babies dying on the day of their birth stood at 16%, and as many as 42% of Bihar’s 15 million children under the age of five were underweight. Bihar’s mothers were bearing more children than those in any other part of the country. Awareness around critical family health topics was low, and issues surrounding caste, son preference and the limited empowerment of women were all contributing to the poor health of Bihar’s population. In addition, the health sector experienced major infrastructure and staffing deficiencies.
A changing state

But Bihar was beginning to change. Economic growth, better roads, improved law and order, education for girls and a focus on better governance were starting to set the state out as an example for the rest of India. Improvements were being seen in health too. State health expenditure was growing by 15–20% annually, and increasing numbers of health workers, including doctors, auxiliary nurse midwives (ANMs), Anganwadi* workers (AWWs) and staff nurses, were being recruited. Frontline health workers specifically assigned to every village (accredited social health activists or ASHAs) were starting to play a role in improving community health.

In addition, the promotion of the national government’s conditional cash transfer scheme, Janani Suraksha Yojana (JSY) (Mother Security Scheme), had seen the share of births taking place in government medical institutions more than double between 2005 and 2009 to just under half of all deliveries.7 And by 2010, two-thirds of children aged between 12 and 23 months had been fully immunised, double the figure in 2006.8 A new aspiration and resolve within the Bihar state government was creating conducive conditions for getting a grip on the great needs that remained.

Ananya: a unique ambition

Against this backdrop, the Bill & Melinda Gates Foundation entered into a five-year partnership with the government of Bihar in 2010 to help accelerate progress towards the

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* An Anganwadi is a government sponsored child-care and mother-care centre in India.
state’s ambitious health goals. Through this partnership called *Ananya* (Hindi for “unique”), the foundation agreed to support the state in maternal, neonatal and child health, nutrition, family planning, immunisation, infectious disease management, water, sanitation and hygiene. This included plans for a major effort around the critical 1,000-day period between the start of a mother’s pregnancy and a child’s second birthday.

The *Ananya* partnership included a number of investments, including:

- The Integrated Family Health Initiative (IFHI) led by CARE International (CARE), which aimed to increase the availability, quality and coverage of key cost-effective family health interventions

- The SDP grant led by BBC Media Action, with a mandate to work with communication to generate demand for health services and to strengthen health-seeking behaviours

- A grant to Project Concern International, to create and strengthen community-based women’s groups that could drive demand for better health services

Each *Ananya* grantee was initially to implement work in eight “innovation districts” (with a combined population of 25 million people), scaling up to the remaining 30 districts of Bihar from 2014. In parallel, the Gates Foundation began providing health system strengthening support to the government of Bihar through its Reproductive, Maternal, Newborn, Child and Adolescent Health Unit (the State RMNCH+A Unit or SRU). This work aimed to support the development of health strategy and policy and state-wide scale-up of proven approaches to improving maternal and child health. It was supported by similar work at district and block level carried out by CARE India.
2. A new health communication approach for Bihar

Strengthening priority health behaviours

The mandate for the SDP grant was to stimulate demand for health services and strengthen the practice of 11 “priority health behaviours” proven to save lives across the critical 1,000 days for maternal and child health (see box below).

Priority health behaviours

1. Birth preparedness and institutional delivery
2. Birth preparedness and safe delivery at home with a plan for seeking care in emergencies
3. Iron and folic acid (IFA) supplementation in pregnancy
4. Preventive postnatal care services including clean cord care, immediate breastfeeding and early follow-up of mother and child
5. Skin-to-skin care (STSC)/Kangaroo Mother Care (KMC) for newborns
6. Exclusive breastfeeding for six months
7. Age-appropriate complementary feeding for children between six and 23 months
8. Postpartum family planning among women who want to space and limit future births
9. Complete immunisation
10. Handwashing with soap at three critical stages:
    a) after using toilet
    b) after cleaning a baby’s bottom
    c) before handling food
11. Prevention and management of diarrhoea and pneumonia

Community-wide action

To effect change, it was important to engage various types of people in Bihar. SDP aimed to help married women become more empowered to take better care of themselves and their children, but also to encourage men, who control household spending, to become more informed and take greater responsibility for the health of their families. Situation analysis also suggested that mothers-in-law – key decision-makers in the family and traditional bearers of knowledge about maternal and child health – need to be actively engaged and encouraged to make the healthiest possible choices for their families, supporting their sons and daughters-in-law to do the same, even if this meant new ways of doing things. Research indicated that frontline health workers (FLWs) needed support and more effective training to help them become better motivated and respected, and more able to persuade the families of Bihar to adopt healthy practices.

A 360-degree communication strategy

With these goals and audiences in mind, the strategy for SDP was informed by a model of change that identifies a range of influences on health behaviour.10 These include factors such as knowledge, attitudes and self-efficacy (people’s confidence in their ability to practise a health behaviour), which are internal to a family. Also important are social norms (what is
seen to be acceptable in society), health service access and quality, and socio-economic factors, which all originate outside the family unit. The project was also shaped by the hypothesis that encouraging “simple, doable actions” related to health (like saving money for transport to hospital or having a conversation with one’s husband) would build confidence and, over time, encourage people to take up behaviours that may appear more difficult to achieve initially (like giving birth in a government hospital or using a modern method of contraception).

Drawing on evidence that multi-pronged communication approaches – where different channels reinforce each other and ensure repeated exposure to new ideas – can create a sense of normality around new behaviours, an intensive 360-degree communication strategy was developed for SDP. It emphasised the importance of “surrounding” whole communities – as well as specific target audiences – with multiple yet complementary channels of communication. It also recognised that different types of communication elicit different psychological responses. For instance, radio dramas may help in shaping perceptions about social norms, while street theatre allows contextualisation, helping people to consider what a “new” practice looks like in their own environment. The strategy also reflected the relatively low media reach in Bihar (see section 1) and, thus, the critical importance of interpersonal communication channels in the state.

Figure 3 on page 12 depicts the activities delivered by SDP and demonstrates how the project reached families and communities through many different kinds of communication.
A TV advertising campaign on birth spacing, broadcast with state and national government funds. Supported by radio, outdoor advertising and rural activation. Watched by 4.16 million people at least three times.9

A TV advertising campaign on birth preparedness, supported by rural activation, initially in eight districts. The State Health Bureau paid to scale up the rural activation to 30 additional districts.10 Watched by 8.3 million people in Bihar at least three times.10

A TV advertising campaign aired by the government of Bihar and supported by rural activation.

