VARN2023
SABIN VACCINE INSTITUTE

VARN2023 CONFERENCE PROGRAM

BANGKOK, THAILAND | JUNE 13 - 15, 2023

SABIN VACCINE INSTITUTE

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Gavi The Vaccine Alliance

The Sabin Vaccine Institute's Vaccination Acceptance Research Network (VARN) is hosting its second annual conference co-convened with UNICEF and co-sponsored by Gavi, the Vaccine Alliance and in support of COVID-19 Vaccine Delivery Partnership priority countries. Conference sessions will provide a space for exploration and facilitate the wide dissemination of a growing body of knowledge, practice, and evidence-informed strategies for driving action across the vaccination acceptance, demand, and delivery ecosystem.

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WELCOME TO THE VARN2023 CONFERENCE: Mission Immunization

On behalf of the Sabin Vaccine Institute and UNICEF, we are privileged to welcome you to this much awaited event. The VARN2023 Conference is co-sponsored by Gavi, the Vaccine Alliance and in support of COVID-19 Vaccine Delivery Partnership (CoVDP) priority countries. We are delighted that this conference is in-person and attendees can fully benefit from opportunities for informal interactions and conversations.

The second annual VARN Conference builds on the success and learnings of the first VARN Conference. The Sabin Vaccine Institute is proud to have launched the Vaccination Acceptance Research Network (VARN) in 2019 to connect stakeholders across disciplines and sectors; to surface and distill evidence-informed knowledge; and to identify solution-focused opportunities to drive and boost immunization.

The global emergency response to the COVID-19 pandemic demonstrated the power of communities to come together to effect positive change—including the most expansive vaccination campaign in history. At the same time, these efforts unveiled stark vulnerabilities in immunization programs. Pre-existing structural and socioeconomic barriers, gender-related inequities, and the growing complexities around vaccine mis- and dis-information drove vast disparities in vaccination coverage.

Though preceded by a period of stagnation in global coverage, the pandemic dealt a significant blow to immunization progress. Between 2019 and 2021, persistent inequities and pandemic-related disruptions in health service delivery resulted in 48 million children remaining 'zero-dose', meaning they did not receive even a single vaccine dose. Another 19 million children remained under-vaccinated, meaning they did not receive a complete schedule of vaccines. As a result, at least 67 million children remain unprotected against preventable diseases and form a growing immunity gap. Already, resurgences in measles, polio, diphtheria, and yellow fever have been reported.

Stalling human papilloma virus (HPV) vaccination coverage and asymmetry in COVID-19 vaccine coverage have underscored the urgent need for pro-active strengthening of life-course immunization. Taken as a group, lower-income countries have yet to surpass 30 per 100 persons receiving a primary course of COVID-19 vaccine. This compares to 61 and 76 per 100 persons in lower middle-income and upper middle-income countries, respectively. Every year HPV causes 600,000 new cervical cancer cases and 340,000-related deaths worldwide, despite the availability of highly effective vaccines since 2006. HPV vaccination was severely impacted by pandemic backsliding. Following a decade of growth, coverage with at least one dose of HPV vaccine fell from 25% in 2019 to 15% in 2021. Changing this trajectory will help to fulfill the incredible promise of a future free of HPV-related cancers.

Vaccines are available, yet not reaching populations most in need.

Globally, there has been a movement to understand *why*.

Social and behavioral science approaches are deepening our understanding of both barriers and opportunities to progress. The challenges are diverse and unique to each context. However, we know communities are more likely to face barriers to vaccination in one of three settings - fragile and conflict-affected, remote-rural, and urban poor. Settings that each affect accessibility and delivery of vaccinations. Likewise, vastly different cultural and social norms across and within nations influence vaccination attitudes and perceptions in distinct ways. It is clear that an accounting of localized needs, priorities, and systems must be made to build vaccine confidence and demand. Community activation and co-design of solutions must be the foundation for sustainable change.

We are at a pivotal moment in shaping the future of immunization. Reversing the unprecedented backsliding in coverage and setting a new course with vaccine equity at its core are our calls to action. We need to reimagine essential childhood immunization and foster its integration into comprehensive health service delivery through policy to community-level responses. We must respond with a clear understanding of the implications of mis- and dis-information. And we must not miss the opportunities to leverage and extend COVID-19 vaccination investments to expand and strengthen life-course immunization and pandemic preparedness to protect and promote healthy futures at all ages.

The real-time sharing of both research and practice-based evidence and experience around vaccine acceptance, demand, delivery, and uptake what works and what does not is required to move the agenda forward. Advocacy and knowledge sharing must be activated to guide vaccination-related decisions. This is what VARN is all about. VARN members span across global regions, work alongside diverse groups, communities, and subpopulations, and are themselves community members.

The VARN2023 Conference brings together global, regional, national, sub-national, and community-level representatives from over 30 countries to share learnings and solutions from work conducted across more than 40 countries- over half of which are CoVDP priority countries. The participation of so many key changemakers and thought leaders exemplifies that the recovery and extension of the benefits of immunization is truly a mission worth embracing.

Anuradha Gupta,
President
Global Immunization
Sabin Vaccine Institute, USA

Ephrem Lemango,
Associate Director – Health, Chief of Immunization
UNICEF Headquarters

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PARTNER RESOURCES

Sabin Vaccine Institute

The Sabin Vaccine Institute is a leading advocate for expanding vaccine access and uptake globally, advancing vaccine research and development, and amplifying vaccine knowledge and innovation. Unlocking the potential of vaccines through partnership, Sabin has built a robust ecosystem of funders, innovators, implementers, practitioners, policy makers and public stakeholders to advance its vision of a future free from preventable diseases. As a non-profit with more than two decades of experience, Sabin is committed to finding solutions that last and extending the full benefits of vaccines to all people, regardless of who they are or where they live. At Sabin, we believe in the power of vaccines to change the world.

UNICEF

UNICEF believes that taking people centered approaches in the design of the delivery and utilization of health programmes is fundamental to ensure that immunization and other health services are tailored to the needs of the most vulnerable, particularly in zero dose and under-vaccinated communities. To achieve this, UNICEF supports countries to develop evidence-based, locally-informed, context-specific strategies with active community participation to improve vaccine uptake.

Gavi, The Vaccine Alliance

Created in 2000, Gavi is an international organization – a global Vaccine Alliance, bringing together public and private sectors with the shared goal of saving lives and protecting people's health by increasing equitable and sustainable use of vaccines. As part of its mission to save lives and protect people's health by increasing equitable and sustainable use of vaccines, Gavi has helped vaccinate more than 981 million children in the world's poorest countries, preventing more than 16.2 million future deaths. Gavi has already protected an entire generation of children, and is now working to protect the next generation. By improving access to new and under-used vaccines for millions of the most vulnerable children, the Vaccine Alliance is transforming the lives of individuals, helping to boost the economies of lower-income countries and making the world safer for everyone.

Scan the QR Code to Access Partner Resources

VARN2023 AGENDA

VARN2023: When Communities Lead, Global Immunization Succeeds

DAY 1: JUNE 13, 2023

8:30 - 10:30 AM
Ballroom 1

KEYNOTE SESSION: Welcome & Keynote Dialogue

Welcoming Remarks and Videos by Ève Dubé, PhD, VARN Chair

Medical Anthropologist, Quebec National Institute of Public Health, Canada

Keynote Remarks

- **Anuradha Gupta**, MBA, *President of Global Immunization, Sabin Vaccine Institute*
  Immunization: The Equity Imperative

Keynote Dialogue

Moderator: Anuradha Gupta

- **Deepa Risal Pokharel**, MA, *Senior Adviser, Social and Behavior Change/Team Lead Immunization Demand, UNICEF HQ*
- **Dr. Sangwe Clovis Nchinjoh,** MD, MPH, MSc, *Founder and Board President, Rural Doctors & Associate at Clinton Health Access Initiative, Cameroon*
- **Saad Omer,** MBBS, PhD, *Director, University of Texas Southwestern Medical Center, USA*
- **Mutua L. Mutinda,** KECN, KRCHN, *Head of Health Promotion in Nairobi City County, Kenya*
- **Glenda Gray**, MBBCh, FC Paeds, DSc, *President, South African Medical Research Council*

10:30 - 11:00 AM — **MORNING BREAK**

11:00 AM - 12:45 PM
Ballroom 1

CONCURRENT SESSION I: Recovery & Reimagining Childhood Essential Immunization

SESSION 1: Research-Based

Moderator: Stacey Knobler, MSc, *Vice President, Vaccine Innovation & Global Immunization, Sabin Vaccine Institute*

- **Doris Njomo,** PhD, MA, *Principal Research Scientist, Kenya Medical Research Institute*
  Effect of COVID-19 Pandemic on Routine Childhood Vaccination in Kenya
- **Sara Al-Dahir**, PharmD, PhD, *Clinical Professor, Xavier University of Louisiana*
  The Impact of Coronavirus Pandemic Shutdowns on Immunization Completion in Hadeetha, Anbar, Iraq: A Case-Study of Vaccine Completion in a Recovering Healthcare System
- **Carla Puca**, MPH, MIDI, *Project Officer, Telethon Kids Institute, Australia*
  Moort Vax Waangkiny: Understanding Barriers to Routine Vaccine Uptake Among Aboriginal Children Aged Under 5 Years in the Perth Metropolitan Region
- ***(Presenting in French)*** **Naby Yaya Conté**, MD, MPH, *WHO Consultant, EPI Program Guinea*
  Study of Factors Associated with Zero Dose and Under-Immunized Children in the Health District of Siguiri in Guinea 2022

Ballroom 2

SESSION 2: Demand Generation Focused

Moderator: Sharon Barnhardt, PhD, MPA, *Director of Research, Center for Social and Behavior Change, Ashoka University*

- **Mofeyisara Omobowale**, PhD, *Lecturer, Institute of Child Health, College of Medicine, University of Ibadan, Nigeria*
  Increasing Demand for Vaccination Through Innovative Childhood Immunization Strategies for Working Mothers in Ibadan: The Role of Social (Relations) Influencers
- **Dumisile Nkosi**, MSc, *Clinical Trial Coordinator, University of Malawi*
  Determinants of Vaccine Coverage and Acceptability of Malaria RTSS Vaccine in Children Aged 6-23 Months in Malawi: A Healthcare Provider's Perspective.
- **Septrina Frisca Tobing**, MAAPD, *Quality Assurance Coordinator, Empatika*
  Engaging Private Sector to Increase Routine Childhood Immunization in Indonesia
- **Devi Leena Bose**, MA, *Director, Behavioral Change and Communication, Kantar, India*
  Lessons on Strengthening Vaccine Demand and Uptake by Parents of Children Under Two: Notes from Pilot in Northern India
- **Emily Hoffman**, MD, *Infectious Disease Fellow, New York University*
  Developing Peer Vaccine Educators within Community Healthcare Practices: A Pragmatic, Multi-Site Randomized Controlled Trial of Peer Education to Increase Routine Pediatric Vaccine Uptake in New York

Ballroom 3

SESSION 3: Practice-Based

Moderator: Richard Kabanda, PhD, MPH, MBA*, Acting Commissioner Health Services, Health Promotion, Education, and Health Communication, Ministry of Health, Uganda*

