# **Voices for health:** how low-cost mobile technology continues to improve child health in Uttar Pradesh

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# Context and objectives

**In a new era of connectivity, technology is revolutionising how public health organisations can communicate messages relating to hygiene, vaccination or nutrition, and inspire behaviour change.**

Modern campaigns can adopt a digital/mobile-first approach that typically costs less and is easier to implement and scale up. COVID-19 only accelerated this digital health trend, with telehealth increasing by 38 times compared to before the pandemic.

India is no exception to the meteoric rise of mobile technology – with a population of 1.4 billion in 2021, the nation had 1.2 billion mobile phone subscribers.[1] This rise is also synonymous with an **increase in mobile health technology.** For example, between 2020 and 2021, health app downloads increased by 38% year-on-year in India, reaching 76 million downloads.[2]

It's clear that digital health communications show no signs of abating, and were front and centre during COVID-19, when access to traditional health care services was significantly reduced. This proliferation means digital campaigns are becoming ever more sophisticated, exploiting smartphone capability – including social media or apps – to deliver critical health messaging.

However, not everyone has access to this functionality in smartphones. For example, around 50% of the mobile-phone user population in India owns a feature phone.[3] These phones tend to have less functionality and are less digitally enabled than smartphones. This limited usability means **not all digital communications are suited to feature phones, potentially leaving a significant proportion of the population without access to public health messaging.**

Not having access to the latest mobile technology should not be a barrier to health outcomes. Gavi, the Vaccine Alliance, and Unilever Lifebuoy teamed up to address this glaring communication gap, taking a step back to deliver a simple but highly effective mobile voice campaign, one that is accessible to all. After all, one function all phones share is the ability to make and receive calls. The programme, *Safal Shuruaat* (or "Successful Beginnings" in English), employs this simple functionality, using a **voice-out mobile model to deliver consistent and personalised messaging to parents in Uttar Pradesh, India**, to increase handwashing with soap (HWWS) and immunisation demand.

**1.2 billion**

people with mobile phone subscriptions in India as of 2021.

**38% increase**

year-on-year growth in health app downloads, **reaching 76 million in 2021 in India.**

**50%**

**of India's mobile phone users** have feature phones, which offer limited digital functionality.


**Credit:** Gavi/Rakesh Kumar

# Insight

Though India has made significant progress in reducing child mortality rates over recent years, pneumonia and diarrhoea remain the country's biggest contributors to preventable deaths of children under five years of age. In fact, India has the highest globally reported death toll for pneumonia and diarrhoea in children under five (>230,000 in one year). That's why public health campaigns must seek to explain the benefits of handwashing with soap (HWWS) and immunisation and provide timely reminders, so parents do not miss vital life-saving information.

## Why go digital?

- Mobile messaging campaigns are a tried and tested way of delivering information and have long been used in other arenas such as political campaigns. Messages delivered through mobiles can effectively engage with people and affect behaviour change in areas with limited resources.
- Societal trends also mean a mobile-first approach for public health campaigns has never been timelier. First, as phone ownership across both genders in India grows, both mothers and fathers can be targeted with tailored messaging. Second, since COVID-19 accelerated digital literacy globally, people are more accustomed to digital health tools.
- It's vital to ensure the momentum behind recent gains in vaccinations and hygiene in India is not lost to COVID-19 pandemic-related disruption. It was crucial to sustain communications that pertained to child health during this period of abnormality, where social restrictions severely impacted access to routine health services. Digital approaches allow for the continuation of timely and personalised health reminders.

For all these reasons, the third phase of the *Safal Shuruaat* programme adopted a digital/mobile-only approach. This is because one of the main channels of the current iteration of *Safal Shuruaat,* interpersonal communication, was interrupted during the pandemic. While the programme had always had a solid digital communications element, the reliance shifted almost entirely to a digital-only approach in this latest phase, as this communication medium was uninhibited by the pandemic. The programme harnessed the opportunity to test whether greatly enhancing mobile/digital components could inspire change in HWWS and immunisation behaviours without community trainers – essential during the COVID-19 pandemic.