Khirk Mehandiwi (Mehendi: Opens a Window)
A 37-part radio series broadcast by All India Radio network in Bihar. Reach low among target female audiences, with “appointment” radio listening simply non-existent. Radio broadcasting was curtailed by the project.
Khirk Mehandiwi repurposed for listening and discussion in group sessions. Clubs established in nearly 56,000 self-help groups run by the Women’s Development Corporation in Bihar and in 81 boarding schools for girls from marginalised groups (Kasturba Gandhi Balika Vidyalayas) across four districts.

Figure 3 Shaping Demand and Practices project activities
Transition to government

The delivery of this comprehensive communication strategy was underpinned by support designed to strengthen the government of Bihar’s capacity to work effectively with communication to improve health. From the early days of the project, an emphasis was placed on transitioning SDP communication outputs and activities to the government of Bihar and other partners, to foster sustainability.

By the end of 2015, this process of transition was well underway. Communication training for FLWs – initially implemented by BBC Media Action and Pathfinder International – was handed over to more than 600 supervisors employed by the government of Bihar. This process enhanced government capacity to provide communication mentoring and support without depending on external trainers or resources. From 2014, the State Health Society Bihar (SHSB) began to use its own budgets to print additional Mobile Kunji decks for use by ASHAs across the state. In 2015, the government’s social welfare programme (the Integrated Child Development Service, ICDS) printed new Mobile Kunji cards on nutrition and infant weight to add to the decks used by its AWWs in the Ananya focus districts. In 2016 it budgeted to scale up the Mobile Kunji service to AWWs across the entire state.

In 2015 the state government also scaled up the SDP interpersonal communication toolkit on diarrhoea management to over 500 primary healthcare centres and all 38 district hospitals in Bihar. Discussions are also underway to transition the production of additional interpersonal communication tools to the SHSB and ICDS, while ICDS is considering funding the scale-up of GupShup Potli to 1,700 VHSND sites across the state.

3. The impact of Shaping Demand and Practices

A backdrop of declining mortality

The overall health of women and children in Bihar improved substantially between 2010 and 2015, with infant, under-five and maternal mortality rates all declining. Across the state, this change was likely driven by continued improvements in the proportion of women delivering their babies in health facilities, nearly 64% in 2015/16 compared with around 48% in 2010/11. The proportion of children exclusively breastfed for at least six months also significantly increased, from around 28% in 2010/11 to around 53% in 2015/16.
However, while there were some improvements in healthcare, data also suggests that the practice of other behaviours important for maternal and child health – such as attending antenatal care in the first trimester of pregnancy, full immunisation of young children, the provision of oral rehydration salts to children with diarrhoea, and the use of modern family planning methods – declined somewhat in the state over the same period.  

The impact of Ananya

So how did districts where the full Ananya intervention was implemented compare with the state overall? A study carried out by Mathematica Policy Research that drew on data collected in early 2012 and again in early 2014 suggests that Ananya led to a number of improvements in important health behaviours. It found that, during that period, Ananya had had a positive impact on the number of FLW interactions with women during pregnancy but not on the number of home visits made immediately after delivery. In addition, the quality of these FLW interactions improved in Ananya focus districts, with FLW visits lasting longer and more advice being provided on critical health topics.

When it comes to impact on health behaviours, the study found that Ananya was associated with:

- Higher levels of birth preparedness practices, such as saving money, keeping important phone numbers handy and arranging transport to a health facility
- A positive impact on some newborn care practices (like clean umbilical cord and skin-to-skin care) but not on others (like levels of immediate breastfeeding or delayed bathing after birth)
- Significant impacts on some complementary feeding practices (like the introduction of solid or semi-solid food at six months). However, many children were still not receiving appropriate nutrition
- An increase in the use of modern contraceptive methods
- No significant improvement in vaccination rates

Evaluating the role of communication

Within this context, data suggests that exposure to the interventions delivered by the SDP project was associated with improved health worker performance and healthy behaviour within families.

Mobile Kunji

Of all the SDP interventions, Mobile Kunji has received the most research into its impact. The Mathematica midline survey cited above found that 39% of women who had received a home visit in the previous six months had been exposed to the Mobile Kunji service. It found that exposure to Mobile Kunji in the previous six months was positively, and significantly, correlated with delivery preparation and complementary feeding, two of the
key behaviours measured. Specifically, those exposed to Mobile Kunji were almost twice as likely to prepare appropriately for childbirth and 17% more likely to feed their children solid or semi-solid foods at the right age. However, increases seen in the delivery of babies at health facilities, receipt of vaccinations, and use of modern methods of contraception were small and not statistically significant.\

Analysis of data collected by CARE India between October 2012 and October 2013 also suggests that exposure to Mobile Kunji was associated with healthy practices across the range of behavioural outcomes for which information was collected. Figure 4 outlines some of the different health behaviours among mothers with 6–8-month-old babies that had been exposed to the Mobile Kunji cards and audio service.

- Over three times more likely to have provided an age-appropriate meal frequency*
- Nearly four times more likely to have provided an age-appropriate quantity of nutrition to their children*
- Nearly twice as likely to adopt contraception to achieve a space between pregnancies compared with those not exposed
- Over three times more likely to adopt contraception to limit the size of their family compared with those not exposed
- 1.6 times more likely to adopt contraception
- Nearly four times more likely to wash their hands with soap before feeding their child

* in the 24 hours preceding the survey

Figure 4 Impact of Mobile Kunji on health behaviour of mothers with babies
A separate quantitative evaluation conducted by BBC Media Action with a larger population showed that, where Mobile Kunji is used by an FLW during interactions with families, the quality of the engagement is significantly better. Conversations last almost twice as long on average, beneficiaries are significantly more likely to ask questions of FLWs and significantly more likely to discuss the conversations they had with the FLWs with other people such as their spouses, mothers-in-law and other family members.

**Figure 5** Impact of Mobile Kunji (MK) on quality of frontline health worker interactions

FLWs reported that they were more confident in their work when they used Mobile Kunji, that it improved their knowledge, and that families accepted the information they provided much more quickly when they used the tool.