- **Carla Toko**, MPH, *Senior Manager, Advocacy & Communications, VillageReach*
  Integration of COVID-19 Vaccination with Routine Immunization Services at Two Primary Health Centers in Kinshasa, Democratic Republic of Congo
- **Yatender Singh**, MSW, *Program Manager, Project Concern International*
  Rebounding Routine Immunization Coverage Slowed Down by COVID-19 Pandemic: How Community Action Groups (CAGs) Came Forward and Turned the Tide in Uttar Pradesh, India
- **Muhammad Zia Muneer**, MPhil, *Manager, IRD Pakistan*
  Exploring Caregivers' Concerns and Queries Related to Routine Maternal and Childhood Immunizations in Pakistan: Analysis of Provincial Helpline Data from 2019 to 2022
- **Mavuto Thomas**, MPH, *Chief Health Promotion Officer, Ministry of Health Malawi*
  Reducing the Zero Dose Children in Mtengowanthenga, Dowa District in Malawi
- **Dr. Sangwe Clovis Nchinjoh,** MD, MPH, MSc, *Founder and Board President, Rural Doctors & Associate at Clinton Health Access Initiative, Cameroon*
  The Use of Community-Oriented Primary Care (COPC) Model to Generate Vaccine Demand: The Case of a Remote Fishing Community in Cameroon

12:45 - 2:00 PM — **LUNCH**

VARN2023: When Communities Lead, Global Immunization Succeeds

DAY 1: JUNE 13, 2023

2:00 - 3:45 PM **CONCURRENT SESSION II: Vaccinating across the Life-Course: Maximizing the Benefits to All**

Ballroom 1 **SESSION 1: Research-Based**

Moderator: Susanne Montgomery, PhD, MPH, MS, *Professor and Dean, Loma Linda University*

- **Laura Skrip**, PhD, *Associate Professor, University of Liberia College of Health Sciences*
  Assessing Social, Demographic, and Clinical Drivers of COVID-19 Vaccination Behavior in Post-Ebola Liberia
- **Porcia Manandhar**, PhD Candidate, *Johns Hopkins University*
  Research on COVID-19 Vaccine Trust, Inequities, and Hesitancy in Nepal
- **Julio Ichazo**, MAppEc, *Project Coordinator, Fundación Bunge y Born*
  First Vaccine Confidence and Access Index in Argentina: Results Comparison from 2019 to 2022
- **Saif ul Hadi**, MA, *Director, Global Access and Behavioral Research, International AIDS Vaccine Initiative*
  How Gamified Behavioral Experiments Can Enable a Deeper Understanding of Say-Do Gaps: Learnings From an HIV Broadly Neutralizing Antibody Acceptability Study in India
- **Stefan Mandić-Rajčević**, MD, PhD, *Social & Behavior Change Specialist, JSI Research & Training Institute, Inc*
  Developing a Behavior-Led Strategy to Integrate COVID-19 Vaccination into Life-Course Vaccination and Healthy Lifestyles

Ballroom 2 **SESSION 2: Demand Generation Focused**

Moderator: Chisom Obi-Jeff, MSc, *Principal/CEO, Brooks Insights*

- **Richard Kabanda**, PhD, MPH, MBA, *Acting Commissioner Health Services, Health Promotion, Education, and Health Communication, Ministry of Health, Uganda*
  Demand Generation as Part of Pandemic Preparedness, Vaccine Access and Delivery, and Decision-Making
- **Rupali Limaye**, PhD, MPH, MA, *Deputy Director, International Vaccine Access Center, Johns Hopkins Bloomberg School of Public Health*
  Vaccine Acceptance and Demand Generation for Future Vaccines
- **Mark Donald C. Reñosa**, RN, MSN, *Supervising Science Research Specialist, Department of Epidemiology and Biostatistics, Research Institute for Tropical Medicine - Department of Health, Philippines*
  Human-Centered Design Bolsters Vaccine Confidence in the Philippines – Results of a Randomized Controlled Trial
- **Kiranmayee Muralidhar**, MBBS, MPH, *Research Physician, Public Health Research Institute of India*
  Knowledge and Acceptability of HPV Vaccination for Young Adult Women in Rural Mysore District, India: A Mixed-Methods Study
- **Heather Lanthorn**, ScD, MPH, *Program Director, Social Science Research Council*
  The Mercury Project: Cost-Effective, Scalable Solutions to Insufficient Demand for Vaccinations Over the Life Course
- **Heidi J. Larson**, PhD, *Professor of Anthropology, Risk and Decision Science, Director, The Vaccine Confidence Project, London School of Hygiene & Tropical Medicine*
  HPV and the Challenges Presented by the Perception and Practice of a "Female Only" Vaccine

Ballroom 3 **SESSION 3: Practice-Based**

Moderator: Aamer Ikram, PhD, MCPS, *Chief Executive Officer, National Institute Health of Pakistan*

- **Prem Singh**, MBBS, MD, *Associate Director and Country Lead-Immunization, Jhpiego*
  Building a Sustainable Adolescent Vaccination Program: Lessons From Recent Efforts to Improve the Uptake of Td Vaccination Across Four States of India
- **Marissa Malchione**, MS, *Senior Manager, Research & Analysis, Vaccine Innovation & Global Immunization, Sabin Vaccine Institute*
  Exploring Determinants of Response-Ready Influenza Vaccination Programs in Middle-Income Countries
- **Saransh Sharma**, MSc, *Lead – Behavioral Science*, *Final Mile Consulting*
  Psycho-Behavioral Segmentation and Targeted Solutions for COVID Vaccine Uptake in LMICs [Burkina Faso, Cote d'Ivoire, Kenya, Pakistan]
- **Angela Chaudhuri**, MPH, *Chief Catalyst, Swasti*
  Last Mile Access to Vaccines: The Case for People-Centered Health Response
- **Adidja Amani**, MD, MPH, MVDD, PhD Candidate, *Global COVID-19 Vaccine Delivery Partnership, WHO Regional Office for Africa*
  Using the Integration Mapping Tool to Support Countries in Assessing Their Level of Integration
- **Marley Jurgensmeyer**, MPH, *Research Associate, International Vaccine Access Center, Johns Hopkins Bloomberg School of Public Health*
  VIEW-hub: Visualizing Data on Vaccine Use and Impact

3:45 - 4:00 PM **AFTERNOON BREAK**

4:00 - 5:00 PM **POSTER SESSION 1**

Riverside Foyer

Childhood Essential Immunization

Riverside Rooms 5-7

Life-Course Vaccination

5:00 - 7:00 PM **SIDE EVENT**

Ballroom 2

Vaccination Demand Hub Global Partners Session

7:00 PM **ON-SITE RECEPTION**

Siam Yacht Club

VARN2023: When Communities Lead, Global Immunization Succeeds

DAY 2: JUNE 14, 2023

8:00 - 10:00 AM | **Ballroom 1**

PLENARY II: Inequities Creating Zero-Dose Communities & Gender Gaps in Immunization

Moderator: Glenda Gray, MBBCh, FC Paeds, DSc, *President, South African Medical Research Council*

Part 1: Moderated Fireside Chat

- **Edina Amponsah-Dacosta**, PhD, MPH, *Postdoctoral Research Fellow, Vaccines for Africa Initiative (VACFA), South Africa*
- **Sunitha Chandrasekhar**, PhD, *Vice President Public Health, 3Analytics*
- **Deepa Risal Pokharel,** MA, *Senior Adviser, Social and Behavior Change/Team Lead Immunization Demand, UNICEF HQ*

Part 2: Presentation Panel

- **Bhakti Ghatole**, MSAP, *Research Assistant, Sangath, India*
  Structural Inequities in COVID-19 Vaccine Access and Uptake Among Transgender and Disability Communities
- **Chinedu Anthony Iwu**, MBBS, MPH, MBA, *Consultant, Department of Community Medicine, College of Medicine, Imo State University*
  Challenges for Mothers in Rural Areas [of Nigeria] in the Uptake of HPV Vaccines Among Their Children in a Developing Country
- **Claire Thomas**, *Co-Deputy Director, Minority Rights Group International*
  Application of a Diversity Equity and Inclusion Framework to Address the Immunization Zero Dose Challenge in Somalia
- **Manojkumar Choudhary**, PhD, MPS, *Monitoring and Evaluation Specialist, CORE Group Partners Project*
  Value of Deploying Community-Level Mobilizers to Mobilize Communities and Boost or Rebound Vaccination Uptake: CORE Group Partners Project's (CGPP) Experience in Increasing Polio, Routine Immunization, and COVID-19 Vaccination in Hard-to-Reach Areas of Uttar Pradesh, India

10:00 - 10:30 AM — **MORNING BREAK**

10:30 - 12:30 PM | **Ballroom 1**

PLENARY III: Inequities Within Conflict-Settings & Amongst Marginalized Communities

Moderator: Holly Seale, PhD, MPH, *Associate Professor, School of Population Health, University of New South Wales, Australia*

Part 1: Moderated Fireside Chat

- **Magid Al-Gunaid**, MBBCH, MPA, *Public Health Progams Director, GHD/EMPHNET*
- **Anant Bhan**, MBBS, MHSc, *Mentor, Principal Investigator, Project Lead, Sangath, India*
- **Amaya Gillespie,** *Senior Social and Behaviour Change Scientist, UNICEF regional office for Middle East and Northern Africa*

Part 2: Presentation Panel

- **Chattiya Nitpolprasert**, PhD Fellow, *Social and Behavioral Researcher, Adam's Love Global Foundation*
  COVID-19 Vaccination and People Living with HIV in Thailand
- **Mónica Berger González**, PhD, MPH, *Director, Unit of Medical Anthropology, Universidad del Valle de Guatemala*
  Vaccination in Plurimedical Settings: Understanding Traditional Medicine's Role for Effective Communication Efforts Against COVID-19
- **Patricka Chulamokha**, MA, MPH, *Regional Vaccination Support Officer, International Organization for Migration*
  Understanding and Addressing COVID-19 Vaccine Confidence and Demand in Displaced Person Shelters on the Thai Myanmar Border—A Human-Centered Design Project
- **Mohamed Modber**, RN, CHN, *Community Health Nurse, Sudan*
  Barriers to Vaccination in the Conflict Setting of Sudan

12:30 - 1:30 PM — **LUNCH**

VARN2023: When Communities Lead, Global Immunization Succeeds

DAY 2: JUNE 14, 2023

1:30 - 3:00 PM — **CONCURRENT SESSION III: Complexities of Vaccine Equity**

Ballroom 1

SESSION 1: Research-Based
Moderator: Rupali Limaye, PhD, MPH, MA, *Deputy Director, International Vaccine Access Center, Johns Hopkins Bloomberg School of Public Health*

- **Lili Nur Indah Sari**, MPP, *Vaccine Senior Program Officer, Clinton Health Access Initiative*
  COVID-19 Vaccine Acceptance Survey in Indonesia: Community and Provider Perspectives Across Four Provinces
- **Katie Attwell**, PhD, *Associate Professor, University of Western Australia*
  Vaccination Acceptance Amongst At-Risk and Neglected Groups: Recentering the State to Address the Limitations of Existing Theoretical Frameworks
- **Melanie Abongo Awino**, PhD, MPH, *Clinical Researcher, Kenyatta National Hospital*
  Prevalence and Challenges of Uptake of COVID-19 Vaccine Among the Key Population in Kenya
- **Sneha Shashidhara**, PhD, *Senior Research Fellow, Ashoka University*
  COVID-19 Vaccine Hesitancy in Rural India

Ballroom 2

SESSION 2: Demand Generation Focused
Moderator: Mavuto Thomas, MPH, *Chief Health Promotion Officer, Ministry of Health Malawi*