**Credit:** GroupM/Sagar Pratap

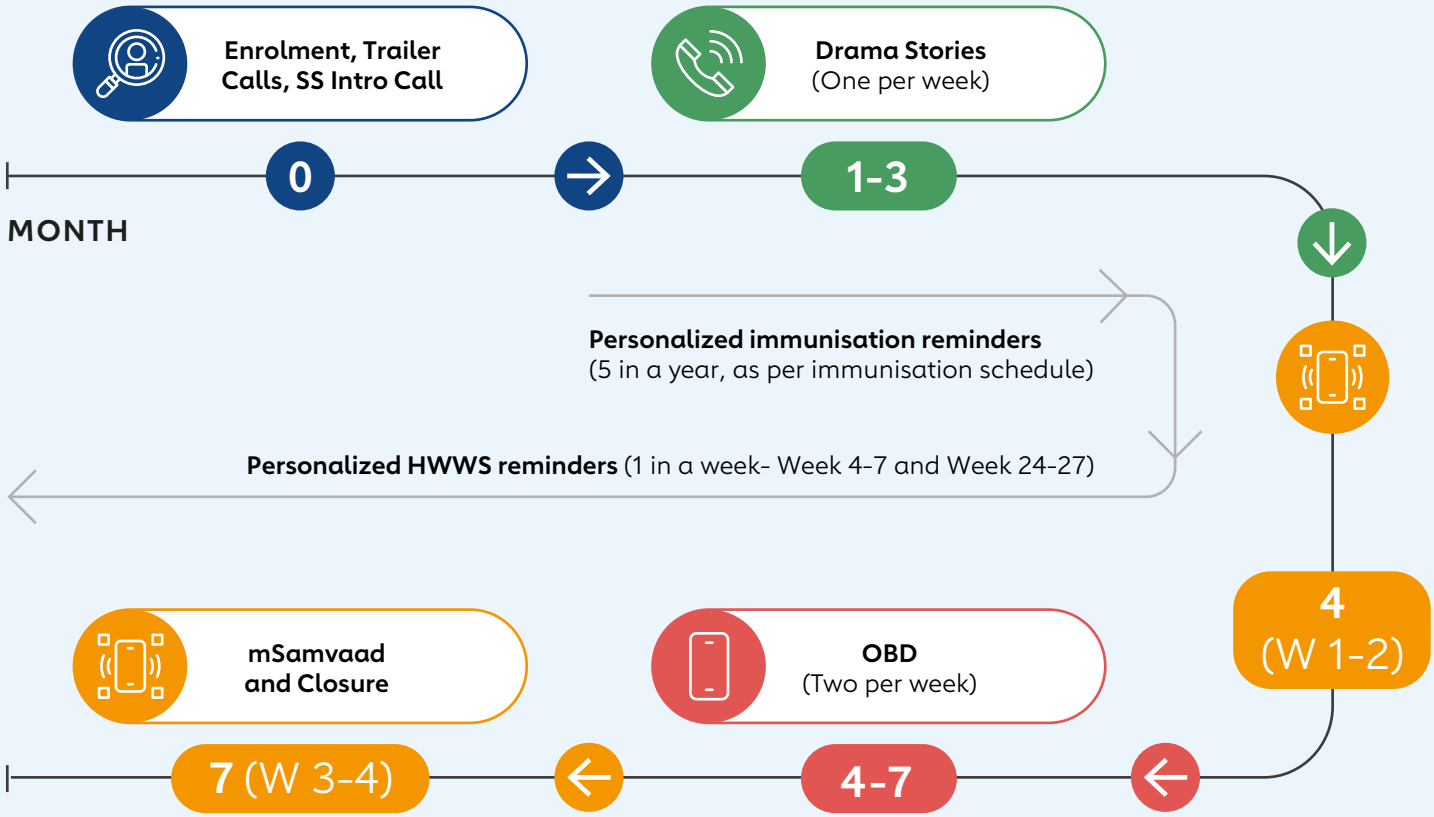
# Strategy

Behavioural change is a complex process that requires consistent effort and many levers. This iterative and frequent mobile engagement was the central premise of *Safal Shuruaat.* The programme included simple, interactive and entertaining voice messages that delivered vital information about HWWS and immunisation.