The same study also showed that Mobile Kunji use was significantly correlated with increases in knowledge and self-efficacy, and changes in attitudes and social norms, across multiple behaviours. Two particularly critical findings were subject to further statistical analysis to try to rule out other explanations for any results seen. These are: that women exposed to birth preparedness content through Mobile Kunji were nearly three times more likely to save their FLW’s phone number compared with those not exposed, and that women exposed to complementary feeding content through Mobile Kunji were almost
twice as likely to have fed their child at least one recommended food item in the last 24 hours, compared with those not exposed.35

The BBC Media Action study found that mothers exposed to family planning content through Mobile Kunji had higher awareness of the recommended three-year gap to leave between births (68% compared with 59%) and slightly better knowledge of spacing methods (71% compared with 67% named at least two) than those not exposed. Those exposed were also more aware of the right time to start complementary feeding than those not exposed (62% versus 49%).36

**Other Shaping Demand and Practices interventions**

Other SDP interventions have also been evaluated, albeit to a lesser extent than Mobile Kunji. Exposure to SDP interventions (TV advertisements, radio programmes, street theatre and audio-visual vans) was again associated with healthy behaviour among mothers with children between six and eight months old, as shown in figure 6.37

**Figure 6** Impact of other Shaping Demand and Practices interventions on health behaviour of mothers with children between six and eight months old

A separate study conducted later by Mathematica Policy Research found that about 12% of women in focus districts had been exposed to the SDP project’s TV advertisements. It found that those exposed to the *Chaar Gaanth* TV advertisement were significantly more likely to adopt recommended birth-preparedness practices that those not exposed (50% compared with 32%).39
Scaling up

As well as directly impacting FLW performance and family health practices in Bihar, as the data above attests, the SDP project has proven to be a laboratory for health communication solutions that are now being scaled up across other India states and nationally. The government of Uttar Pradesh has adopted Mobile Kunji, Mobile Academy and GupShup Potli, along with the public service advertisements, rolling them out across the whole state. The services have also been taken to Odisha, with support from the government of Odisha and the UK Department for International Development.

Moreover, with the support of the national Ministry of Health and Family Welfare, and in partnership with a consortium of funders, including the Gates Foundation, USAID and the Barr Foundation, Mobile Academy and Kilkari were launched by the Union Minister of Health and Family Welfare, on a national platform in January 2016, with services to gradually scale up across the country. At this scale, Kilkari will have the potential to reach 9.5 million women with critical health information every year. The service already has 2 million subscribers. BBC Media Action believes that this is the first national adoption of mHealth services ever seen globally.

Other SDP outputs also went on to have a life outside Bihar. The radio show Khirki Mehendi wali was recreated for Madhya Pradesh and rolled out to over 1,700 residential schools for girls from marginalised groups, in partnership with the Department of Education. GupShup Potli too has been recreated for Madhya Pradesh, and is currently being piloted in Uttar Pradesh. The state government for Odisha has expressed an interest in adopting the interpersonal communication toolkit on diarrhoea, while the Ek Teen Do and Four Knots TV advertisements originally created for Bihar have been adopted by the central National Rural Health Mission and broadcast nationally.
4. Lessons in health communication

This section documents the particular approach to project design and implementation used in SDP. This proved effective both in achieving change in the highly challenging environment of Bihar and in developing health communication solutions that could be scaled nationally. Drawing on reflections from the project team, insights from research data and an interview with the project’s grant manager at the Bill & Melinda Gates Foundation, this briefing finds that there were five intertwined success factors underpinning the project. Namely:

• Employing fresh thinking about potential communication platforms to ensure that all possible opportunities for audience interaction were exploited

• Using a human-centred design approach that involved immersive research into people’s lives and the testing and refinement of communication solutions to ensure impact

• Maintaining a rigorous focus on the “art and craft” of designing health communication outputs, drawing on creativity and experiences drawn from working with mass media to maximise audience engagement

• Devising new tools and approaches to reinvigorate the role that FLWs play in driving population-level behaviour change

• Commitment to partnerships with state and national government, rooted in the co-design of project outputs, to ensure that the results were sustained after the lifetime of the project

Each of these factors is explored in detail here.

Challenges and opportunities for 360-degree communication

As described in section 2 above, the SDP project aimed to deliver an intensive 360-degree communication strategy “surrounding” whole communities – as well as specific target audiences – with multiple yet complementary channels of communication, ensuring repeated exposure to new ideas. Establishing mass, repeat exposure proved a challenge in Bihar, where access to media and other traditional communication channels is limited, as the data attests (see section 1). However, the project partners worked hard to overcome this, revealing new communication opportunities that might otherwise have remained hidden.

The first major challenge was in working with mass media to bring about health-related behaviour change at scale in Bihar. At the time of developing the SDP proposal, secondary data suggested that TV and radio penetration stood at 26% and 33% of the adult population, respectively, in rural areas.[^40] However, information gathered by BBC Media Action in 2011 suggested that mass media reach for women was far lower than this, with 18% of women of reproductive age watching TV and only 12% listening to radio.[^41] These low levels of access were compounded by challenges in leveraging Bihar state government budgets to support the project’s broadcasting plans. Drawing on government funds in this way had been central to past BBC Media Action projects in India, and the original SDP proposal assumed that the same approach would be possible in Bihar.
Under SDP, BBC Media Action worked with Madison World, an established Indian media agency, to develop detailed media plans for the public service advertising component of the project. Plans were based on calculations about the most effective media channels to use to reach target audiences a repeated number of times, ensuring optimal exposure. These plans needed to be supported by the different government departments that hold the budgets for, and execute, health communication campaigns. In Bihar, this was — respectively — the State Health Society Bihar (SHSB) and the Information and Public Relations Department (IPRD). Within SDP, IPRD did not execute the media plans developed for the project’s first advertising campaign (Ek Teen Do) effectively, despite appropriate budgets being agreed by the SHSB. As a result, the advertisement was broadcast on a single channel for one week rather than on multiple channels over six weeks as planned, meaning that reach with audiences was not optimised.

