MEETING REPORT

Measuring Behavioural and Social Drivers (BeSD) of Vaccination Working Group

1-3 May 2019, Geneva, Switzerland

Convened by World Health Organization Headquarters, Geneva

Aim of this report

To summarise the outputs and plans of a 3-day working meeting for the expert working group (WG) on acceptance and demand data, 1 to 3 May 2019 at WHO Headquarters in Geneva.

Background to the May 2019 meeting

The group's objective is to advance in the development of tools and guidance **to enable immunization programmes and partners to measure and address local reasons of under-vaccination, and to track consistent and comparable data over time** at a national and global level. The standardised tools under development will include quantitative survey questions for caregivers of children and qualitative interview guides for caregivers and healthcare workers. There will also be a related user guide. These tools will support high-quality data collection, analysis and application of findings to immunization programmes. They will also be developed with a long-term view conversant with coming generational changes in decision influences.

The WG was launched by World Health Organization in November 2018 as a workstream under the larger multi-partner Demand Hub and in consultation with UNICEF, the US Centers for Disease Control (CDC), Gavi, the Vaccine Alliance, and the Bill and Melinda Gates Foundation. Members of the group include representatives of global agencies and experts from multiple geographical regions, covering a range of social and behavioural science disciplines with practical experience in high, middle and low-income settings.

Since the launch of this group, a series of monthly teleconferences have taken place to support information sharing, planning, and early work to review the literature and generate insights from a range of relevant projects within and outside of immunization. This background work served as a foundation for the 3-day in-person meeting in May 2019.

May 2019 meeting objectives

- Build a common understanding of working group objectives and planning, and strengthen collaboration.
- Enhance familiarisation with diverse country needs, existing data collection mechanisms, and areas that WG outputs will support.
- Learn from comparable global efforts in developing and implementing standardised data collection tools in areas of health outside of immunization.
- Integrate findings from an initial rapid needs assessment based on end-user informant interviews from regions and countries.
- Agree on a framework for the development of qualitative and quantitative tools, and related user guidance.

Preparations and inputs

In the lead-up to the meeting, the WG members carried out a range of preparations and considered methodological issues. This included literature reviews of evidence for the factors affecting vaccination uptake, and discussions with key stakeholders, experts, as well as regional and country staff from WHO and UNICEF. These activities occurred in addition to the monthly teleconferences of the WG and helped to build a common understanding of the needs and offered initial directions for the tool design.

A summary of preparations that took place prior to the meeting:

- Identified known determinants of vaccination from existing systematic reviews.
- Identified relevant theories and frameworks that can help structure the tools.
- Identified and reviewed existing self-report survey instruments.
- Built a pool of constructs/domains and associated question items.
- Identified user needs and capabilities using a series of pilot informant interviews with colleagues and partners at a regional and country level.
- Decided on main question topic areas and developed an initial draft structure of the quantitative survey tool.

Meeting outline

Following initial introductions and a short framing presentation, **Day 1** focused on revisiting the expected outputs of the WG and its guiding principles for tool development. The most important principles were agreed to be: 1) pragmatism – that the tools can be easily used and the results enable action; and 2) rigour – that the tools are robust, theory-driven, and predictive of behaviour.

Meeting participants, from left to right: Kerrie Wiley, Neetu Abad, Gilla Shapiro, Alina Lack, Wenfeng Gong, Nick Sevdalis, Julie Leask, Monica Jain, Gustavo Correa, Noel Brewer, Saad Omer, Cornelia Betsch, Charles Wiysonge, Gillian SteelFisher, Lisa Menning, Eve Dubé.

To provide an orientation on immunization programme data collection and reporting, the group explored multiple mechanisms including existing coverage surveys, Expanded Programme on Immunization (EPI) reviews, the WHO/UNICEF joint reporting forms, and case-based surveillance (see Annex 3). Opportunities were identified for harmonization so that where possible, the eventual tools can be integrated into existing processes where possible, with consideration of routine monitoring platforms as a possible long term solution. In addition, the WG considered methods for measuring global trends similar to the non-communicable disease risk factor surveillance surveys, the International Tobacco Control Survey and/or partnering with a global polling entity that conducts multi-country surveys.

The group also heard the interim findings of pilot informant interviews carried out with regional and country focal points. These offered insights into need, anticipated use, and practical considerations. The day finished with an initial discussion regarding the structure and scope of what can be measured by the quantitative tool. It was concluded that the main users of the tools would be EPI managers, and implementing partners, e.g. UNICEF and WHO in-country staff.

Day 2 focused on preliminary steps for developing the qualitative and quantitative tools.

Quantitative tool

The quantitative tool is for use with caregivers. The findings would enable insights into behavioural and social drivers of vaccine uptake among children aged under 5 years. This incorporates those arising from the experiences of caregivers. To align the quantitative tool with the factors affecting uptake, the group carefully considered frameworks and models that guide action. The main considerations were the COM-B model[1], Brewer et al.'s Increasing Vaccination Model[2] and a yet-to-be-published "Caregiver Journey" Framework (Annex 2). These models enabled the group to identify important question areas for the quantitative tools. A priority was to structure questions in such a way as to facilitate action, based on a key finding of the early informant interviews.