- **Thiaba Fame**, MPH, *Risk Communication & Community Engagement Coordinator, International Federation of Red Cross and Red Crescent Societies*
  Using Real-Time Community Insights to Inform and Adapt Plans and Strategies to Improve Vaccine Uptake: Red Cross and Red Crescent Approach and Lessons Learned from Ebola to COVID-19
- **Raveesha Mugali,** MD, MPH, *Health Specialist - Immunization, UNICEF*
  Rapid Community Assessments are Effective Tools for Identifying, Understanding and Reaching Missed Communities, Especially During the Pandemic
- **Linda Shuro**, PhD, *Evaluation Coordinator, VillageReach*
  Evaluation of Community-Based Participatory Project to Identify Barriers of Childhood Immunization Uptake and Generate Community-Driven Solutions in Zambézia, Mozambique
- **Viviane Bianco**, MSGH, *Social and Behavior Change Specialist, UNICEF Regional Office for Europe*
  Implementing a Nation-Wide SMS Reminder to Increase HPV Vaccination in Georgia: Results from a 5-Arm Parallel Randomized Controlled Trial
- **Corrina Moucheraud**, ScD, MPH, *Associate Professor, University of California Los Angeles*
  HPV Vaccination in Kenya: Factors Associated with Uptake
- **Holly Seale**, PhD, MPH, *Associate Professor, School of Population Health, University of New South Wales*
  "It's no use saying it in English": A Qualitative Study Exploring the Strategies to Enhance Immunization Uptake Amongst Ethnic Minority Communities in Australia

Ballroom 3

SESSION 3: Practice-Based
Moderator: Robert Kanwagi, MPH, *Team Lead, Vaccine Confidence Project*

- **Yulianto Santoso Kurniawan,** MD, *National COVID-19 Coordinator (Vaccine Access & Health Security Initiative), Australia Indonesia Health Security Partnership*
  Inclusive Vaccination: Narrowing Operational Gaps COVID-19 Vaccinations for People with Disability
- **Djeneba Coulibaly-Traore,** PhD, MPH, *Country Project Director, PATH*
  Improving Vaccine Uptake in the Democratic Republic of Congo: Engagement of Non-Traditional Partners to Improve COVID-19 and Routine Immunization
- **Sabitri Bhatta,** MA, *Vaccination Program Support Specialist, Abt Associates, Inc*
  Engaging Community Health Workers, Elected Leaders, and Other Influential Community Members in Communication and Mobilization Activities to Increase COVID-19 Vaccine Acceptance in Municipalities with Low Vaccination Coverage [in Nepal].
- **Isaac Olufadewa,** MBBS, MHS**,** *Founder, Slum and Rural Health Initiative*
  Young People as Change Agents in Vaccination Programs: Lessons from the 'Youth for COVAX' Project in 2 African Countries [Nigeria and Ethiopia]
- **Doreen Tuhebwe,** PhD Candidate, MPH, *Research Fellow, Makerere School of Public Health*
  Improving HPV Vaccine Acceptance Through Peer-to-peer Education Among Adolescent Girls in the Urban Poor Settings of Kisenyi, Kampala, Uganda

3:00 - 3:30 PM — **AFTERNOON BREAK**

3:30 - 4:30 PM — **POSTER SESSION 2**

Riverside Rooms 5-7 — **Demand Generation**

Riverside Foyer — **Social Listening and Combating Misinformation**

4:30 - 6:30 PM — **SIDE EVENTS**

Ballroom 2

Skills Building Session on Applied Behavioral Science for Health Equity
Facilitated by UNICEF

Ballroom 3

How Understanding Behavior Can Help Us Improve Immunization Services Experiences
Facilitation/Moderation: The Vaccination Demand Hub facilitated by JSI

DAY 2: JUNE 14, 2023

6:30 - 8:30 PM

Ballroom 1

EVENING EVENT: Sabin Vaccine Institute's Social and Behavioral Research Grants Program: Video Narrative Project Screening

Welcoming Remarks:

Theresa Sommers, PhD, MPH, *Senior Manager of Research, Vaccine Acceptance & Demand, Sabin Vaccine Institute*

Nick Boehman, *Associate, Vaccine Acceptance & Demand, Sabin Vaccine Institute*

Screening:

- ***Setting the Scene: Opportunity for Positive Change***
- ***Methodology, Data Gathering, & Analysis***

Panel Discussion

Screening:

- ***Key Findings***
- ***The Way Forward: When Communities Lead, Vaccination Succeeds***

Panel Discussion

Refreshments provided

VARN2023: When Communities Lead, Global Immunization Succeeds

DAY 3: JUNE 15, 2023

8:30 - 10:00 AM **PLENARY IV: Open Forum Discussion**

Ballroom 1

Challenges of Online & Offline Circulating Misinformation Relating to Zero-Dose Children and Vaccine Introduction

Moderator: **Angus Thomson,** PhD, *Principal, Irimi Company*

Panelists:

- **Adidja Amani,** MD, MPH, MVDDc, PhD Candidate, *Global COVID-19 Vaccine Delivery Partnership, WHO Regional Office for Africa*
- **Ana Bottallo,** PhD, *Journalist, Folha de S. Paulo, Brazil*
- **Julie Leask,** PhD, MPH, *Social Scientist and Professor, Faculty of Medicine and Health, University of Sydney*
- **Farah Naz Qamar,** MD, MSc, *Associate Professor, Aga Khan University*
- **Joe Smyser,** PhD, MSPH, *Chief Executive Officer, The Public Good Projects*

10:00 - 10:30 AM **MORNING BREAK**

10:30 - 12:30 PM **CONCURRENT SESSION IV: Tools and Approaches to Boost Vaccine Confidence**

Ballroom 1

SESSION 1: Research-Based
Moderator: **Kate Hopkins**, PhD, MPH, *Director of Research, Vaccine Acceptance and Demand, Sabin Vaccine Institute*

- **Emily Miller,** MGH, *Education and Training Coordinator, International Vaccine Access Center at Johns Hopkins Bloomberg School of Public Health*
  Evaluation of a Training Resource to Strengthen Healthcare Worker Capacity in Combating Vaccine Misinformation
- **John Cook**, PhD, *Senior Research Fellow, University of Melbourne*; **Jacquellyn Ssanyu**, MPH, *Research Coordinator, Makerere University;* **Doris Njomo**, PhD, MA, *Principal Research Scientist, Kenya Medical Research Institute;* **Rubina Qasim**, RN//RM, MScN, *Acting Principal, Dow Institute of Nursing & Midwifery, Dow University of Health Sciences, Karachi, Pakistan*
  Co-Designing a Mobile-Based Game to Improve Misinformation Resistance and Vaccine Knowledge in East Africa and South Asia
- **Suman Pant**, MBBS, MPH-GH, *Research Officer, Nepal Health Research Council*; **Tahir Yousafzai**, PhD, MPH, *Assistant Professor, Departmen tof Pedatrics and Child Health, Aga Khan University*
  How Microbe Literacy Workshops are Conducted and Why We Think They Work

Ballroom 2

SESSION 2: Making it Personal: Using Motivational Interviewing to Increase Pandemic Vaccine and Routine Immunization Uptake Across Four Countries
Moderator: **Nessa Ryan,** PhD, MPH, *Global Health Epidemiology Fellow, Global Immunization Division, US Centers for Disease Control and Prevention*

- **Arnaud Gagneur,** MD, PhD, *Professor, Université de Sherbrooke*
  Training HCW in an Evidence-Based Immunization Promotion Strategy that Integrates MI in Quebec
- **Julie Leask,** PhD, MPH, *Social Scientist and Professor, Faculty of Medicine and Health, University of Sydney*
  The Sharing Knowledge About Immunization (SKAI) Approach Integrating MI in Australia
- **Raluca Zaharia,** *Social and Behavior Change Specialist, UNICEF Romania*
  Using Motivational Interviewing to Encourage Timely Completion of Vaccinations and Improved Interpersonal Communication Between HCWs and Caregivers in Romania
- **Hinda Omar,** *Health Educator Specialist, Minnesota Department of Health, USA*
  & **Nessa Ryan,** PhD, MPH, *Global Health Epidemiology Fellow, Global Immunization Division, US Centers for Disease Control and Prevention*
  Modules to Build Skills in Effective Peer-to-Peer Communication About Vaccines in Somali Diaspora Communities

Breakout Groups: Gain practical experience using a role-playing motivational interviewing exercise

Ballroom 3

SESSION 3: Skills Building Workshop on Human-Centered Design Approach to Increase Vaccine Demand
Moderator: *UNICEF/Nucleus*

During this interactive skills building session, practical tools will be introduced to analyze complex challenges and foster collaborative problem-solving through various systems mapping methods. Participants will engage in group activities using example scenarios to enhance community understanding and engagement with primary health services.

12:30 - 2:00 PM **LUNCH BREAK**

DAY 3: JUNE 15, 2023

2:00 - 3:30 PM

CONCURRENT SESSION V: Social Listening and Understanding Community Information Needs

Ballroom 1

SESSION 1: Bridging Research to Practice

Moderator: Kate Hopkins, PhD, MPH, *Director of Research, Vaccine Acceptance and Demand, Sabin Vaccine Institute*

- **Chrys Promesse Kaniki,** MD, PhD Candidate, *Senior Technical Officer for Strategic Program and Bingwa Initiative Coordinator, Africa Centers for Disease Control and Prevention*
  Mind the Gap: Bridging Disparities in Vaccine Acceptance Across Different Communities
- **Susanne Montgomery**, PhD, MPH, MS, *Professor and Dean, Loma Linda University*
  Understanding COVID-19 Vaccine Acceptance Among Healthcare Workers: Implications for Community
- **Valentina Bollenback,** *Regional Program Director - Asia, MAGENTA*
  Countering Misinformation in South Asia Amid the COVID-19 Pandemic [Afghanistan, Bangladesh, India, Pakistan, Sri Lanka]
- **Lucilla Blankenberg**, *CEO, Community Media Trust*
  Zwakala National Youth Social Media Campaign to Mitigate Rumors Using Humor [in South Africa]
- **Charles N. Kakaire**, MPH, *Social and Behavior Change Specialist, Immunization, UNICEF*
  Social Listening and Anthropological Insights into Ebola Virus Disease and Vaccination in Uganda: A Mixed Methods Study

(Presenting in French)

- **Joël Fabrice Konan Djaha**, MPH, *Qualitative Research Assistant, Université Félix Houphouët-Boigny /Programme PAC-CI*
  Vaccination Against COVID-19 in Côte d'Ivoire: Responding to Missed Opportunities to Promote to Virtual Facebook Communities

Ballroom 2

SESSION 2: Demand Generation Focused

Moderator: Chelsey Lepage, MA, *Director of Programs, Irimi*

- **Margie Danchin**, MBBS, FRACP, PhD, *Consultant Paediatrician, Murdoch Children's Research Institute* Vaccine Champions Program in Viet Nam and Fiji
- **Raheel Allana**, MSBE, BDS, *Research Specialist, Aga Khan University*
  Mobile Phone Caller Tunes as an Innovative Strategy to Mitigate Pandemic Spread and to Promote Vaccination Uptake in Pakistan Digital Health Strategies
- **Chizoba Wonodi**, DrPH, *Associate Scientist, Johns Hopkins Bloomberg School of Public Health; and Convener, Women Advocates for Vaccine Access*
  Targeted Messaging for COVID-19 Vaccine Acceptance (TM-COVAC)
- **Daniela Da'Costa**, MSc, *Technical Advisor, Institute of Inclusive Health, and Research Guest, Unit of Medical Anthropology, Universidad del Valle de Guatemala*
  Developing a Transdisciplinary Approach to Intercultural Team Building for Addressing Vaccine Hesitancy Uptake in Maya Communities of Guatemala
- **Corrina Moucheraud**, ScD, MPH, *Associate Professor, University of California Los Angeles*
  COVID-19 Vaccine Information, Misinformation and Vaccine Uptake in Malawi
- **Rabab Batool**, PhD Candidate, *Senior Instructor, Aga Khan University*
  Typhoid Conjugate Vaccine Acceptance Among Parents of Age-Eligible Children in a Typhoid Outbreak Setting of Lyari Town Karachi, Pakistan

Ballroom 3

SESSION 3: INTERACTIVE SESSION – How to tell your immunization story to a journalist and why?

