Data for Action:
Collection and use of data to increase vaccine uptake amongst health workers in South Africa

A policy brief prepared by Anthrologica for UNICEF East and Southern Africa Regional Office, in collaboration with UNICEF South Africa Country Office

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The current global rollout of COVID-19 immunisation efforts takes place in the context of widespread public discussion about the safety and efficacy of some of the vaccines. Given existing scepticism, debate about the COVID-19 vaccines may erode public trust and confidence and lead to vaccine hesitancy (defined as the delay in acceptance or refusal of vaccines despite the availability of vaccination services).[1] This is a particular concern in South Africa, in light of the recent suspension of roll-out for both the AstraZeneca and Johnson & Johnson vaccines after concerns about their efficacy and safety.

Mistrust of COVID-19 vaccines is found across a range of social and demographic groups in South Africa, including amongst health workers, who were the first group to be vaccinated. Health worker acceptance of the vaccine is central to the success of immunisation programming, and it is therefore essential to understand what drives their concerns and how these can be addressed. In order to accomplish this, UNICEF and the South Africa National Department of Health (NDoH) conducted a Behavioural and Social Drivers (BeSD) survey to inform Risk Communication and Community Engagement (RCCE) strategies for vaccine uptake. This brief provides an overview of the BeSD methodology that was adopted, highlights how recommendations have been implemented, and outlines considerations for ongoing action.

In 2019, the WHO declared vaccine hesitancy (the reluctance or refusal to vaccinate) as one of the top ten threats to global public health.[12]

WHO, 2019

Background

As of May 2021, South Africa had recorded more cases of COVID-19 (1.6 million) and more COVID-related deaths (55,000) than any other country on the African continent. In February 2021, South Africa became the first African nation to receive a COVID-19 vaccine (the AstraZeneca/Oxford (AZ) vaccine) and planned for the immediate rollout of a million doses. The government suspended the rollout, however, after research raised doubts that the vaccine provided protection against South Africa's main COVID-19 variant of concern. Soon after, the government, in partnership with the South African Medical Research Council (SAMRC) and the South African Health Products Regulatory Authority (SAHPRA, began an initial rollout of the Johnson & Johnson (J&J) vaccine, with the aim of vaccinating 67% of the population by December 2021.[2] But in April 2021, further concerns were raised about an association between vaccination and a clotting disorder in a small number of recipients of both the AZ and J&J vaccines. Vaccination with the AZ and J&J vaccines was briefly suspended in Europe, the USA and elsewhere. Administration of the J&J vaccine was also temporarily paused in South Africa although it was announced on 22 April 2021 that rollout would resume.[3]

Frontline health workers were set to receive the vaccine in the first phase of South Africa's vaccine rollout programme. After suspension of the AZ vaccine, reports quickly surfaced that health workers were concerned about the vaccine's efficacy, and that there were high levels of hesitancy in the general population.[4] A survey conducted in January 2021 found that, even before the AZ suspension, 18% of South Africans reported that they 'definitely would not' or 'probably would not' take the vaccine and 15% were unsure if they would take the vaccine. The main reasons for reluctance included concerns about the side effects and overall effectiveness, fear, religion and/or mistrust in the government.[5] Such hesitancy is likely to have increased following the issues with the AZ and J&J vaccine rollouts globally.

South African health workers were trained on vaccine rollout in January 2021, and by February, vaccination of this group with the J&J vaccine had begun in Gauteng province.[2] Little evidence had been gathered, however, on health worker's views of the vaccine and how hesitancy amongst this cohort might affect training, administration and uptake more broadly. Recognising this gap, the UNICEF Country Office and the NDoH launched a BeSD survey to understand the factors that might influence uptake and inform interventions. The results of that survey were to be used to guide the development of RCCE targeted strategies for vaccine uptake in South Africa.

Understanding the BeSD survey tool

It is important to understand how people think, feel, and act in relation to vaccination campaigns so that appropriate interventions can be developed and resources allocated to promote vaccine acceptance. Targeted strategies and interventions, informed by quality data about the behavioural and social drivers of vaccine acceptance, can be very effective as well as cost-efficient. BeSD data can help shape interventions, tailor communication approaches and offer insights as to how to improve vaccine implementation strategies.[7]

The BeSD approach is designed to represent populations at a broad level and is suitable for large sample sizes.[8] The survey tool was initially developed by the WHO to collect data on childhood vaccination. The Vaccine Demand technical sub-working group of the Covax Country Readiness and Delivery (CRD) workstream adapted the original tool for COVID-19, developing BeSD qualitative and quantitative surveys for both health workers and the general population. Core questions from these surveys were digitised by UNICEF and made available on the Internet of Good Things (IoGT) platform. UNICEF South Africa and the NDoH further adapted the health workers BeSD tool to the South African context. The questions used in South Africa were primarily quantitative, with one qualitative question to elicit more data on reasons for not accepting the vaccine.