Based on the considerations of what drives vaccination behaviour, the group agreed to incorporate four question areas into the quantitative tool and drafted indicators and early question items for each:

- Thinking and feeling
- Social processes
- Readiness to vaccinate
- Practical factors

The tool should eventually be tailored according to user needs such as having capacity for short and long formats. It would have standardisation through core recommended question items from each question grouping while also having sufficient flexibility to be adapted to diverse settings.

[1] Michie et al. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science* 6:42. doi: 10.1186/1748-5908-6-42

[2] Brewer et al. (2017). Increasing Vaccination: Putting Psychological Science into Action. *Psychological Science in the Public Interest, 18(3),* 149-207. doi.org/10.1177/1529100618760521

Qualitative tool

The qualitative tools are for use with caregivers, health care workers/community health workers, and immunization programme managers. A sub-group with relevant expertise considered how these tools would be structured, with the aims to have them harmonized to the survey tool.

The qualitative tools could be used in four possible ways – as follows:

- Pre-survey, as an exploratory approach to discover where to focus the subsequent quantitative survey;
- Post-survey, to enrich and contextualise findings from the quantitative survey;
- Listening for change, for longer term periodic use to identify previously unknown issues - "horizon scanning";
- In the context of emergencies, for rapid response with the view to offering understanding and informing responses to evolving public health situations.

These four possible applications of the qualitative tools are not mutually exclusive and may be jointly applied (e.g., qualitative exploration, followed by quantitative survey, followed by qualitative post-survey elaboration of the survey findings).

Day 3 began with some refinement of the qualitative and quantitative tools. The discussion then shifted into a planning phase, exploring key next steps for testing and evaluation of the tools and ongoing stakeholder involvement.

The following areas were discussed at length:

Project planning for the quantitative tools involves phases of question refinement. Cognitive testing will happen in 6-7 countries, that represent a matrix of level of population remoteness, household income, language, and potential for impact. Testing will coincide opportunistically in countries undertaking programme activities such as EPI reviews or similar. For the qualitative tools, there will be a survey of end users and mapping of existing guidance documents specific to qualitative research to inform development of the user guide.

- **Stakeholder engagement**. The WG will disseminate a regular update on its progress and establish a web page containing information on the tool development process and opportunities for stakeholders provide input or contribute. The WG will also continue the end-user interviews.

- **Name of the WG**. The strengths and limitations of the term "Acceptance and Demand" were considered. Since the tools attempt to identify all factors influencing uptake, they will capture demand, supply, experiential, structural and internal factors that affect vaccination. Given the importance of how language shapes understanding, assumptions and solutions regarding uptake, it was agreed to adopt an interim name "Measuring Behavioural and Social Drivers (BeSD) of Vaccination" working group.

Meeting outputs

In summary, the deliverables of the meeting were as follows:

- Key insights from relevant studies completed to date and current programme data collection processes.

- Agreement on guiding principles, scope and structure for the development of qualitative and quantitative tools, including an interim working model. Agreed on four areas for the quantitative tool: *thinking and feeling, social processes, readiness to vaccinate, and practical issues.*
- Agreement on indicators and initial questions/items for the qualitative and quantitative tools (structured around the four main question areas).
- Drafted an outline of the user guidance for each of the quantitative and qualitative tools.
- Development of a plan for the development of the tools, including stages of cognitive and psychometric validation testing, as well as stakeholder consultations throughout the process.
- Development of an outline for the user guidance, defining expected user groups and key content areas, with the aim of supporting local adaptation and implementation
- Agreement on methods and activities to support the tool's dissemination and use, primarily centred on a digital platform, data repository and analytic support.

The WG will next continue drafting quantitative and qualitative tools, then over the following months will begin testing and refining items, and developing user guides with a view to disseminating final draft package of tools and guidance by mid-2020.