This voice-broadcasting approach means people in hard-to-reach places can use mobile technology to share relevant, time-sensitive and critical vaccine and hygiene information in a simplified colloquial manner. Voice-based services, mobile reminders through IVR (interactive voice response), access to physicians, messaging services and tracking real-life health data are all examples of how mobile technology can foster a constructive transition toward adopting healthy preventative measures. The latest *Safal Shuruaat* programme uses these measures.

The voice-out digital model is a free-of-cost mobile-based campaign to reach out to parents and carers with drama stories and personalised messages in the comfort of their homes. Parents are onboarded onto the voice service platform through missed call number activation (pull mechanism) and promotional opt-ins (push mechanism). These mechanisms are fundamental, because they work on both feature and smartphones. This dual applicability was important in Uttar Pradesh, where the programme was implemented, as one in five participants owned a feature phone.

Over seven months, participants received one drama story per week, which created a realistic and engaging story centred around the need for handwashing and immunisation. It also shared personalised handwashing and immunisation reminders. To ensure parents felt broad and continued support in the absence of a trained health care worker, the programme also hosted optional group dial-in sessions known as mSamvaad calls. These calls were a chance for parents to ask a health care professional their pressing questions related to their children's health. Below is how the digital journey looked for parents enrolled in the programme.




**Credit:** GroupM/Sagar Pratap

With vaccination and HWWS outcomes in mind, the model employed various behavioural change strategies and embedded these throughout the voice messages:

## Reinforcing parental identity

- Messages resonated with parental identity and reinforced their identity as a good parent by listening to messages.
- **Example message:** *You are trying to be the best parent. Remember, you can put your child on a path of success by protecting the child from infections/ diseases at an early age through handwashing with soap, and immunisation. Preventing infections helps healthy growth and proper brain development of the child.*

## Social proof

- Messages indicated that many people in their local area had already engaged in these health behaviours to highlight the behaviour as a social norm.
- **Example message:** *Thousands of parents have already signed a commitment to achieve success for their child through handwashing with soap and not missing a single dose of immunisation. Get ahead on the road to success.*

## Inspiring commitment

- Parents were asked to pledge to commit to vaccinating their child and better HWWS to hold themselves accountable.
- **Example message:** *To achieve success and fulfil your commitment, remember to wash your hands on these occasions every day: before touching your child, before cooking, feeding and eating, post-defecation and after cleaning child faeces. Do it today.*

Importantly, messaging for parents was all personalised to their children. Messages were tailored by tracking their child's name and date of birth and sending reminders around key vaccination dates aligned to government vaccination schedules and local health systems.

> Dr Nilesh Chatterjee, Senior Behaviour Change Specialist, also highlights another key element that helped the messages to resonate with parents: *"Notably, the messages were framed in terms of success, using the idea of thriving children and good parenting to inspire behavioural change. The idea of prosperity is dominant among Indian families, therefore it was crucial to frame vaccination and HWSS as foundational to child success."*

The campaign was sensitised through multi-media efforts to maximise engagement in the programme, including posters and community radio. This high level of community advertisement helped to increase recruitment numbers for the voice programme.

# Impact

The results of the voice-out model demonstrate that a relatively simple method of communication can still be a potent tool for behavioural change. Through the programme, it became clear that mobile voice messages can increase HWWS and demand for immunisation in even the most rural parts of India, where resources are limited.