The BeSD survey tool measured four key areas that play a role in shaping vaccination uptake: people's thoughts and feelings about vaccines; social processes that drive or inhibit vaccination; individual motivations (or hesitancy) to seek vaccination; and practical factors that shape the experience of seeking and receiving vaccination. Collecting data in all four domains allowed for a more comprehensive understanding of barriers and enablers that could better inform planning and evaluation.

BeSD for health workers in South Africa

Research indicates that health workers and immunisation programme managers play a particularly important role in influencing public acceptance of vaccination.[6] Given the central role of health workers in the dissemination of information and promotion of the COVID-19 vaccine, understanding how they think and feel about vaccination is critical. Communities consistently regard health workers as trusted sources of information, especially health information. As the South African rollout of COVID-19 vaccines


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continued, securing health worker support for promoting vaccination was therefore crucial for reducing hesitancy and encouraging uptake amongst the general population.

The BeSD survey for health care workers was launched using the IoGT mobile initiative, which enabled the survey to be conducted with minimal cost.* Public and private sector partners were engaged to actively promote the survey and ensure widespread coverage across the country. A link to the survey on the IoGT site was circulated through the Health Stakeholder Forum** in South Africa. The link was also shared with provincial COVID-19 communication teams and the provincial health departments.[10]

The survey was launched on 28 January 2021 and remained open for one week. When it closed on 5 February, a wealth of data had been received – 22,751 responses from health workers across nine provinces.[1] At the time of writing (May 2021), the initial analysis had been completed, but the data will be further disaggregated to inform approaches to vaccine hesitancy at the local level.

Findings

Most (71%) of the survey respondents were female, with a median age of 41 years. Many participants (41%) worked in a hospital setting, and others identified themselves as independent practitioners (26.6%), clinic workers (12%) or employees in another healthcare setting (18%). Over half of the participants were doctors or allied health workers (26% and 27% respectively). The remaining participants were paramedics, community health workers, traditional healers and other related groups.

Most (69%) survey respondents confirmed that they would take the vaccine when it became available. However, just over half (52%) of respondents thought that adults in their communities intend to be vaccinated, and 50% thought their co-workers would take the vaccine.

In South Africa, COVID-19 vaccination was not seen as a social norm amongst the public nor a professional norm amongst health workers. Overall, survey responses indicated that participants valued the vaccine, and just over 80% reported it was 'very' or 'moderately' important for their health. Despite this, however, 14% confirmed that they did not trust the vaccine 'at all', and a further 16% reported low levels of trust. Moderate levels of trust were reported by 38% of participants, and only 31% agreed that they would trust the vaccine 'very much'.

Perceived challenges to accessing the vaccine were significant. Although more than 40% of respondents worked in a hospital setting, only 19% believed that it would be easy for them to access the vaccine, and nearly a quarter of respondents said it would be 'not easy at all' to get the vaccine when it became available.

Primary drivers for vaccine hesitancy included fears about efficacy (31%) and safety (26%). Other notable concerns related to lack of information, limited trust in authorities, and concerns about comorbidities, pregnancy and breastfeeding. These findings were further explained in responses to the single open-ended question in the survey, which asked why participants would not accept the vaccine.

The main reasons associated with hesitancy included concerns about the speed at which the vaccines were approved, their efficacy rates and potential adverse effects following immunisation. In some cases, this was tied to the brand of vaccine, particularly the AZ vaccine. Some participants mentioned rumours on social media about safety concerns.

* The IoGT platform is a data-light website hosted by UNICEF; it was specifically designed for low-end mobile devices with low-literacy, first-time internet users in mind. IoGT is used to deliver UNICEF programming and partner content to the last digital mile. The IoGT initative packages content and makes it available for free, even on basic devices. It also supports surveys, quizzes, and user comments.

** The Health Stakeholder Forum is a consultative structure through which the NDoH engages all related professional bodies, trade unions, private medical care networks, insurance companies and civil society.

As one participant confirmed, they were *"concerned about the long-term effects that we are yet to discover. Concerned about the speed at which we have produced vaccines and their safety and effectiveness."* Despite their own reservations, however, 73% of respondents agreed that they would recommend to others that they should get vaccinated.

> *I am worried about the efficacy of the AstraZeneca vaccine. If I am to go to the trouble of taking the vaccine then I would really prefer something more effective.*
>
> Health Worker

Programmatic recommendations

The BeSD data were analysed and considered in the context of existing behavioural research which demonstrated that vaccine acceptance and uptake can be increased through the adoption of three strategies:

- Creating an enabling environment – make vaccination easy, quick and affordable, in all relevant respects;
- Harnessing social influences – engage people to encourage vaccination, especially those who are particularly trusted by and identified with members of relevant communities;
- Increasing motivation – encourage vaccination through open and transparent dialogue and communication about uncertainty and risks, including the safety and benefits of vaccination.

Based on this analysis, UNICEF, the NDoH and the SAMRC communications team developed recommendations to improve acceptance of COVID-19 vaccinations in South Africa.

Increase information about vaccine access.