Having secured national government funds to enable the wider broadcast of the Ek Teen Do, and later Chaar Gaanth, campaigns, the Mathematica midline study found that about 12% of women (i.e. about two-thirds of those who had access to TV) in focus districts at midline reported having watched the Chaar Gaanth birth preparedness TV advertisement in the previous year. Although the advertisement reached a good proportion of people who did have access to TV, the failure to ensure the effective execution of media plans by the state government and the fact that other communication channels were more successful in reaching a greater proportion of the target audience dissuaded the Gates Foundation and BBC Media Action from investing in additional mass media advertising within the project, as originally planned.

This experience had three main implications for the SDP project, each of which suggests lessons for future health communication work in Bihar:

(i) The value of strategically leveraging alternative platforms for the dissemination of mass media content to achieve cost-effectiveness

(ii) The importance of placing even greater emphasis than originally planned on interpersonal communication, the pivotal role of FLWs and community outreach

(iii) The need to pursue a multi-pronged communication approach to ensure maximum reach and exposure, despite the limited reach of some individual platforms

Accordingly, the SDP project team was innovative in exploiting opportunities to disseminate the project’s mass media outputs through non-traditional broadcast channels. The Khirki Mehendiwali programme was repurposed for listening and discussion in group sessions. The programme was regularly played to the members of nearly 56,000 self-help groups run by the Women’s Development Corporation in Bihar and in 81 boarding schools for girls from marginalised groups across four districts in the state, maximising its potential impact.

TV advertisements originally created for broadcast formed the centrepiece of rural activation campaigns on birth spacing, birth preparedness and complementary feeding. The advertisements were played to rural audiences and provided the creative collateral for other activities such as games and quizzes. These rural activation efforts reached around
800,000 people in the state. It is recommended that health communication interventions actively pursue similar approaches to extend the life of outputs originally developed for mass media broadcast.

In addition, the project placed increasing emphasis on community engagement and interpersonal communication, in particular on the importance of FLWs as the critical interface with women of reproductive age. Great efforts were put into training FLWs in communication skills and in developing tools to enable them to carry out their work more effectively. The high take-up for the Mobile Academy training course and the high usage rates for the Mobile Kunji service noted in figure 3 demonstrate their appeal to health workers.

The impact of Mobile Kunji on both health worker performance and health behaviours among the population is also evident from the impact data collated in section 3. Too often, health worker communication skills are taken as a given and health workers are expected to work with poor, outdated communication tools like flip charts and perishable leaflets. SDP reveals the value of taking a different approach – a mobile phone based approach that is scalable, with the potential to transform performance across an entire state.
As well as developing tools to improve FLW communication, the project also devised strategies to maximise the overall amount of communication between FLWs and their clients. The SDP project had originally conceived home visits as the primary window for contact between FLWs and their clients. However, the intense focus on FLWs as a key communication channel led to an initiative to try to make more of “out-of-home contacts”, for instance at VHSNDs, although this was not part of the original project strategy. In Bihar, VHSNDs occur in every village each month but they were being used predominantly to deliver vaccinations and some antenatal care. The idea of reinventing these occasions as health communication “hotspots” where women can learn about a wider range of health issues and see FLWs demonstrate new ideas is showing great promise. In order to support this approach, the SDP project developed “disruptive” communication aids to be used by FLWs.

These tools drew on the concept of vivid demonstration familiar in advertising, which recognises the importance of actively capturing the audience’s attention in order to create engagement and change behaviour. The tools were created using bright colours and illustrations, and deliberately stand out from the type of health communication materials that audiences might have seen before. As described above, these interactive tools are beginning to turn the VHSND from a simple service delivery point to an engaging interface between people and the health system.

**A doll to explain diarrhoea**

This “diarrhoea doll” designed by BBC Media Action aims to bring alive medical facts through demonstration, recognising that dehydration is a problem not understood by families in Bihar.

The plastic doll is filled up with water by a health worker then water is released through a plug in the doll, representing a baby’s bottom. As water pours out of the doll it shrivels up, demonstrating the dehydration caused by diarrhoea.

The health worker then refills the doll with oral rehydration solution, showing the effects of dehydration being reversed. Demonstrations using the doll create instant demand for life-saving oral rehydration solution and zinc supplementation, transforming these into “must-have, must-use” products.

Design decisions in developing the doll included the choice of materials, inlet-outlet methods, how to control the rate of fluid flow, the shape, packaging, portability and how this would all affect the way that the health worker demonstration looked to audiences.
The idea of rethinking platforms for communication also applies to the way in which the SDP project handled rural activation to engage diverse communities in Bihar. Rural activation activities – where video vans or vans with speakers on board visit communities, distribute information and engage villagers using games and street theatre performances – are standard in health communication and often achieve real impact. However, the SDP project used these approaches in new and imaginative ways. For instance, it successfully experimented with a tablet-based app to take complementary feeding content and games to the courtyards of marginalised families on the periphery of villages. In this way, it reached marginalised groups who would not typically attend events held at the centre of their village. With street theatre, the SDP focus was on frequency of exposure, not just reach. This meant that 400,000 people were reached at least three times with performances, enabling the layering of information and repeated exposure to new ideas.

Characteristics of effective street theatre

- Repeat visits, bringing three different plays to the same communities over 18 months
- A cast of characters that stays constant across the three plays
- Creative scripts, using cliffhangers and other devices used in TV drama storylines
- Echoing and reinforcing the “big creative ideas” conveyed in the SDP TV advertising campaigns

Finally, the SDP project revealed that in a context as vast and poorly connected as Bihar, where literacy rates and access to media is low, a multi-pronged strategy is essential to reach diverse audiences at scale.

Applied design thinking in health communication

One of BBC Media Action’s core values is to ensure that audiences are at the heart of everything it does. To achieve this, the organisation has taken a human-centred approach to designing communication interventions to address challenges faced in developing and transitional countries for more than a decade.

Building on this experience, in the SDP project BBC Media Action adopted and adapted a five-part, human-centred design process originally developed by the Institute of Design at Stanford University.

The SDP experience suggests that applying an adapted version of Stanford’s five modes of design thinking in a consistent and structured way may contribute to the development of high-quality health communication interventions. This section explores how Stanford’s five modes of thinking (empathise, define, ideate, prototype, test)
were adapted and applied in the SDP project, as a case study in how design thinking processes can be applied to pressing public health challenges in low-income settings.

Immerse (empathise)
BBC Media Action begins work by immersing teams in an understanding of the people who will engage with a new project. Immersion covers context (social, cultural, economic, political) as well as what people know, think, feel and do, what they need, and who their key influencers are. Within the SDP project, the process of immersion took many forms including desk research, visits to project areas and technical health consultation.