Broadly speaking, the impact is threefold: reach and engagement, knowledge and attitude, and behaviour change. Below are some selected highlights.

## Reach and engagement

Across 831 villages in Uttar Pradesh, 2.6 million calls were pushed, with over 370,000 people reached with messaging relating to HWWS and immunisation. The average proportion of people who completed the listenership over the seven months was 40–60%. However, in the programme's last phase, almost 90% of parents reported listening to most or all of the calls.

Meanwhile, engagement on the mSamvaad calls was exceptional. On one call with Dr Chatterjee, where almost 500 people connected, more than 50% of these people stayed on for over 21 minutes, asking various questions related to their children's health.

> The mSamvaad calls were particularly well attended, with up to 10,000 parents attending in one session. As Dr Chatterjee highlights, these calls saw parents thinking more broadly about their children's health: *"On the calls, parents asked questions beyond vaccine-preventable diseases on how to prevent other common infections, and how to support good nutrition and brain development to ensure school readiness. This shows that parents are progressing with the next steps of their child's health, beyond the programme, seeing their child's health as a critical precursor to a successful beginning."*

**Some examples of the questions asked on the mSamvaad calls:**

> *"We missed taking our daughter for immunisation at 1.5 months old, and now it's time for the next one (2.5 months). Can we get her immunised for both together?"*

> *"My kid just turned two years old a few months back. However, he displays an extremely low appetite. Doesn't eat well at all, neither does he relish having milk. What should I do?"*

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**10,000 parents**
attended a single mSamvaad call session, indicating high levels of engagement.

**Credit:** GAVI/Oscar Seykens

## Knowledge and attitude

The programme messaging aims to create awareness about the benefits of immunisation. It promotes the message "5 saal 7 baar" indicating that a child needs to be vaccinated seven times up to the age of five years. The percentage of parents with correct knowledge of routine immunisation went from 25.3% in the first stages to 84% in the last stage of the programme.

A positive shift in practice of tracking child immunisation was observed among parents in the intervention. Compared to the start of the programme, by the end more than 50% of parents in intervention areas reported keeping track of their child's immunisation, suggesting effective reception of the programme message.

Across handwashing with soap, there were similar levels of improvements too, with a positive shift in knowledge around the benefits of HWWS observed in intervention areas. For example, up to 100% of parents reported that HWWS is necessary after defecation, compared to 80% before the intervention.

## Behaviour changes

These improvements build the foundation for successful behavioural change for vaccination and immunisation. And the results speak for themselves. Total compliance for pentavalent, rotavirus and measles-rubella vaccination has increased significantly since baseline in intervention areas. In total, just three zero-dose cases were observed across all four monitoring visits.

Impressive results for HWWS were similarly observed, with a significant increase in incidences of HWWS on key occasions in intervention groups. For example, incidences of HHWS before breastfeeding was at 64% compared to just 13% in the control group, while after defecating, the incidence was 92% compared with just 60% in the control.

**Credit:** GroupM/Sagar Pratap

I am Ruchi from Khajuah Village, Fatehpur. Earlier I used to forget to get my child immunised in case the ASHA [Accredited Social Health Activist] wouldn't come, but now, since I get SS [Safal Shuruaat] reminder call prior to the actual immunisation day, it has made it so much easier for me to plan my day accordingly and I never miss my child's immunisation now.

Here Ruchi also highlights the importance of appropriate timings between message reminders and immunisation dates. Dr Chatterjee believes this was also an important facilitator for behavioural change: *"It was essential to leave enough time before messages to allow parents to plan, but not so long that it was too far removed from the deadline. Following vaccination date, parents were either congratulated for completing doses or encouraged to contact their local health worker if they missed the appointment."*

Messaging also promoted good parenting practices such as ensuring timely child immunisation, maintaining cleanliness and hygiene, improving age-appropriate child nutrition and more. This approach positively affected parenting, with knowledge around actions that constitute good parenting increasing. Further, increased interspousal communication and paternal involvement in parenting were observed in intervention areas. We can attribute this improved knowledge about good parenting to the programme's messaging.