Moderator: Nadia Peimbert-Rappaport, *Senior Manager, Stakeholder Partnerships, Vaccine Acceptance & Demand, Sabin Vaccine Institute*

- **Ana Bottallo**, PhD, *Science Journalist and media mentor, Folha de S. Paulo, Brazil*
- **Patrick Kahondwa**, *Science Journalist, Chief Editor of sciencemediardc.net and reporter for SciDev & VaccinesWork*
- **Jaya Shreedhar,** MD, *Media Trainer and Journalist, Internews*

This interactive session with seasoned media trainers and health and science journalists from Africa, Asia and the Americas will provide participants with practical guidance and approaches to engaging with the media on vaccination acceptance, demand and delivery issues, using storytelling and strategic communications tactics. The session will cover:

- Understanding why the media is important to build and sustain immunization
- Addressing the challenges journalists face in covering vaccines and immunization
- Practical approaches and resources for effective media outreach and delivering compelling messages

3:30- 4:00 PM **AFTERNOON BREAK**

DAY 3, JUNE 15, 2023

4:00- 5:00 PM
Ballroom 1

CLOSING PLENARY: Connecting the Vaccination Ecosystem

VARN2023 Poster Session Awards

- **Ève Dubé,** PhD, *Medical Anthropologist, Quebec National Institute of Public Health, Canada*
  VARN2023 Poster Session Awards

Closing Remarks

- **Stacey Knobler**, MSc, *Vice President, Vaccine Innovation & Global Immunization, Sabin Vaccine Institute*
- **Deepa Risal Pokharel,** MA, *Senior Adviser, Social and Behavior Change/Team Lead Immunization Demand, UNICEF HQ*

Recovering lost gains in childhood immunizations

June 13th, 4 PM - 5 PM

An explorative study to assess the impact of the COVID-19 pandemic on uptake of child routine immunizations in South Africa

Sangiwe Moyo[1], Anushka Ashok [2], Laura Myers[1], Rebecca Nyankieya[3], Saransh Sharma[4]

1. Final Mile Consulting, Johannesburg, South Africa,; 2. Final Mile Consulting, Mumbai, India,; 3. London School of Hygiene & Tropical Medicine, London, United Kingdom,; 4. Final Mile Consulting, New York, United States of America;

ABSTRACT:

Background: In 2020, 23 million children missed basic childhood vaccines through routine health services, the highest number since 2009 and 3.7 million more than in 2019 (WHO, 2022). South Africa experienced a decline in the number of children who were fully immunized in 2020 compared with 2019 (Pillay et al., 2021). Disruption of immunization programmes can reverse several progressive years that brought vaccine preventable diseases under control. Understanding the demand and supply issues that negatively impact routine immunization (RI) is critical in future proofing the expanded programme of immunization thereby averting infections and saving lives of children. This study aims to understand the impact of COVID-19 on the uptake of routine child immunization in South Africa from a supply and demand lens.

Methodology: A qualitative research study was conducted through in-depth interviews with 51 parents or caregivers of children below the age of 6 who missed/delayed 1 or more doses that were due during 2020-2022 using public facilities, and 12 health care providers working in immunization during the pandemic period. The sample was drawn from South Africa across Urban and Rural provinces [Gauteng (urban), KZN (mixed) and Mpumalanga (rural)]. South African Demographic and Health Survey (SADHS) data was utilized to identify locations with children under five in the respective provinces. Door-to-door recruitment was then conducted using a screening tool to consenting caregivers or parents of under six children who already access routine immunization from public health facilities. Telephonic interviews were conducted through trained moderators with a validated discussion guide. The transcripts were analyzed using thematic analysis.

Results: The qualitative thematic analysis revealed that prior to the pandemic, routine immunization was considered a norm in South Africa, the pandemic created an 'active decision-making' moment, leading to inaction among some, in what was previously almost automatic behavior. During the peak of the pandemic lockdowns, caregivers were faced with a paradoxical decision of appraising the risk of COVID-19 exposure against the risk of child developing a vaccine preventable disease, where the covid salience outweighed the risk of the missed dose. Caregivers perceived the government communication as routine immunization is not urgent during the lockdown and therefore deprioritized. Active decision-making resulted in three RI uptake pathways: path of procrastination, path of doubt, path of persistent uptake. Of the three pathways, only one led to consistent RI uptake (the 'path of persistence'). An unvaccinated status quo emerged once the other two groups 'fell off the wagon' of immunizing their children as scheduled.

'Procrastinating' caregivers intended to immunize their children but non-consciously delayed doing so, despite viewing RI in a positive light or didn't take action after experiencing service delivery and other barriers. For the doubtful, COVID-19 triggered doubts about the necessity and safety of routine immunization for other caregivers, some of whom felt hesitant about vaccines, prompted or reinforced by emerging concerns about COVID-19 vaccines.

Recommendations: Elaborate recommendations have been proposed for the level of communication interventions, service delivery interventions, and health system intervention, and path specific interventions for procrastination and doubt have also been articulated.

Keywords: Routine Immunization, COVID-19, Behaviour Science, Child Immunization

References:

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Recovery of Routine Immunization Coverage Disrupted by COVID Pandemic: India's lessons in mitigating the catastrophic impact on immunization services disrupted by the pandemic

Jitendra Bhaskar Awale, Dr. Roma Solomon, Manojkumar Choudhary
1. Core Group Partners Project, India

ABSTRACT:

Background: Due to COVID-19 Pandemic and its response activities, routine child immunization was disrupted for a considerable period. As India already accounts for 2.1 million unvaccinated and under-vaccinated children, child mortality would have increased drastically without any intervention. Taking into cognizance of these facts, the Government of India (GoI) and its immunization partners took a series of actions that halted the reverse trajectory of immunization services and showed recovery and improvements in RI coverage.

The CORE Group Partners Project (CGPP) works in 12 districts of Uttar Pradesh. CGPP has deployed district and sub-district mobilization coordinators who support MoH officials through advocacy, social mobilization, capacity building of frontline health workers, and supervision of RI services.

In April 2020, the GoI declared immunization as an essential service and issued guidelines to resume the services. The risk grading of areas as containment and buffer zone was done. It was advised to resume services in all places except containment zones. But caregivers were hesitant due to multiple reasons like the threat of COVID infection.

Interventions: CGPP used its two decades of experience addressing vaccine hesitancy and community engagement. CGPP formed Community Action Groups (CAGs) of local influencers to support health workers and caregivers in social mobilization.

On the supply side, the government did a series of actions like issuing guidelines to health workers to resume and continue RI services, missed sessions substituted in the same week/month through special catch-up campaigns like Intensified Mission Indradhanush (IMI) 3.0, and 4.0 from Feb. 2021 to March 2022 vaccinated 69,57,501 children.

In CGPP work areas, over 1,400 additional sessions were organized by the government from October 2020 to March 2022.

On the demand side, CGPP supported health workers to mobilize the community for immunization services. Regular meetings of CAGs and frontline health workers were organized, supporting health workers in ensuring physical distancing at session sites, thus instilling confidence among the caregivers. Messages on RI were distributed through WhatsApp, mosque, and E-rickshaw rallies to generate awareness. CAG members and ASHAs visited hesitant families to allay their fears.

Results: All these synchronized efforts demonstrated signs of recovery of RI coverage. The full immunization coverage in the CGPP catch-up areas has significantly increased from 65.4 percent in December 2021 to 94.8 percent in September 2022.

Conclusion: Strong political will and ownership by governments and a dependable immunization system ensured vaccines and supplies at session sites. Community confidence-building measures like ensuring physical distancing, masks, and hand-washing at session sites through ASHAs and local influencers supported achieving targets. CGPP teams ensured equity by reaching out to the most marginalized groups like nomads, migrants, etc.

Restoring immunization services is one step in the long journey to reverse the impact of the pandemic on immunization programs. These learnings underline the significance of keeping immunization a top priority while designing any future pandemic response. Immunization systems need to have an in-built mechanism to continue during such health emergencies.
The learnings can be and need to be replicated in many low and middle-income countries.

References:

1. Reaching zero-dose children in India: progress and challenges ahead, Murhekar, Manoj V et al. The Lancet Global Health, Volume 9, Issue 12, e1630 - e1631
2. https://imi3.mohfw.gov.in and https://imi4.mohfw.gov.in

Keywords: Routine Immunisation, COVID-19, Campaigns, Equity, Social Mobilisation

COVID-19 Recovery Strategies and Coverage for Routine Childhood Immunization in Nepal - A retrospective analysis of National Family Welfare Survey Data 2020-2021

Navneet Bichha, Sagar Dahal, Bibek Kumar Lal
1. Department of Research and Development, Dhulikhel Hospital, Kathmandu University of Medical Sciences, Nepal; 2. Child Health and Immunization Service Section, Family Welfare Division, Ministry of Health and Population, Nepal; 3. Family Welfare Division, Department of Health Services, Ministry of Health and Population, Nepal

ABSTRACT:

Background: With the onset of the COVID-19 pandemic in 2020 in Nepal, there had been disruptions to essential health services affecting different regions of Nepal. Immunization programs were significantly impacted in multiple ways, and those disruptions extended to multiple sites, outreach sessions and vaccination campaigns. As a result, large number of children's missed vaccinations during this time period and several still had not caught up on their needed vaccines, making them susceptible to vaccine preventable diseases. Revival of routine immunization program needed efficient and effective interventions by the Ministry of Family Welfare Division of Nepal to strengthen and increase catchup vaccination campaign and immunization coverage.

Methodology: We used the data from the survey done by National Family Welfare Division of Nepal, a cross-sectional survey which collected immunization information using Multi Survey Cluster Indicator data among (n= 596,205) children's below 23 months of age in seven provinces of Nepal from July 2020 to July 2021. Coverage of the following vaccine doses was considered: Bacillus Calmette–Guérin (BCG), DPT- Hep B-Hib 3 (diphtheria, pertussis, and tetanus), OPV3(Oral Polio Vaccine), fIPV2(fractional Injectable Polio Vaccine), Rota 1 and Rota 2, PCV1 and 2 (Pneumococcal Conjugate Vaccine), measles and rubella first and second dose (MR1 and 2), and JE (Japanese Encephalitis).

Results: In comparison to the data survey generated from the year 2019 to 2020, immunization coverage for BCG increased by 5% (86% to 91%), DPT-Hep B-Hib3 increased by 10% (78% to 88%), OPV3 increased by 5% (77% to 82%), fIPV2 increased by 13% (69 to 82%), PCV1 and PCV2 increased by 2% each (85 to 87%) and (80 to 82%)respectively, MCV1 and MCV2 increased by 2% (80% to 82%) and 10% (71% to 81%) respectively and JE increased by 6% (78 % to 84%) from the year 2019 to 2021. Rota virus (1 and 2) vaccination coverage was 81% and 71% respectively from the year 2019 to 2021.

Recommendations and/or Conclusions: Even during the COVID-19 pandemic situation in 2020, Nepal was able to complete its nationwide vaccination campaign, as well as introduce Rota vaccine in the National Immunization Program and achieve high routine immunization coverage in 2020 /2021. The Ministry of Family Welfare Division of Nepal was able to uplift and achieve these objectives by developing resilient immunization strategies such as development of vaccination guideline for delayed schedule, conducting five days provincial level workshop and training on immunization,

review meetings, microplanning formulation at subnational levels, guidelines for Measles Rubella Outbreak Response Immunization, provision of adverse events following immunization kits at all session sites, endorsed by the ministry of health, strengthening of cold chain (expansion and extension) at all level, continued new vaccinator trainings at provincial level, immunization data verification, validation and monitoring for sustainability of municipality for Full Immunization Declaration program, continued adverse event following immunization surveillance at all levels.