In addition, a number of techniques were used to build empathy with audiences, ranging from ethnographic immersion – where researchers and other staff spend time with different groups, observing, listening and talking – to more traditional research involving in-depth interviews, focus group discussions and large quantitative studies based on door-to-door surveys. A key objective was to gain a greater understanding of the different barriers to change (such as social norms, religious traditions, economic priorities or class and caste) as well insights into catalysts for change.

Immersion trips to rural Bihar by project teams were particularly important for building an understanding of the experience of poor, rural women – from girlhood through to motherhood – and the corresponding changes in their levels of mobility and agency. The teams observed and engaged with different groups, from TV-viewing households in peri-urban areas to marginalised communities living in isolated properties. They talked to women about what they did, thought and felt about their families, what motivated them to have children, what their role was in making decisions about their pregnancies and the birth of their children, how they cared for their babies and who their key influences were. They also talked to their husbands, mothers-in-law and healthcare workers.
Teams gained a greater understanding of village power dynamics, where authority radiates from the centre, occupied by upper-caste Hindus and village leaders, out to marginalised *dalit* (oppressed, or lowest caste) communities occupying the fringes of settlements. They learned about the taboos associated with crossing religious and caste lines, where Hindu health workers rarely visited new and expectant Muslim mothers in their catchment areas and where lower-caste communities were excluded from the public health system. Access to different forms of communication was also explored. All of these insights shaped the communication strategies developed by SDP.

**Define**

After a period of immersion, and after the results of qualitative and quantitative landscaping studies had been made available, multidisciplinary project teams came together to define the challenges that they had observed, and to “mine” data for insights into how social and behaviour change could be achieved.

The first challenge identified was a lack of access to the primary group the project was trying to reach – new and expectant mothers. Any health communication intervention designed to reach these women would be mediated by key gatekeeper figures – husbands and mothers-in-law. A second challenge identified was younger women’s lack of agency. Mothers reported that they had to continue having children until at least two males were born, as this was what their husbands, mothers-in-law, joint families and society at large expected. Modern contraceptive methods were mistrusted as potentially harming fertility when more male children were required. Pregnant women reported that they had no say in where they gave birth. This decision was usually made by their mother-in-law.

The third challenge defined was the powerful web of social norms and religious traditions that regarded women’s bodies as impure and inadequate. This leads to behaviours such as discarding the “impure” first milk (colostrum), washing a baby to remove the “polluted” coating from the womb and putting “medicine” on the umbilical cord to heal it.

Teams also identified that many men felt overwhelmed by their large, dependent families and, despite opposition from older family members, were open to change – particularly on the basis of financial benefit. FLWs were strongly identified as potential change agents with socially sanctioned access to new and expectant mothers. Finally, mobile phone technology was identified as a channel with a great degree of penetration across gender and economic divides.

**Ideate**

Using this set of clearly defined insights, the SDP team began developing ideas for communication solutions. The first step was to develop a framework that defined communication objectives for each target group over a specified period of time. The framework detailed specific problems to be solved, barriers to tackle and triggers to improve knowledge, change attitudes, increase self-efficacy and change practice.

Thematic (for example, health, gender or rights), creative, digital and programmatic experts then worked together to develop creative ideas and innovative solutions for achieving these objectives. Cross-disciplinary teams – working in smaller groups, in pairs and collectively
– used different techniques to develop as wide a range of ideas as possible. They gradually refined these long lists, fleshing out, interrogating, testing and eventually discarding ideas until a shortlist was created. These shortlisted ideas were then taken forward to the prototype stage.

To give a concrete example, teams used insights about the limited access and agency of pregnant women and new mothers to develop a range of tools for community health workers. The objective was to train, empower and equip community health workers with authoritative yet engaging job aids that they could take into families’ homes to help them persuade not just young women, but also mothers-in-law and husbands, to adopt healthier behaviours. Teams developed a number of ideas for job aids using different delivery mechanisms, including charts built into custom handbags and audio-visual material on projector phones. This eventually resulted in the development of the multi-award-winning audio-visual job aid Mobile Kunji, discussed in more detail in section 3.

Prototype

Various prototypes were developed for different types of media and communication outputs. Prototypes were used to gauge audience preferences – for example, for different visual and language approaches, variations in format and navigation, and different brand names and logos. Prototypes developed under the SDP project ranged from the high-tech (fully functional digital prototypes of everything from interactive voice response, or IVR, services to smartphone games and tablet applications) to low-tech (mood boards for identifying preferences for visual approaches, paper-based prototypes, and “narramatics” for testing audio-visual outputs). In the SDP project, the process often started by rapidly creating less expensive prototypes (for example, out of paper) and then, as the testing process progressed, graduating to fully functional prototypes.

Test

The human-centred design process used in the SDP project was iterative in nature, often involving returning to the ideation stage multiple times. The objective was to learn quickly about what would and would not work for audiences. SDP’s communication framework, creative approaches, and output user-interfaces and content, were continually refined on the basis of learning from audience testing. Rapid, repeat engagement, with stimuli designed to elicit genuine responses (rather than what the participant thinks you want to hear) was critical, particularly in a context where it is not the norm to express dissent.

In order to help test ideas and draw out the opinions of reticent rural women, and to effectively engage them in the development of communication outputs and activities, the SDP team developed the concept of a portable design laboratory, which could be implemented under a mango tree, in a primary healthcare centre or local school. The “lab” consisted of facilitators who spoke the local language and dialect, and were trained in the use of discussion guides that were developed, translated into lay language, tested in the field and fine-tuned. A significant investment was made – in terms of staff time – in building the capacity of facilitators and researchers to probe responses to questions to make sure they are understood. Researchers were also trained to carry out task-based user-testing of digital prototypes, involving unaided user engagement and techniques to capture what was not understood by users.
This whole process involved the SDP team committing to, as one staff member put it, “learn from user tests and research, to redefine problems, to reboot strategy, to redo outputs, to redesign implementation”. This requires the humility to set aside theoretically great ideas that just do not work, as well as — importantly — flexibility from your funder. BBC Media Action found the Bill & Melinda Gates Foundation to be open to considering changes in project activities, not wedded to an immovable logframe dictating fixed outputs from the project inception.