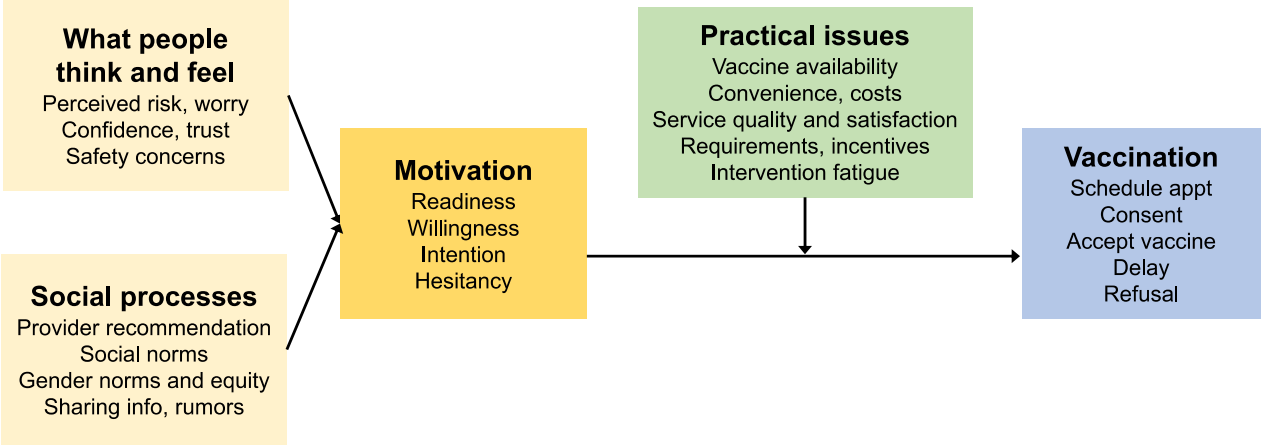
Annex 1: Group membership

Lisa Menning (Secretariat)	World Health Organization Headquarters, Switzerland
Julie Leask (Chair)	University of Sydney, Australia
Neetu Abad	Centers for Disease Control and Prevention (CDC), US
Cornelia Betsch	University of Erfurt, Germany
Noel Brewer	University of North Carolina, US
Vinod Bura	World Health Organization, Indonesia
Gustavo Correa	Gavi, the Vaccine Alliance, Switzerland
Ève Dubé	Laval University, Canada
Wenfeng Gong	Bill and Melinda Gates Foundation, US
Benjamin Hickler	UNICEF New York, US
Monica Jain	International Initiative for Impact Evaluation (3ie), New Deli, India
Mohamed Jalloh	Centers for Disease Control and Prevention (CDC), US
Saad B. Omer	Emory University, US
Deepa Risal Pokharel	UNICEF, Pakistan
Nick Sevdalis	Kings College London, UK
Gilla Shapiro	University of Toronto, Canada
Gillian SteelFisher	Harvard University, US
Kerrie Wiley	University of Sydney, Australia
Charles Wiysonge	South African Medical Research Council, South Africa

Annex 2: Models used to inform tool development

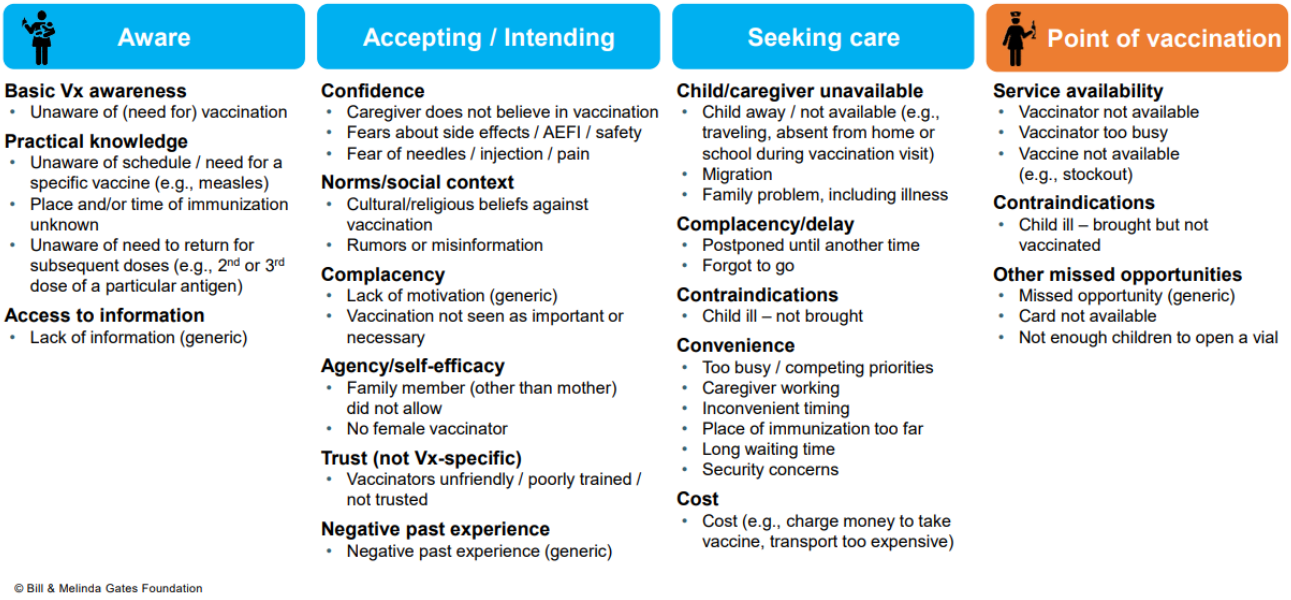
The two models shown here were carefully considered as a basis for identifying important question areas for the quantitative tools. It was recognised that these models may also evolve as the work on tool development and testing advances.

Increasing Vaccination Model



(Based on Brewer, Chapman, Rothman, Leask, and Kempe (2017), in Psychological Science for the Public Interest https://www.ncbi.nlm.nih.gov/pubmed/29611455)

Caregiver Journey Framework



Annex 3: Summary of programme data collection processes