Keywords: Catchup vaccination; routine immunization; immunization coverage; Adverse event following immunization; Family Welfare Division

References:

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2. Addressing disruptions in childhood routine immunization services during the COVID-19 pandemic: perspectives from Nepal, Senegal and Liberia. http://dx.doi.org/10.1136/bmjgh-2021-005031
3. Learning from the COVID-19 pandemic to strengthen routine immunization systems. https://doi.org/10.1371/journal.pmed.1003934

COVID-19 Recovery Strategies and Coverage for Routine Addressing health fears that prevent routine immunization in Iraq Background

Sarah-Jean Cunningham
1. MAGENTA

ABSTRACT:

Background: In 2020, the secondary effects of COVID-19 spread in Iraq had an alarming impact on the immunization coverage of all antigens which witnessed a decrease of 17.6% compared to 2019, while the Iraqi Ministry of Health stated serious concerns that by the end of 2020 there could be in excess of 400,000 unvaccinated children. Regular immunization campaigns at the national and subnational levels had been affected by (1) the imposed curfew and movement restrictions, and (2) community fears and perceptions in accessing the health care facilities due to COVID-19.

This project aimed to increase that lost demand for routine immunization (amongst other routine practices such as school attendance) by designing and implementing an evidence-driven behavioural change media campaign across Iraq.

Methodology: MAGENTA used a 360 degree methodology for the project including: a secondary data review, strategy, message pre-testing, production, and finally broadcast of traditional and digital media platforms.

The campaign included a combination of TV and radio advertisements, posters, social media advertisements, and engagement with key influencers in Iraq.

We developed an overarching brand to tie the campaign. This, along with key messages, was tested with different audience segments to assess: comprehension, attraction, behavioral response and engagement.

Media planning was conducted to optimise the media spend available and maximise the opportunity to see (OTS) ratio of the target audience groups.

Results: The message testing results demonstrated a strong behavioural response to the campaign content, and the campaign reached over 7 million Iraqis within the first month of implementation. The project served as a good proof of concept for scale up.

Conclusion: Campaign effectiveness could be increased by:
- More time, repetition and, therefore, exposure to the message
- Shorter ad duration resulting in more airtime within the same resources

Keywords: Iraq, lost routine immunization, children

Delayed Childhood Vaccination in the Urban Poor Settlements of Nairobi, Kenya: An Examination of the Role of Behavioral and Social Factors

Judy Gichuki, Francis Wafula, Ben Ngoye
1. Strathmore University Business School, 2. Institute of Healthcare Management

ABSTRACT:

Background: Disruptions resulting from the COVID-19 pandemic have contributed to a reduction in the global childhood immunization coverage with approximately 25 million children missing out on one or more vaccination doses in 2021(1). Often, children in marginalized populations such as those residing in slums are at higher risk of missing out on vaccination. In Kenya, timely immunization coverage in urban poor settlements remains below 50% (2).

Timely vaccination is crucial in maintaining population immunity against vaccine-preventable diseases (VPDs) and in preventing VPD outbreaks (3) . Exploring context specific reasons for missed and delayed vaccinations facilitates the identification and development of tailored interventions to improve vaccination uptake. This study explores the behavioral and social factors that influence timely childhood vaccination uptake in the urban poor settlements of Nairobi, Kenya.

Methodology: Five focus group discussions (FGDs) were conducted with purposively sampled caregivers of children under five years of age residing in two urban slums in Nairobi, Kenya. Each FGD involved face-to-face discussions with groups of seven to nine female and male caregivers using an open-ended FGD guide. The development of the FGD guide was based on prior literature review. The FGDs were audio-recorded and transcribed. Thematic framework analysis was used to identify emerging themes and patterns.

Results: A total of 39 respondents participated in the FGDs. The median age for the participants was 29 years (range 20–52 years). Preliminary analysis shows that vaccination was perceived to be beneficial and effective in preventing disease. Factors perceived to positively influence vaccination uptake included emotional affect such as parental love for the child and fear of disease, the desire to avert financial losses from diseases, and anticipated regret from the effects of missed vaccinations.

Factors negatively influencing timely vaccination included uncertainties about the side effects of vaccination, lay theories, and cultural beliefs such as the fear of death following an injection if a child had been looked at with “evil eyes”. The level of spousal support and lack of the mother’s autonomy in financial decisions greatly influenced access to timely vaccination. There was inadequate vaccination information to facilitate decisions, with male participants expressing marginalization in vaccination messaging and processes.

Conclusion: Various social, behavioral, and contextual factors influence caregiver vaccination decisions and choices in urban poor settings. Community derived and context specific approaches such as tailored message framing need to be tested and applied to enhance timely childhood vaccination uptake in these marginalized populations.

Keywords: Childhood, Vaccination, Socio-behavioral, Urban, Poor

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2. Mutua MK, Kimani-Murage E, Ngomi N, Ravn H, Mwaniki P, Echoka E. Fully immunized child: coverage, timing and sequencing of routine immunization in an urban poor settlement in Nairobi, Kenya. Trop Med Health [Internet]. 2016 Dec 16 [cited 2021 May 10];44(1):13. Available from: http://tropmedhealth.biomedcentral.com/articles/10.1186/s41182-016-0013-x
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Implementation of an EPI/PEI synergy model for improving immunization in the peri-urban areas of Karachi: A case study

Sobia Ambreen, Muhammad Anas Khan, Rakhshanda Ishaque
1. Vital Pakistan Trust, Karachi, Pakistan

ABSTRACT:

Background: Routine childhood immunization (RI) helps to prevent many infectious diseases and ultimately reduces child mortality(1). Polio is one of the endemic diseases that is still not eradicated in Pakistan(2). Vital Pakistan Trust (VPT), which is a not-for-profit organization in collaboration with EPI (Expanded Program on Immunization) started an immunization project for improving the RI coverage in the peri-urban areas of Karachi especially in Super High Risk Union Councils (SHRUCs). In Pakistan, EPI and PEI work in parallel to improve immunization and a synergy between these two is necessary to improve the immunization coverage and to eradicate the polio virus from Pakistan(3). Therefore, we aimed to implement an EPI/PEI synergy model in one of the SHRUCs (Ittehad Town-UC-2) of Karachi to assess its role in improving the vaccination coverage rates.

Methodology: The EPI/PEI synergy model was implemented in Ittehad town UC 2 since December 2021 by Vital Pakistan Trust, nested within the immunization project of VPT as a pilot project. VPT signed an MOU with the EPI Sindh and District Health Management Teams (DHMTs) on 11th February 2021 for the immunization project to which an addendum was added on 30th June 2021 where VPT was given full charge of Ittehad Town. However, final roll out started in December 2021 when VPT took full charge with a target of completion till December 2022. 12 outreach teams, three fixed sites teams and one mobile van were deployed within the allotted UC. The outreach teams conducted 144 outreach sessions per week as per micro plan whereas the mobile van targeted BCG dose coverage for Zero Dose children. Overall, 16 teams were deployed by VPT. Vaccine coverage against set targets by EPI were measured and coverage rates of zero dose children were assessed.

Results: In Ittehad Town, a total of 14,436 eligible children for RI had been registered, of which 7,260 were female and 7,176 were male. Immunization services were provided through outreach 10,263 (71%), followed by fixed vaccination sites 2,376 (16%), and mobile vaccination vans 1,797 (12%). Through the implementation of this synergy model, the targets were met in 2022 as compared to 2021 and 2020 for BCG, Penta1-3(e.g., In 2020, target for BCG immunization was 5,220 children and achieved 4,163, in 2021, target was 5,076 and achieved 4,132 whereas in 2022 target was 5,700 and achieved 6,917 vaccinations). From December 2021 till December 2022, approximately 7,209 zero-dose children had been identified and reached. Out of this number, 3,143 children had received immunization - leading to a 43.5% success rate in coverage of zero-dose children. However, out of the 56% uncovered children, 89.9% were due to refusals.

Conclusions: The synergy model presents itself as a sustainable solution to the critical barriers to immunization coverage, including issues of accessibility and awareness. The impact of the implementation of this model is a significant increase in the immunization coverage rates overall

as well as tracking and vaccinating defaulters and zero-dose children to help reduce morbidity and mortality related to vaccine-preventable diseases in the community.

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3 Haq Z, Chandio AK, Zafar S, Iqbal F, Naeem A, Karim SJJoGHR. The synergy between Expanded Program on Immunization and Polio Eradication Initiative in Pakistan: a policy and program exploration. 2021;5:e2021081.

Keywords: EPI/PEI synergy, immunization, vaccination, SHRUCs

Understanding stakeholder perspectives for introduction and uptake of newer vaccine/s for acute lower respiratory infections in children – qualitative insights from four Indian states

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1. IAVI; 2. Achuta Menon Centre for Health Sciences Studies; 3. Independent researcher; 4. Savitribai Phule Pune University, Pune Maharashtra; 5. All India Institute of Medical Sciences (AIIMS), Delhi; 6. All India Institute of Medical Sciences (AIIMS), Patna; 7. North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGHRIMS), Shillong, Meghalaya; 8. All India Institute of Medical Sciences (AIIMS), Bibinagar, Hyderabad, Telangana;

ABSTRACT:

Background: Acute lower respiratory infections (ALRIs) are associated with significant morbidity and mortality in children. Preventive products for maternal and pediatric populations (vaccines and monoclonal antibodies) provide an opportunity to decrease disease burden. However, misalignment with community and system needs often lead to delay in introduction and uptake of products1. Respiratory Syncytial Virus (RSV) is one of the major causes of ALRI2 with several products in the development pipeline3. The study aimed to understand community and health system level perspectives on need, acceptability, product and delivery preferences for introduction and uptake of newer maternal and pediatric products against ALRI in children (using RSV as a reference).

Methodology: Qualitative data was collected in four states of Haryana, Bihar, Meghalaya, and Andhra Pradesh between June 2021 and April 2022. The states were selected based on composite score created using key indicators to ensure representation. Using pre-designed and pilot tested interview guides in-depth interviews and group discussions were conducted at community and health system settings. Program managers (PMs:15), health care providers (HCPs:21), frontline health workers (FHWs:60), and caregivers/beneficiaries (83) were purposively sampled. Interviews were transcribed, translated, and coded using principles of framework analysis. At least two people involved in transcribing, coding, and code writing to ensure data quality and validity.

Results: ALRI/pneumonia risk was perceived by both community and system level respondents with variations between and within states, often based on previous pneumonia experience. High pneumonia burden was well recognized by PMs and HCPs. However, among FHWs and beneficiaries' awareness regarding pneumonia varied across states and awareness of RSV was mostly absent. Across respondents, the need for newer product/s to provide early protection and decrease burden was well-recognized due to perceived risk, pneumonia management gaps, and decreasing trends in pneumonia attributable to newer vaccines recently introduced. Both product strategies were acceptable (slightly greater preference for maternal products), although acceptance of a new product was expected to take time amongst the beneficiaries. Acceptance was influenced by perceived benefits (early protection, greater effectiveness etc.) and risk (miscarriage, premature delivery, multiple pricks etc.) in the community. Need for awareness generation efforts in the

community and provision of relevant scientific information – burden, cost-effectiveness, efficacy etc. across community and system stakeholders was reiterated for timely acceptance and uptake. Across stakeholders, integration with the Universal Immunization Program was considered critical with products provided free of cost through government facilities closer to home. However, considerations regarding administration of pediatric vaccines at gap periods or as combination vaccines, mixed approach using both maternal and pediatric products were suggested along with evidence need to support product- and context-specific implementation planning.

Recommendations and/or Conclusion: Previous vaccination experiences have positively influenced demand for prevention from ALRIs. While both maternal and pediatric strategies remain acceptable, there is a need for early awareness generation efforts supported with relevant scientific information (disease and product related) to ensure better demand and uptake. In addition, aligning stakeholder preferences while planning delivery scenarios and implementation strategies for both maternal and pediatric products can enable acceptance and uptake.
zero-dose children had been identified and reached. Out of this number, 3,143 children had received immunization - leading to a 43.5% success rate in coverage of zero-dose children. However, out of the 56% uncovered children, 89.9% were due to refusals.