Having such a comprehensive product development process paid off, according to Debarshi Bhattacharya of the Bill & Melinda Gates Foundation, who notes that many of SDP’s successes were “rooted in the capacity of the team to have thought it all through completely, all the nuts and bolts. There was a tenacity and a ‘deep-thinking’ approach, reflecting on-the-ground realities about what will and won’t work.”
The “art and craft” of health communication

BBC Media Action often talks about the “science, art and craft” of communication. The “science” relates to the application of behavioural science to its work (see section 2) and the use of rigorous processes to understand audiences, generate insights and underpin output design (outlined earlier in this section). Correspondingly, the “art and craft” of communication refers specifically to how powerful and engaging creative ideas are generated and how different communication outputs are produced, encompassing everything from character development to scriptwriting, and from graphic design and branding to sound design for audio outputs. Under SDP, a range of “art and craft” techniques and processes were used to ensure that the outputs produced were of high quality – engaging and effective. A few insights about these processes are shared here.

First, the project was rooted in an understanding that insight-based – as opposed to message-based – communication enhances audience engagement with new ideas about health. For instance, rather than simply telling a pregnant woman that it is important for the health of her baby that she take IFA supplements, the project took a different approach. Communication emphasised how a mother and her unborn baby are intrinsically linked through shared (or a “blood line”) that is strengthened through taking IFA. This “blood line” language draws on important cultural concepts of family or lineage, resonating with women in Bihar to help to build understanding of the importance of IFA supplementation. When these insight-based ideas were communicated in the form of a visual tool – using bindi-like stickers to show how taking IFA supplements every day strengthens a baby’s blood supply – complex health information was conveyed in a way that actively engaged women in Bihar.
Second, the project found that devices typically associated with mass media – such as the use of consistent characters, serialised storytelling and audio-visual material – could provide stimulus for audience engagement across communication platforms. The project demonstrated the power of introducing recognisable fictional characters (for example, a character called Dr Anita and a consistent cast of characters used across street theatre performances) into mHealth products and interpersonal communication materials as well as mass media outputs. Dr Anita became an important and engaging character, identifiable with both the project and family health in Bihar. Representing friendliness, empowerment and authority, Dr Anita was used in many different communication outputs, infusing these values across the project and building audience trust in the information they were seeing and hearing. FLWs using Mobile Kunji reported that beneficiaries found the Dr Anita character instantly credible and engaging.

The SDP team also emphasises that design and functionality are central to uptake and audience engagement. Rigorous testing of communication products and services has revealed the difference that seemingly small design decisions can make. Mobile Kunji cards are just the right size to slip inside a FLW’s bag and Mobile Academy content is simple to navigate using just two buttons on a phone. Its bookmarking technology allows an FLW to return to the content where she left off, a critical design feature given the busy lives of FLWs. The illustrations used across the project’s materials are aspirational but not alienating.

Finally, the SDP team members report that they have found it fruitful to experiment with visual “nudges” to encourage behaviour change. For instance, the IFA reminder tool described above encourages mothers to place a sticker on an illustration of a baby each time a tablet is taken, representing the process of “filling up” a baby with blood. Pre-testing suggests that having the tool at home will remind women to complete a full course of tablets. While the impact of this tool is yet to be evaluated, it may be effective for health communicators to consider more proactively whether they should use similar approaches, given what is known about the importance of visual cues for changing and maintaining certain behaviours.

Innovation to enhance health worker performance

The SDP project found that going “beyond health” to focus on professional pride, credibility and empowerment was vital in engaging and motivating FLWs in Bihar. Across the SDP project, efforts were made to bolster the standing and confidence of FLWs rather than just ‘using’ them as a communication channel. As one member of the SDP team put it, “across the project, FLWs were presented differently. As a life-saver rather than a cog in a wheel.” In health communication, attention is often paid to more obvious questions about how FLWs can be encouraged to promote certain behaviours. However, the SDP project found it was first critical to address more fundamental questions around FLW motivation, general skill levels and support structures – all of which were found to be wanting in Bihar.

A range of approaches were used to address these issues, including the introduction of the fictitious character of Dr Anita, described above. As audience familiarity with Dr Anita grew, FLWs felt that the character helped to build their authority and
establish them as credible agents of change in their communities. The voice of Dr Anita in mobile services Mobile Kunji and Kilkari backs up the real-world advice provided by FLWs and increases the extent to which they felt able to influence the communities that they serve. As one health worker explained: “I will show the cards first, explain the cards and then play the audio. After me explaining the concept and Dr Anita saying the same things, then they trust us and understand the concept.”

Another powerful device was the oath taken at the end of FLW communication training (see box below), which poetically emphasises the critical role played by health workers in their communities. A government-endorsed certificate for completion of the Mobile Academy course presented at a district-level ceremony also built up pride and motivation among FLWs. Critical too were the new positive approaches to FLW supervision introduced by the project. Where group supervision meetings had often been used to berate FLWs for poor performance, data about Mobile Kunji usage began to be used to identify and publicly praise good practice.

As well as building the confidence and authority of FLWs, SDP has also been innovative in terms of introducing new techniques and approaches for use in FLW communication with families in Bihar. A first step was to underscore the importance of moving from information provision to genuine discussion and engagement if behaviour change is to be achieved. Training FLWs how to put their clients at ease and how to invite their involvement in discussions was essential, so that clients gained the confidence to ask questions about new ideas and any concerns they had.

Through the SDP project, BBC Media Action and its partner Pathfinder International developed specific processes for use in two-way interpersonal communication that may be helpful in other contexts. Drawing insights from the commercial sales sector, the training involved guiding FLWs how to build a relationship with a client, to listen to and understand her needs, work with her to formulate a solution, encourage her to make a commitment to a new health behaviour, and then follow up on and reinforce this commitment. Having this structured approach to two-way communication helped to build the confidence of FLWs in their ability to bring about change with their clients.

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**Mobile Kunji oath**

“I solemnly swear by this unique instructional Mobile Kunji that I will begin every day with the firm resolve to positively transform one life.