Data revealed that health workers did not know how to access the vaccine. In order to create an enabling environment for vaccination and remove perceived access barriers, it was recommended that greater emphasis be placed on explaining how, when and where to get vaccinated.[11] This included developing a health worker pocket guide to accessing the COVID-19 vaccine.

Build trust.

The survey highlighted a significant gap between health workers' perceptions of the importance of the vaccine and their trust in the vaccine. As a result, trust-building interventions were emphasised. These were not limited to health workers but were directed to the community as a whole. Key recommended actions included showcasing social influencers (including high-level health personnel) receiving the vaccine and engaging with health workers at vaccination sites to address their concerns before, and during vaccination. Other initiatives included creating safe places for health workers to articulate feelings and concerns about vaccination and to ask questions, and drew on existing, trusted networks of professional associations and trade unions.

Reinforce vaccination as the prevailing social norm.

Recommendations included the development of targeted communication materials to present facts about the vaccine, the introduction of signage and 'behavioural nudges' at vaccine sites to encourage uptake, and positive collaboration with religious leaders and other key community influencers for community engagement activities.

It was also suggested that trusted influencers be recruited as 'vaccine champions' and that various initatives be aimed at generating positive human-interest stories and publicity around health workers receiving the vaccine, so that vaccination was presented as 'the norm'.

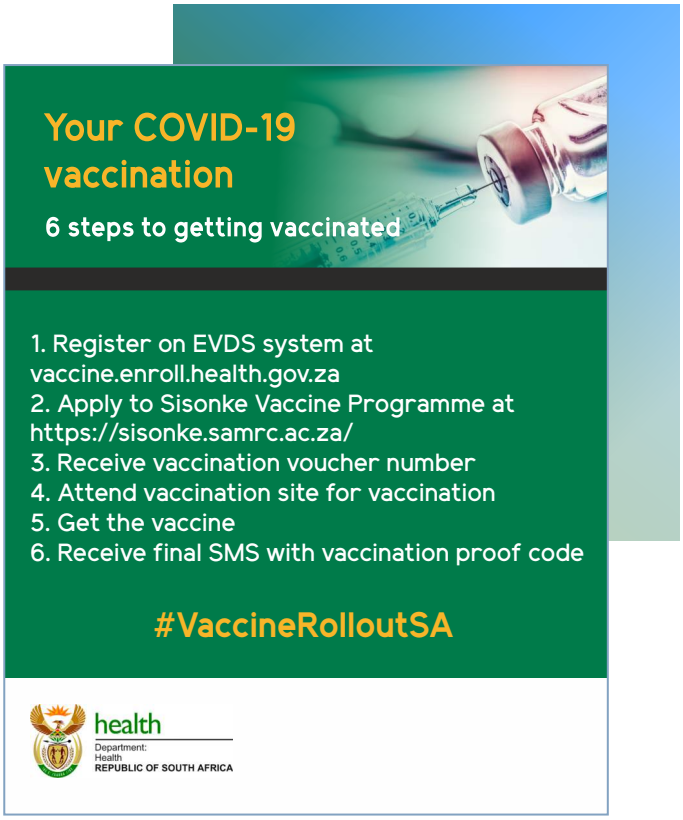
Monitoring.

It was recognised that ongoing monitoring would be needed to address the drivers of vaccine hesitancy and that communications should be adapted when necessary to tackle misinformation.

Action taken

At the time of writing, a number of actions had been taken to implement the recommendations that emerged from the BeSD data. In a live television broadcast, the President, the Health Minister, and union leaders were vaccinated alongside the first health worker to receive the vaccine.

A series of vignette videos in which people express their feelings about the vaccine and the experience of getting vaccinated has been developed by UNICEF for community engagement activities. Provincial health departments also encouraged health workers to make 'selfie' videos, which were disseminated through social media. GIFs have been developed to tackle issues of vaccine efficacy and side effects and have been circulated widely on social media. Informational videos that provide guidance on different ways health workers can get vaccinated have been produced with topics including '6 steps for registration' and 'Steps at vaccination site'.



Conclusion

The ways in which people engage with vaccination services can be complex and multifaceted. The introduction, suspension and reintroduction of COVID-19 vaccines in South Africa may have compounded existing resistance and mistrust in the population. Health workers are well placed to promote vaccination uptake in the community, and understanding their perceptions of COVID-19 vaccines is critical. The use of a digital platform to administer a tailored BeSD survey has proved to be a valuable tool, capable of providing important and timely insights.

As the South African COVID-19 vaccination programme scales up, the UNICEF Country Office will continue to work closely with the government to promote the development and implementation of data-driven interventions. The large volume of responses received poses an analytical challenge, but also provides an opportunity to analyse results at the provincial level to support tailored interventions as vaccine rollout continues.

Working with RCCE focal points at the NDoH and members of the Technical Working Groups, UNICEF will continue to support government efforts to enlist health workers to promote vaccine uptake, amongst their own members and within their communities.

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