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Keywords: Vaccine demand, acceptability, routine immunization, product preferences, pneumonia

Vaccine Confidence and Intention to Vaccinate Children against COVID-19 among Parents in Mysore, India

Kiranmayee Muralidhar[1], Maiya G Block Ngaybe[2], Purnima Madhivanan[2]

1. Public Health Research Institute of India (PHRII); 2. Health Promotion Sciences Department, Mel and Enid Zuckerman College of Public Health

ABSTRACT:

Background: The Government of India rolled out its COVID-19 vaccination program for adults in January 2021, fully vaccinating around 70% of eligible adults in two years. A survey conducted in 2021 indicated that 63.1% of Indian parents were willing to vaccinate their children against COVID-19. Vaccine access was expanded to include children ages 12-18 in early 2022. While vaccinating children may provide substantial benefit in curbing COVID-19-related morbidity and mortality, few studies have specifically examined vaccine hesitancy and acceptability among Indian parents. In this study, we examined parents' or caregivers' intentions-to-vaccinate their children against COVID-19 and factors influencing their decision in India.

Methodology: Between November 2021 to May 2022, 506 parents/guardians of children below 18 years in the Mysore district in Southern India were administered a survey by phone or face-to-face after obtaining informed consent. They were asked about their COVID-19 vaccination status, vaccine confidence, reasons for or against receiving vaccines, intention-to-vaccinate their child against COVID-19, and who would influence this decision. Using the Vaccine Confidence Index, responses to four statements were measured; participants who did not agree with ≥1 statement were assumed to have low confidence in vaccines.

Results: We found that 90.9% fully trusted COVID-19 vaccines for their children, 91.3% were themselves fully vaccinated against COVID-19, and 91.5% of parents were confident about the COVID-19 vaccine. Vaccine hesitant and vaccine confident groups were not significantly different socio-demographically. Doctors were cited as the most influential in deciding if parents should vaccinate their children (71.2%) followed by community health workers (CHWs) and teachers.

Recommendations and/or Conclusions: Most parents expressed vaccine confidence and intention-to-vaccinate their child against COVID-19. They showed trust in doctors, CHWs and teachers when making decisions about their child's health. Health promotion by trusted stakeholders and continuing to explore decision-making processes regarding vaccination are crucial strategies moving forward to ensure effective implementation of vaccination programs.

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Combating the loss in childhood immunization gains and vaccination of disabled persons: The approach of building relationships and harnessing power in the communities

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ABSTRACT:

Background. In 2021, 25 million children missed out on essential vaccines, with routine childhood immunization falling for the second year running. Hence, increasing routine childhood immunization in low- and middle-income countries should be a priority to reduce the loss in the gains of routine childhood immunizations and prevent a rise in vaccine-preventable diseases. This requires localized solutions made up of evidence-based effective interventions for improving routine childhood immunization outcomes in rural communities and vaccine acceptance and demand in disabled persons in Cameroon. A recent study in rural communities in the Manoka Health District in the Littoral Region of Cameroon revealed a zero-dose children proportion of 91.7 %. This situation has been made worse by the COVID-19 pandemic which has disrupted the delivery of essential health services, as well as pockets of armed conflicts in the country (Njoh et al., 2022). Vaccine hesitancy (VH) to COVID-19 vaccines has had a spillover effect on routine childhood immunization rates. This implies that an attempt to increase routine childhood vaccination rates would be best achieved by addressing VH in general. Even though these factors have been identified by several studies in Cameroon, addressing them is a complex process that requires localized solutions since the challenges are adaptive in nature. Here, we propose building relationships and power within rural and disabled people's communities and use the WHO Behavioural and Social Drivers (WHO BeSD) tool to identify barriers to vaccine uptake, and activate and harness this power to increase vaccine acceptance and demand.

Methodology. This is a longitudinal study involving qualitative and quantitative data collection approaches using the WHO BeSD tool. The "balcony" approach was used to identify the gap of increasing routine childhood vaccination rates in rural communities and vaccine acceptance and demand amongst disabled persons. Participants inclusion criteria include caregivers of children below the age of 5 in villages and disabled persons adults. Relationship/team building with the following stakeholders: authorities, allies, opposition, village champions, troublemakers and casualties. These relationships and the associated power will be harnessed to come up with tailored interventions. These interventions will be implemented/monitored. Statistical analysis will be carried out on the data collected before and after the implementation to assess its efficiency and effectiveness.

Results. Scientific evidence-based findings obtained so far shows that the following factors are associated with reduced COVID-19 vaccine acceptance and demand; mis- and disinformation,

limited information on vaccines, trust in pharmaceutical companies and the health system of Cameroon (Dinga et al., 2022, Titanji et al., 2022). We intend to obtain effective evidence-based tailored interventions that will increase routine childhood immunizations rates in rural communities and vaccine acceptance and demand amongst disabled persons.

Conclusion. By building relationships with all the stakeholders in rural communities and the power associated with it, effective tailored interventions to increase vaccine acceptance and demand will be achieved. Involving researchers, public health officials, anthropologists, Expanded Programme on Immunization manager and a journalist in the leadership team will ensure effective implementation, wild dissemination of the output/policy brief and its uptake by the Ministry of Public Health, Cameroon.

Keywords. Most parents expressed vaccine confidence and intention-to-vaccinate their child against COVID-19. They showed trust in doctors, CHWs and teachers when making decisions about their child's health. Health promotion by trusted stakeholders and continuing to explore decision-making processes regarding vaccination are crucial strategies moving forward to ensure effective implementation of vaccination programs.

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Connected Learning to Accelerate Local Impact at Global Scale: Year 1 of the Movement for Immunization Agenda 2030 (IA2030)

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1. The Geneva Learning Foundation; 2. Bridges to Development

ABSTRACT:

Background: In Year 1 of its "Movement for IA2030" peer learning programme, the Geneva Learning Foundation (TGLF) organized a digitally enabled series of activities for immunization and other health professionals from low- and middle-income countries (LMICs). We explored novel models of "consultative engagement", the dialogue between international and national stakeholders that is a core element of the Immunization Agenda 2030 (IA2030) Framework for Action.

Methodology: The project was likely the principal IA2030 consultative engagement activity carried out in 2021/2022. It supported practical action and collaboration by health professionals delivering and managing immunization services at different levels of health systems – from facility to national – and in different sectors.

Results: In March 2022, 6185 practitioners from 99 countries joined the programme, with 1021 progressing to implementation of peer-reviewed local action plans by June 2022. More than half of participants work for ministries of health at district or facility level.

More than 500,000 quantitative and qualitative data points generated by programme participants helped shed light on priority challenges and opportunities.

Additional discussion events, lectures and online surveys were developed in collaboration with IA2030 Working Groups and UNICEF, covering topics such as "zero-dose" challenges (reaching those not receiving any vaccines), gender barriers and COVID-19 vaccine uptake.

Quarterly "Teach to Reach" events created a space for engagement with thousands of national and sub- national immunization staff – rising from 2,604 registrants in March 2021 to 14,234 in October 2022 – and international stakeholders, including representatives from UNICEF, USAID MOMENTUM, the Gavi Zero Dose Community of Practice, and IA2030 Working Groups, listening and contributing.

By September 2022, more than 10,000 country-based practitioners were identifying as members of a "Movement for Immunization Agenda 2030", expressing a moral and professional commitment to achieving the goals of IA2030, through implementation of action plans aligned with their countries' immunization strategies

Conclusions: Most This iterative learning and action led by local practitioners provided a unique window through which international stakeholders could better understand what is happening on the ground within countries, in particular giving a voice to those working below the national level.

The engagement activities have revealed a highly motivated group of thousands of professionals

trying to work within local constraints to organize comprehensive, user-friendly services, working closely with local communities. Participants have shown a great willingness to share experiences and learn from others, and consistently highlight the benefits they feel they gain from their connections to peers facing similar challenges and from the guidance offered by international experts.

The experience also suggests that there are no "magic bullets" – overlooked and potentially transformative technical solutions to immunization challenges. Progress more likely comes from the systematic application and adaptation of existing good practice, tailored to local contexts and communities. This suggests that there are significant opportunities to: (1) empower health professionals and drive improvement from the ground up by connecting them to their peers and linking them to global guidance and (2) harness the knowledge, experience and intrinsic motivation of these tens of thousands of professionals to drive improvements in immunization coverage and wider primary healthcare services in LMICs.

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Keywords: Immunization Agenda 2030, COVID-19 recovery, local action, technical assistance, digital peer learning and leadership networks

Community solutions to overcome barriers to vaccination: Using Photovoice to improve immunization uptake

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ABSTRACT:

Background: In low- and middle-income countries (LMICs), there are communities that have never received routine immunization because they lack access to vaccination services. In 2021, more than 25 million infants were under- or unvaccinated ('zero dose'). These children tend to live in communities that are at heightened risk of infectious disease outbreaks, exacerbated by COVID-19 pandemic-associated disruptions (WHO 2022). The USAID-supported MOMENTUM (Moving Integrated, Quality Maternal, Newborn, and Child Health and Family Planning and Reproductive Health) Routine Immunization Transformation and Equity project (the project) strengthens routine immunization programs to overcome the entrenched obstacles contributing to stagnating and declining immunization rates and barriers to reaching zero-dose and under-immunized children with life-saving vaccines in LMICs.

Methodology: The project will conduct a series of interactive in-person sessions through purposive sampling with community leaders, caregivers, and frontline health workers In Kenya and Mozambique to identify and implement locally proposed solutions to reach and increase use of immunization services among zero-dose and under-vaccinated children and communities.
In Kenya and Mozambique, the project will use Photovoice, a visual qualitative method used in community-based participatory research, to record participant perspectives on strategies to overcome identified challenges to and gaps in reaching zero-dose and under-immunized children. Photovoice has shown to yield insight into the potential solutions for addressing uptake of health services, including immunization (Powelson et al. 2002).

Participants will be asked to capture and share their points of view by photographing scenes of their community that highlight themes of interest that the research team presents during the sessions. The team will support those who want to take pictures and protect people's privacy by ensuring that pictures do not identify people or settings directly, including the community they live in, if possible. The team will obtain community member and session participants consent for photos through a signed consent form and will exclude photos that are too clearly identifiable to protect subjects' safety and privacy (Creighton et al. 2018). Minors will not be included in the study. Copyright is owned exclusively by the participants.

Results. The project is expected to be completed in 2023 and ethical approval has been obtained from the John Snow Inc. (JSI) Institutional Review Board and was submitted to the national research ethics' review committees in Kenya and Mozambique.

Conclusion: This activity will generate community-driven and locally appropriate ways to overcome barriers to vaccination, particularly in zero-dose communities and inform health workers, policy and decision-makers.

Keywords: photovoice; immunization; solutions; zero-dose; communities

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Facilitators and barriers associated with Zero-dose among children less than five years old in Pakistan: secondary analysis of demographic health surveys (2012-2018)

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ABSTRACT:

Background: Pakistan with 0.8 million zero-dose children is the fourth largest contributor to the global pool of unvaccinated children. Evaluation of zero-dose children and associated barriers and facilitators are highly recommended for data driven strategies and interventions. We performed analyses of linked data of two latest population wide demographic health surveys of Pakistan (PDHS: 2012-2013 and 2017-2018) to evaluate zero-dose children.

Methodology: Permission was obtained from the national institute of population studies and Pakistan Bureau of Statistics for analysis and publication of findings. PDHS 2011-2013 was conducted in all provinces including Islamabad Capital Territory except Azad Jammu & Kashmir (AJK) and Federally Administered Tribal Areas (FATA). PDHS 2017-2018 was inclusive of AJK and FATA. The data in both surveys is representative of both rural and urban populations. Detail methodology including sample size are published in PDHS 2012-2013 and 2017-2018 reports. Briefly, stratified two stage cluster sampling was used to enroll the required number of households. All ever-married women aged 15-49 years old who were either permanent residents of the selected households or visitors who stayed in the households the night before the survey were eligible to be interviewed. Questionnaire in local languages was used to collect sociodemographic and health related data. Vaccination status of all children between 12 to < 5 years of age was obtained. Zero-dose was defined as children without any DPT (diphtheria, pertussis, and tetanus) containing vaccine by their second birthday, incomplete vaccination was defined as children without any measles vaccination by 2nd birthday and complete vaccination was up to date vaccination by their 2nd birthday. We used a generalized logistic model to identify factors associated with zero-dose children.