The dream of a healthy Bihar will soon be a reality and I will be an integral architect of this dream…”
Finally, the SDP project found that helping FLWs engage with people's fears and genuine barriers to change, rather than ignoring or whitewashing them, is key to credible communication that can inspire change. For instance, in the past in Bihar, communication about immunisation has repeatedly emphasised the benefits for children’s health. Vaccination uptake has grown but still around 40% of children are not fully immunised. As well as creating tools that communicate more effectively the risks of leaving children unvaccinated, SDP research has shown that it is important to engage with people’s fears about side effects in a more transparent way. Interpersonal communication tools have been developed to do just this.

**Lessons in sustainability**

At the beginning of the SDP project, the intention was to ensure sustainability for as many communication outputs developed as possible. Three sustainability strategies were considered: (i) transition to government; (ii) transition to civil society partners; and (iii) sustainability of mobile products by commercial mobile phone operators. This section captures lessons learned from exploring these three avenues to sustainability.

The SDP project has shown that making arrangements with civil society platform-owners can encourage lasting delivery of face-to-face communication activities. For instance, BBC Media Action has extensively licensed versions of the radio programme *Khirki Mehendiwali* to organisations such as Project Concern International (PCI) and Jeevika, a World Bank-supported rural livelihood project. Both PCI and Jeevika will use the content in listeners’ clubs and group meetings across Bihar in the future.

Sustainability partnerships with government have been even more successful. Indeed, supportive government partnerships were a critical success factor throughout the lifetime of the project, as the state government marshalled its own resources to ensure extensive reach for the communication activities and outputs. The state government encouraged FLWs to support all aspects of SDP, paid for rounds of rural activation, took over the lead on FLW communication training, scaled up Mobile Kunji, and rolled out interpersonal communication tools across the state. As one member of the BBC Media Action team put it, “government ownership transformed implementation”.

How was this achieved? Within the SDP project, a structured process was used to co-develop outputs with government counterparts from the very beginning. This involved drawing up technical and creative briefs for each output, followed by production, pre-testing and redesign if necessary. This approach provided opportunities for interaction and collaboration with government at many stages. Moreover, rather than relying on national or international technical guidelines, state government input was always incorporated in the technical briefs underpinning output design. This close collaboration created a sense of ownership within government and ultimately supported the transition of the project’s products and services into government hands. Designing tools that are adaptable also helped promote sustainability, because government health priorities evolve. For example, new audio content can be added to the Mobile Kunji, *Kilkari* and Mobile Academy IVR platforms and to the *GupShup Potli* service. The fact that the Mobile Kunji decks are held together with an expandable metal ring means that new cards can be added as necessary.
Flexibility and experimentation were also key. An important part of the successful transition of FLW communication training to the state government was testing a range of training approaches of differing intensity and duration. Assessing the impact of these different approaches helped to develop a training solution that achieved optimal impact while working within government budgets. Similarly, as the project honed its approach to FLW supervision, this became more light-touch and thus more practical to transition to government. Regularly sharing project data was, of course, also essential to securing government buy-in. Critically, real-time data collected on the usage of the project’s mobile tools enabled the government to see how high the demand for these services was.

Capacity-strengthening support was also central to the process of transitioning communication products to government. This ranged from regular co-working with government officials to develop technical briefs for project outputs, to supporting the implementation of training and monitoring plans at state, district, block and village level. A member of BBC Media Action staff was embedded in the State RMNCH+A Unit (SRU) to provide technical support to government at state level. Over time, as the focus on institutional capacity-strengthening and government scale-up of communication solutions grew, the intensity of engagement by BBC Media Action staff on the ground in delivering training and project monitoring was reduced.

Introducing concrete and procedures for developing quality communication outputs within the government has helped too. For example, for the first time in the SHSB, a template for writing a communication brief was developed in the Hindi language and introduced to guide key health officials commissioning communication outputs. This helps stakeholders to think through the objectives of communication output, as well as target audiences, technical content and the like. It also helps to build common understanding between those delivering communication interventions and those commissioning them. The value of this tool in making officials think more strategically about communication was established through the process of co-designing SDP outputs and it is now routinely used in the State Health Society. According to Debarshi Bhattacharya of the Bill & Melinda Gates Foundation, a bigger shift may have been seen at district level where the creation of a “very tangible tool [Mobile Kunj] that people want, are motivated to use and that gives good results” has helped government staff to “feel that communication is more important and… feel more comfortable and confident in talking about communication”.

Other factors that helped to secure the transition of SDP outputs and activities to government have included tapping into current political discourse – for instance, the Indian government’s #DigitalIndia strategy was a useful umbrella under which to discuss transitioning SDP outputs. BBC Media Action was also able to draw on its own experience to support commercial negotiations between national and state governments and mobile phone operators – achieving significant financial value. Similar support may be beneficial for cost-effective scale-up of other mHealth services in other contexts.

Despite these notable successes, the high turnover of officials with decision-making authority at state level affects ownership of the project within government departments and makes it challenging to sustain changes brought in by SDP. Institutional memory is weak and staff attrition often requires ongoing engagement with new officials to regain lost ground,
and ensuring buy-in can be more challenging once the critical co-design phase has passed. This engagement is currently possible due to the funding of a second phase of SDP by the Bill & Melinda Gates Foundation, with a focus on further transition to government and appropriate capacity-strengthening. The final success of the project’s transition strategies will need to be judged when that work is completed.

Within the SDP project, BBC Media Action also pursued partnerships with commercial mobile operators as a route to sustaining mHealth services after donor funding came to an end. There were promising signs that this would be successful as, in the first phase of the project, there had been considerable buy-in from the operators, with call costs secured at vastly reduced rates. However, despite experimenting with several different approaches, promoting and marketing mHealth services directly to the end-user was extremely costly and challenging. This made it more strategic to focus on partnership with state and national governments, where the government covers the bulk of running costs for the services and is able to promote them to all health workers and families registered within the health system. The national scale-up of Kilkari is now based on a model where the national government covers subscriber call costs. It also pays for access to Mobile Academy for all registered ASHAs.
CONCLUSION

This briefing concludes that, despite challenges in reaching audiences in vast and poorly connected settings like Bihar, multi-pronged communication strategies can be effective in reaching large numbers of people and encouraging the adoption of critical health behaviours among those reached.

Communication interventions have also proven to be effective in improving the performance of FLWs. The SDP project has shown the value of investing in building the communication skills of FLWs, as a critical interface with families in Bihar, and offers a series of recommendations about how this can be done effectively. Building the confidence and self-esteem of these workers through positive appreciation and the provision of fit-for-purpose communication tools are important first steps. The project has also demonstrated how effective it can be, in challenging communication settings, to think laterally about new communication spaces, making the utmost use of all available opportunities to reach and engage people.