**Some more key results from the programme:**

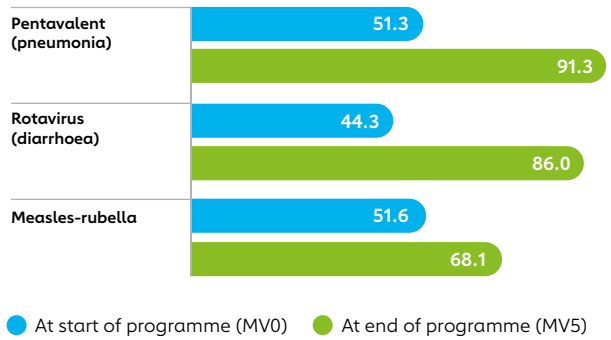
**50-70%**
Content listenership

**57,655%**
Total enrolled users

**65-85%**
Average retention

***Content listenership:** Percentage length of message consumed for content calls.
***Retention rate:** Refers to the percentage of eligible audiences connected on the call.

## Vaccine compliance




**Improved knowledge of immunisation schedule -** The percentage of parents with correct knowledge of routine immunisation (7 times in 5 years) went from 25.3% at the start of the programme to 84.4% by the end of the programme.

**Improved adoption of HWWS as a regular practice to prevent spread of germs -** Significant increase in incidence of HWWS on critical occasions such as 46.2% increase before feeding children, 24.6% increase before cooking, 43.6% increase before breastfeeding between the beginning of the programme (MV0) and the end (MV5).

**Shifting norms around gender roles in parenting -** Increased participation of fathers in good parenting practices such as, getting the child immunised (40% increase), talking to and playing with the child (39% increase), helping the mother take care of child (25.7% increase) and helping in maintaining hygiene in and around the household (21% increase) between the beginning of the programme (MV0) and the end (MV5).

# So, what next?

Dr Chatterjee is hopeful for the future and applications of this digital-voice approach: *"While technology may never truly emulate the role of an in-person and trained health care worker, this programme's results demonstrate that a voice-out-only model is an extremely cost-effective way of inspiring behaviour change."*

*Safal Shuruaat* has walked parents through the critical steps needed to ensure a successful beginning for their child and has readied them for the next phase of the journey, beyond vaccination and hygiene practices. Now there is a need for multisectoral engagement working across all areas of child development. The programme's success could act as a stepping stone for a more comprehensive programme that focuses on vaccines and HWWS, neurological and brain development, and nutrition as a route to school readiness, the ultimate goal for most parents within India.

There's an opportunity now to partner with local governments, ministries and other child health organisations to scale and implement this existing voice model more broadly. There is already an interest in adapting the Indian government's COVID-19 vaccine tracking app to routine childhood immunisations. This low-cost, low-technology programme ensures that all parents in India can access personalised messages supporting their children's health, regardless of access to or understanding of the latest technology. But since feature phones remain the most used phones in the lower- to middle-income strata of the country, a voice-only model with SMS reminders and voice calls will be crucial in these populations.

Sophisticated digital campaigns are wonderful and work in many settings, but importantly, not every setting. In lower income and underserved settings, health-related voice messages delivered through simple mobile phones still have profound power to change behaviours. The power of voice is still a key enabler of behavioural change. It's also proven possible to continue providing practical and sustained messaging to increase handwashing and immunisation, even during the COVID-19 pandemic. Together, and through leading initiatives like *Safal Shuruaat*, we can ensure that no child is left behind and we can contribute to reduce vaccine-preventable deaths.

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**Credit:** Gavi/2023/Benedikt von Loebell

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**Credit:** Gavi/2021/Benedikt von Loebell

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