Results: A total of 24,471 women of reproductive age were interviewed (2012-2013: n = 11,763 and 2017-2018: n = 12,708). During 2012-2013, 2434 and 2017-2018, 1572 women had children aged 12 months to < 5 years of age. Overall, 52% of women (2011-2013: 53% and 2017-2018: 49%) with children aged 12 month to < 5 years were illiterate. On the contrary, illiteracy among men with children (12 month to < 5 years) was only 30%. Similarly, 41% of the women reported home delivery (2011-2013: 47% and 2017-2018: 31%) during the last pregnancy. Overall, 21% (2012-2013: 23% and 2017-2018: 19%) of children aged 12 month to < 5 years were zero-dose, and 31% (2012-2013: 33% and 2017-2018: 28%) with incomplete immunization. Being female child, stunted growth, maternal age below 20 years, paternal age below 25, maternal illiteracy, paternal illiteracy, mother housewife, home delivery, wealth index poorer, area of residence Baluchistan, Sindh, and Khyber Pakhtunkhwa, rural versus urban, family size ≥ 8, no exposure to television/ radio/ internet, newspaper, native language Pashtu, Sindhi, and missed BCG at birth were significantly associated with zero-dose.

Conclusion: Slightly less than a quarter of children between 1 to 5 years of age are zero-dose in Pakistan. Only a 4% decline in zero-dose children has been observed between 2012-2013 to 2017-2018. Community led codesign of interventions targeting subpopulation with higher rates of zero dose children concentrated in Baluchistan, Sindh, and Khyber Pakhtunkhwa province is recommended.

Keywords: Pakistan Demographic Health Survey; zero-dose children; codesign interventions; routine immunization; incomplete immunization

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Social listening to mitigate rumors and misinformation about vaccines and vaccination

June 14th, 3:30 PM - 4:30 PM

Improving Health Worker and Community Influencer Competence on Identifying and Managing Misinformation on Routine Immunisation in Niger State, Nigeria

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ABSTRACT:

Background: Health misinformation negatively impacts health seeking behaviour and has the potential to increase morbidity and mortality. In rural communities, health structures and mechanisms for managing infodemics are often weak, as seen during the COVID-19 pandemic, leaving rural dwellers susceptible to mis- and disinformation. There is, therefore, a need to set up mechanisms that leverage community structures to improve health literacy in the communities.

In August 2022, Nigeria Health Watch piloted and offline social listening project in eight Local Government Areas (LGAs) in Niger State, Nigeria, where community members were trained and supported to collect quantitative and qualitative data on prevailing health misinformation in their communities, including on childhood routine immunisation. A key finding from this data was that community members get their health information from three top sources - 58% from health facilities, 22% from traditional media (radio/TV) and 11.8% from community leaders. Interventions were subsequently deployed to debunk identified misinformation in the State using these insights, one of which was a training of Heads of primary health care centres, LGA health educators and ward development committee heads on identifying and combatting misinformation. The aim of the project was to pilot a viable offline social listening mechanism for community-based management of health misinformation in Niger State.

Methodology: An andragogic approach was used to train primary health care facilities-in-charge, LGA health educators, and Heads of Ward Development Committees (WDCs), influential community leaders tasked with ensuring accountability in the delivery of primary health care services in communities. This included interactive discussions, group work, role play and practise sessions, encouraging equal participation from all attendees. At the training, common misinformation previously identified was discussed and debunked, and participants were trained on social and behavioural methods for combatting misinformation. Participants were subsequently supported with Information, Education and Communication (IEC) materials to conduct cascade trainings in their facilities and communities.

Results: A total of 25 participants were trained from 8 LGAs, and there was a significant increase in knowledge of social and behavioural considerations for combatting misinformation (27%). Feedback from participants was that they had never benefitted from a training targeted at the management of misinformation before, and had found their own bias towards misinformation confronted during the training.

Cascade trainings were confirmed to have been conducted in communities in all 8 LGAs, with health care workers conducting cascades in their facilities and WDC Heads conducting cascades

via community meetings in 4 out of 8 LGAs. A total of 162 community members and 50 health care workers have been trained via cascades. An endline survey to check for impact on knowledge, awareness, health seeking behaviour, vaccine hesitancy, etc. will be conducted in February 2023.

Conclusion: Community structures remain a viable, sustainable option for ensuring a consistent flow of accurate health information and should be leveraged for the management of misinformation both during and outside public health emergencies. This has the potential to improve vaccine uptake and reduce hesitancy.

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Keywords: Misinformation, Routing Immunisation, Health Literacy, Community Structure, Vaccine Hesitancy

Reaching insular communities with reliable health information: the Jewish Orthodox Women's Medical Association (JOWMA) Covid-19 hotline

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ABSTRACT:

Background: Public health officials have long struggled to reach Jewish, ultra-Orthodox (Haredi) communities, similar to other religious and ethnic minorities. Reasons include historical mistrust of secular authority and discouragement of internet and secular media consumption within these communities. Additionally, Covid-19 vaccine hesitancy is common in strictly Orthodox Jewish communities, in particular the Haredi-Orthodox Jewish communities, where natural immunity from prior infection is widespread, furthering the community's distrust in the overarching messaging applied to the Covid-19 vaccine by health officials. Insular religious communities with historically-embedded distrust in government and public health officials need reliable sources of health information that resonate with them and can overcome self-imposed communal limitations on consumption of the internet and other digital media.

Methodology: The JOWMA Covid-19 health hotline was developed to deliver culturally-sensitive, evidence-based information about Covid-19 infection and Covid-19 vaccines to the strictly Orthodox Jewish community. Staffed by physicians and medical trainees of JOWMA, the tele-hotline ran from Oct 7, 2021 through June 30, 2022. The hotline menu offered three options: 1) speak with a live volunteer 2) leave a voicemail and receive a callback 3) listen to pre-recorded health education. Hotline volunteers utilized a regularly updated script of information to answer the most commonly asked questions and outsourced more specific questions to a network of physicians to provide an answer. Impact was measured by analyzing call volume over time, traffic on the pre-recorded health education information and common questions of callers.

Results: The hotline received a total of 5192 calls from across the United States, Canada, Israel and the United Kingdom. The majority chose to listen to pre-recorded information (58%). The hotline had 779 live call attempts (15.02% of total calls), of which contact was made between hotline staff and callers in 60.33% of instances. Demographic data obtained showed callers overwhelmingly self-identified as Orthodox Jewish and comprised a diversity of sub-groups. Preliminary descriptive results of call content show the callers' most common concerns about Covid-19 vaccines were infertility risk, vaccination during pregnancy, and the risk-benefit analysis of vaccination after infection. We are conducting additional analyses of thematic content of callers' questions, call volume over time, and traffic on the educational recordings. Analyses are expected to be completed by March 1, 2023. Limitations of hotline operation included volunteers with varying levels of vaccine-specific training, as well as "anti-vax" callers with malignant intent and callers who did not respond to callbacks. Limits of our current analysis include callers who did not provide demographic data.

Conclusion: Overall, our data demonstrate the feasibility and reach that tele-hotlines may have for providing culturally specific health information to self-protective religious communities. Within the Orthodox Jewish community where generalized vaccine hesitancy is now emergent, a tele-hotline integrated with pre-recorded health education may continue to be play an important role in providing evidence-based information to this self-protective, insular community to promote vaccine acceptance as new vaccine-preventable health crises arise. Similar community-led hotlines may function as a useful tool for increasing vaccine acceptance in other religious and ethnic minorities with historically-embedded mistrust in public officials.

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Keywords: Misinformation, Routing Immunisation, Health Literacy, Community Structure, Vaccine Hesitancy

Perceived Safety of COVID-19 vaccines: Conceptualization and Impact on Vaccine Intention in Côte d'Ivoire

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ABSTRACT:

Background: The government of Côte d'Ivoire (GoCI) has set an ambitious goal of having 70% of the population vaccinated. Through fixed sites as well as mobile delivery, the GOCI is making progress but facing considerable hesitancy while preparing to vaccinate imminently eligible sub-populations such as pregnant women. Understanding emerging barriers to COVID-19 vaccine intention is critical for reaching the goal.

Methodology: The Breakthrough ACTION Côte d'Ivoire project, in partnership with the Ivoirian Ministry of Health, has tracked perceptions of COVID-19 in real-time over the last three years using both offline and online rumor tracking methods, including social listening software and locally embedded key informants. The data reflect concerns that the vaccine against COVID-19 is ineffective, harmful (causes infertility, for example), or even deadly. To further explore knowledge, attitudes and practices around the vaccine, the project conducted a repeated cross-sectional household-based survey in November 2021 (Abidjan; n=1,000), February 2022 (Abidjan; n=1,000) and September 2022 (Abidjan (n=1,000); Bouaké (n=700), San Pedro (n=650), Yamassoukro (n=650)). The project collected complementary qualitative data in Abidjan, Bouaké and San Pedro in November 2022 through focus groups with both vaccinated and unvaccinated men and women and individual interviews with vaccinated and unvaccinated health workers, pregnant women, people with comorbidities and community leaders (n=222).

Results: All data sources pointed to perceived safety as a key theme. Safety was conceptualized by respondents in various ways with respect to immediacy of the effects, intent of the manufacturers, and sub-populations for whom the vaccines are safe or harmful. Across survey waves and sites, unvaccinated individuals who agreed that the vaccines against COVID-19 are safe were 6.2 times more likely to intend to be vaccinated than those who disagreed (p=0.000), controlling for demographic variables. The qualitative data suggest that negative stories about severe side effects or deaths (spreading through word of mouth or online) drowned out accounts of positive vaccination experiences and that the experience of familiar others strongly influenced people's narratives around the safety of the vaccine. Fears about the impact of the vaccines on fertility or on the health of the baby for pregnant women were particularly salient. The survey data confirm that perceived social norms and perceived safety are significantly associated in that people who believe that important others think they should get vaccinated and are vaccinated themselves are more likely to agree that the vaccine is safe.

Recommendations and/or Conclusions: Although causal order is unclear, it is possible that flooding the environment with positive personal testimonies from vaccinated individuals can change perceptions around the safety of the vaccine and influence intention and uptake of the vaccine. The Breakthrough ACTION project is including positive personal testimonies about the vaccines to allay fears around safety as part of a national mass and social media campaign.

Insights from this study are likely applicable for other newly developed vaccines and could be rapidly applied to combat vaccine-related misinformation in West Africa, such as for emerging or reemerging zoonotic diseases like Ebola or Mpx.

Keywords: Safety, norms, mixed methods, social listening, West Africa

Exploring the Importance of Social Listening to Mitigate Anti-Vax Propaganda. A Retrospective Analysis.

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ABSTRACT:

Background: Sri Lanka initiated the Covid-19 vaccination campaign in January 2020; by the beginning of 2022, less than 70% of the eligible population had received two doses. However, there was less enthusiasm among the community for receiving the booster dose, where less than 40% of the eligible population had taken the booster dose four months following its launch. This study was undertaken to discover the anti-vaccination narratives that propagated on the Facebook page dedicated for health promotion, under the purview of the Ministry of Health.