The briefing proposes the adoption of a clear, human-centred design process to guide the development of health communication interventions and has demonstrated how this process worked in action in Bihar. It also offers a series of tips on crafting engaging communication outputs, showing how creative devices more typically associated with mass media interventions can be successfully applied to interpersonal communication and community engagement activities.

Finally, the briefing recommends strategies for sustaining the life of donor-funded health communication efforts. The SDP project found it essential to establish effective partnerships with government, characterised by co-design, flexibility and capacity-strengthening support. These partnerships will help to ensure that there is a lasting legacy for the SDP project in Bihar and that health workers and families across India feel the benefits of this in years to come.
ENDNOTES

1 Bihar’s population of 104 million was bigger than that of Germany and Romania combined. Four-fifths of people lived in rural areas, in the state’s 45,098 villages.


6 In Bihar, caste-based marginalisation skews access to health information and services, contributing to poor health among members of the lower castes.

7 http://www.ananya.org.in/who-we-are [Accessed 1 October 2016].

8 http://www.ananya.org.in/who-we-are [Accessed 1 October 2016].

9 In fact, the scale-up of some solutions began in 2013 at the request of the government of Bihar.


12 Rural activation is a term used in marketing to describe efforts to reach and engage rural audiences. It typically involves outreach at community gatherings like markets, meetings or festivals, or specially arranged events involving, for instance, street theatre, film screenings, discussion, demonstrations or games.


14 BBC Media Action field monitoring data.

15 BBC Media Action field monitoring data.

16 BBC Media Action field monitoring data.

17 VHSNDs are a major initiative under India’s National Rural Health Mission, designed to improve access to maternal, newborn, child health and nutrition services at village level. The intention is that VHSNDs occur in every village once a month, usually at the Anganwadi Centre (the village health centre, run by the government’s Integrated Child Development Services programme) or other suitable location. VHSNDs provide a range of health, nutrition and counselling services to the community.
They serve as a delivery platform for basic health services, including immunisation, antenatal care visits, distribution of take-home food rations and other health products such as zinc and contraceptives.

18 BBC Media Action field monitoring data.

19 BBC Media Action Monitoring Information System data, based on call logs shared by mobile telephony operators.

20 Ibid.

21 Ibid.

22 BBC Media Action field monitoring data.

23 The SHSB printed 11,000 Mobile Kunji decks in 2014/15 and 28,000 in 2015/16. A further 18,200 are proposed for 2016/17.


25 Ibid.

26 Ibid.

27 Ibid.

28 Mathematica Center for International Policy Research and Evaluation (2014) Midline findings from the evaluation of the Ananya programme in Bihar [online]. Available from: https://www.mathematica-mpr.com/our-publications-and-findings/publications/midline-findings-from-the-evaluation-of-the-ananya-programme-in-bihar [Accessed 10 January 2017]. The methodology utilised was a type of quasi-experimental design known as “difference-in-differences”. Cross-sectional surveys were implemented at two points in time (baseline and midline) with a different cohort of beneficiaries. The design relied on comparing changes in key outcomes in the focus districts, with changes in similar comparison districts between baseline and midline. This design assumes that “non-intervention” districts of Bihar are similar to the eight focus/intervention districts, in terms of both outcomes measured at baseline and demographics/socio-economic measures. As such, it assumes that difference-in-differences observed at the midline measure can be attributed to the intervention with a degree of confidence.

29 Ibid.

30 Ibid. The associations noted exist even when taking into account (or controlling for) characteristics such as parity (number of children), religion, literacy and education, and socio-economic category. In understanding this data, note that the specific Mobile Kunji topics covered in the last home visit were not captured. Therefore, the Mathematica analysis examines correlations between broad exposure to Mobile Kunji (any use in the previous six months, regardless of topics covered) and health practices.

31 These results are based on survey data collected by CARE India in eight districts of Bihar in 2012 and 2013 using Lot Quality Assurance Sampling (LQAS) methodology. In 2017, BBC Media Action ran “logical regression analysis” on this data, taking religion, father’s and mother’s education, household asset value and number of living children as control variables to provide the results cited. Other possible values considered included caste and age of mother but these were discarded because they were statistically insignificant.

32 These are descriptive not adjusted differences. The analysis does not control for confounders such as age, parity, socio-economic status, etc.
Usage and Engagement Study. There were two components of the study. The first was a cross-sectional survey with 585 FLWs across the eight Ananya focus districts. All identified having used Mobile Kunji to some degree. The second was a beneficiary study that used a cross-sectional survey sample of more than 3,000 beneficiaries in two key target groups: currently pregnant women and mothers with an infant aged 6–11 months. The sample was drawn from eight innovation districts, within the catchment of 585 FLWs.

These are descriptive not adjusted differences. The analysis does not control for confounders such as age, parity, socio-economic status, etc.

These findings are based on regression results, controlling for key confounders such as age, parity and socio-economic status but not education.

These are descriptive not adjusted differences. The analysis does not control for confounders such as age, parity, socio-economic status, etc.

Of the CARE India LQAS survey participants, about 5% reported that they had been exposed to TV advertisements, radio programmes, street theatre performances and outreach by audio-visual vans. These are the women with the lowest degree of mobility and agency in rural Bihar. As such, they are unlikely to have been exposed to any communication outputs outside of the interpersonal communication delivered via the FLW at the household level.

These results are based on survey data collected by CARE India in eight districts of Bihar in 2012 and 2013 using LQAS methodology. In 2017, BBC Media Action ran logical regression analysis on this data. See note 31.

Mathematica Center for International Policy Research and Evaluation, Midline findings from the evaluation of the Ananya programme in Bihar. See note 28.


These low reach levels are a function of a lack of electricity in many parts of Bihar, which in turn limits TV ownership and access. They are also the result of women’s lack of mobility, which means that they can’t easily access a TV set in someone else’s home or in a community setting.

Mathematica Center for International Policy Research and Evaluation, Midline findings from the evaluation of the Ananya programme in Bihar.


A narramatic is a video storyboard with an audio animation.


BBC Media Action field monitoring data.