Methodology: A search was carried out on the Facebook page with the terms "Covid-19", "Booster" and "Vaccine" in all three primary languages in Sri Lanka to identify the Covid-19 booster vaccine related posts. Using Export Comments software, the selected publicly accessible posts together with user reactions and comments were extracted. The anonymised comments were then categorised manually by four researchers into five broad groups: anti-vaccine, pro-vaccine, information-seeking, sarcastic, and not relevant. The anti-vaccination comments were further categorised using the codebook which included 24 codes developed during a prior study. The most prevalent anti-vaccination codes and the comments seeking information were further classified by using keywords identified in the comments.

Results: Eight booster related posts were identified following the search, with a total of 6514 comments, out of which 1862 were considered irrelevant and 651 were considered sarcastic. Among the 4001 vaccine related comments, 72.78% were categorised as anti-vaccine comments, whereas only 16.42% were pro-vaccine and 10.8% were seeking information. Further analysis of the anti- vaccine comments revealed that most commonly occurring codes were health hazards (29.5%), lack of trust in administrative structures (11.87%), motive is profit (8.92%), not effective (8.59%), and alternative treatment (6.53%). Under the code of health hazards, the most common occurrence of the keyword 'Death' was identified, followed by 'Myocardial Infarction.' 'Demanding consent prior to vaccination' was the most frequently occurring keyword under the code, 'Lack of trust in administrative structure.' The least occurring anti-vaccine codes were religious tenets (0.08%) and effective only for trivial diseases (0.08%). The vaccine information that the individuals were seeking the most was on the vaccination centres, side effects, and eligibility.

Recommendations and/or Conclusions: Even though Facebook has implemented a set of regulations intended to combat vaccine misinformation, the comment section seems to be frequently overlooked. As a result, it may provide an ideal environment for the propagation of anti-vaccination propaganda. As evident from the research a high volume of anti-vaccine comments are being propagated via the Facebook page dedicated for health promotion, under the purview of the Ministry of Health., Therefore, a greater number of people have the potential to be exposed to them, which may lead to vaccination hesitancy and eventually give rise to a public health risk.

Therefore, both offline and online social listening should be done timely and vigorously to identify the health misinformation that gets circulated on social media, and immediate action needs to be taken to answer the public's concerns with scientifically based evidence and debunk the myths.

Keywords: Social Listening, Anti-vaccine, Social media, Booster, Infodemic

Psychodynamic analysis of the behavior of healthcare staff during the Covid-19 crisis

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ABSTRACT:

Background: The holistic approach allows a realistic study and deciphering of professional hazards, in particular, those related to the management of patients infected by the virus.

In the light of the epidemiological data of the Covid-19 health crisis, there is renewed the need for scientific research to study the experience of hospital staff and analyze their behavior during the various stages of the pandemic, with the addition of social and cultural factors surrounding the professional environment, and to draw lessons to develop an effective, reasoned and realistic prevention policy.

Methodology: The study is carried out at the university hospital of the city of Oran (Algeria). The sampling is random in relation to the official lists of on-call teams and includes a total of six guards during the period February 2020 to July 2021. The on-call team consists of a senior doctor who supervises the interns of different specialties and is the coordinator between the consultation units, the hospitalization and resuscitation blocks.

The behavioral study is carried out by semi-structured clinical interviews. The items in the interview grid capture the grievances of hospital staff. The approach of psychodynamics at work is adopted in our research.

Results: Are classified into three stages following the evolution of the pandemic:
1. The first stage is the "Declaration of the state of health emergency" during which the medical emergency department is identified as the 1st triage point for patients, and the nursery of the hospital is converted into the "Covid-19 Unit".
The increase in requests for exemption from medical guards at the occupational health service is under a psychiatric motive with the fear of transmitting the infection to their relatives.
2. The second stage is "the fluctuation of statistical indicators of the pandemic". Particular attention is subject to the trivialization of the risk of contamination by hospital staff, their mistrust of the effectiveness of prevention methods and their indifference to clandestine visits by patients' relatives. Absenteeism of internal doctors becomes the rule during religious holidays.
3. The third stage is "mutant viruses and vaccination available". The extent of attacks on hospital staff.

Conclusion: Vaccine hesitancy of health workers is similar to the international hospital community where behavioral factors likely to influence vaccine uptake are: complacency, perception of risk, severity of the disease, sources of information, socio-demographic characteristics, level of commitment of populations to the culture of risk, as well as their level of trust in health authorities and conventional medicine. In addition, context-specific variables concerning the non-availability of the vaccine for countries in economic distress, and the requirements of international validity of placing on the market of certain vaccines have delayed the vaccination campaign and increased the uncertainty of their benefits.

Emotional aversion is divergent, accommodated in healthy subjects, but anxiety-depressive in the population that is psychologically vulnerable and deploys different behavioral stratagems to avoid restrictive situations at work.

Keywords: Vaccination and work; Vaccine hesitancy; Vaccine and mental health; Health crisis; Psychodynamics

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Prevalence and factors associated with COVID19 vaccine uptake in Ugandan communities twenty months into the COVID19 pandemic

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ABSTRACT:

Background: Vaccination is a cost-effective public health intervention against infectious diseases. Improving vaccine uptake is a global health imperative. Prevalent misinformation and mistrust in government policies has revived the interest in understanding the social and behavioral drivers of vaccination uptake. Vaccine hesitancy, 'delay in acceptance or refusal of vaccines despite their availability, remains a critical public health challenge. In Uganda, an online survey of 1067 respondents showed a 53.6% acceptance rate for the COVID-19 vaccine. Among health profession students, COVID-19 vaccine hesitancy was at 30.7%. However, other recognized drivers of vaccination uptake have been summarized into categories of "thinking and feeling", "social processes" and "practical issues" in a recent behavioral and social drivers of vaccination framework of the World Health Organization. Using this framework, we determined the prevalence and factors associated with COVID19 vaccine uptake in the communities in Uganda.

Methodology: It was a nationwide study in Uganda, a low-income country with a gross domestic product per capita of USD 940. Up to 73.4% of this population lives in rural areas, in households with mean size of 4.7 persons and their main economic activity is subsistence farming. A total of 3290 households in 138 rural and urban villages were enrolled into the study. The villages were selected by simple random sampling from eight districts purposively selected from two regions, Central and Eastern Uganda. Their selection was informed by recent study findings that reported that Eastern region Central region (because of its relatively urban nature) had higher odds of vaccine hesitancy. A structured questionnaire adapted from the WHO behavioral and social drivers of vaccination framework was used for data collection.

Results: Of the total 3143 respondents, majority were female (64%), wife or mother (59%), had primary level of education (47%), a median age of 40 with range from 30 to 54 years. The prevalence of COVID19 vaccine uptake twenty months into the COVID19 pandemic in Uganda was 83.1% (95% CI: 81.8, 84.4). Factors associated with COVID19 vaccine uptake were being resident in Eastern Uganda, prevalence ratio (PR) 1.04 (95% CI; 1.01, 1,07), having an occupation, having trust in the health worker, getting a health worker recommendation to get COVID19 vaccine, thinking that the COVID19 vaccine is safe, thinking that most workmates will be COVID19 vaccine, knowing where to get the COVID19 vaccine, easy of getting COVID19 vaccine for oneself, and satisfaction with COVID19 vaccination services. Being female PR, 1.01 (95% CI: 0.98-1.04) and age, PR 0.99 (95%

CI: 0.99, 1.00) were not associated with COVID19 vaccine uptake.

Recommendation and Conclusion: COVID19 vaccine uptake in Ugandan communities was high. Factors from three domains of the WHO behavioral and social drivers of vaccination uptake framework; "thinking and feeling", social processes and practical issues were associated with COVID19 vaccine uptake. The reported COVID19 vaccine uptake is likely an overestimate affected by social desirability bias as it was measured by self-reports by the respondents. Efforts to maintain and increase the high uptake should target the identified predictors of COVID19 uptake.

Keywords: COVID19 vaccine; COVID19 vaccine uptake; prevalence of COVID19 vaccine uptake; factors associated with COVID19 vaccine uptake; COVID19; misinformation; COVID19 vaccine hesitancy; Uganda

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Rumor has it ... you can quickly leverage a national health hotline for social listening

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ABSTRACT:

Background: To help boost COVID-19 vaccination rates in Malawi, VillageReach began working with the Ministry of Health (MoH) in April 2022 to listen to citizens' concerns surrounding COVID-19 vaccines via the toll-free national health hotline, Chipatala cha pa Foni (CCPF), and suggest data-driven strategies to respond to those concerns. CCPF is operated by the Malawi MoH and serves approximately 9,500 callers per month1. At the start of the COVID-19 pandemic, demand for CCPF sharply increased up to five times after it was declared a trusted source of information on COVID-19 during a presidential address.

Methodology: We partnered with the MoH to train CCPF operators to label incoming calls relevant to COVID-19 vaccination and catalogue whether the caller was asking about vaccine access and eligibility, effectiveness, misinformation or safety concerns. This allowed VillageReach to filter calls for further quantitative and qualitative analysis. All CCPF calls are recorded, but stripped of any personally identifiable information. Every two weeks, a VillageReach Malawi researcher listens to and records a sample of 20-25 of the filtered calls. The calls are tracked across the identified topic categories and monitored for the frequency of concerns over time. When rumors are identified, their potential impact is assessed as either low, medium or high2. Lastly, we produce a bi-weekly report to share with the National Covid Task Force and Risk Communication and Community Engagement group (RCCE).

Results: Social listening helped inform the RCCE on how to respond to emerging rumors and citizen questions. Data from these reports have led to the tailoring of COVID-19 vaccine messaging featured on radio, flyers, posters, brochures and jingles. Furthermore, this data led to the creation of COVID-19 vaccine messaging on CCPF interactive voice response messages, of which there have been over 6,000 interactions with since May. Challenges with the approach include: (1) Absence of sustained funding to maintain the staff time for manual transcription and qualitative analysis; (2) Decreased interest in findings due to waning focus on COVID-19; (3) Decreasing trend in the number of COVID-19 vaccine calls to the hotline; and (4) Lack of representativeness of CCPF callers.

Recommendations and Conclusions: This approach demonstrates how to quickly leverage health hotlines for social listening to support introduction of new vaccines. Recommendations for successful implementation of this approach include: (1) partners should work together to implement social listening to ensure that multiple types of data sources, including health hotlines, are including in social listening analysis; (2) social listening teams should be comprised of individuals with both analysis and advocacy skills, as the analysis is only useful if there is someone to advocate for that data to be actively used; and (3) social listening programs via health hotlines must work closely with hotline staff to ensure they understand coding procedures as well as how to effectively respond to caller vaccine concerns and reports of misinformation.

Keywords: social listening; vaccines; rumors; Malawi

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Rumors in the Wake of COVID-19: How CORE Group Partners Project (CGPP) Fought with Local Level Misinformation in Uttar Pradesh, India

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ABSTRACT:

Background: The COVID-19 pandemic put the entire humanity at a state of risk and caused enormous loss of lives, globally. Vaccines were developed in record time. The triumph of the medical sciences did not automatically lead to mass vaccination in the face of vaccine hesitancy and other social and behavioral barriers, at least initially. The USAID-funded Core Group Partners Project (CGPP) received a new grant to promote COVID-19 Appropriate Behaviors (CAB) in 58 blocks across 12 districts in Uttar Pradesh. One of the major mandates of the new grant was to promote COVID-19 vaccination among eligible populations living in resource-poor areas. Project Concern International (PCI) along with its three NGO partners embarked on a mission to support the Government's vaccination drive in 24 blocks across 5 districts under CGPP. PCI engaged over 250 Community Mobilizers (CMs). Most of them worked with CGPP as Community Mobilization Coordinators for several years and contributed to the polio eradication program. The current paper examines the extent, nature, and type of rumors that inflicted the pace of COVID-19 vaccination and how CGPP coped with it.

Methodology: The CGPP decided to collect all sorts of rumors as part of its routine data collection. All the CMs who were in the field were asked to report the rumors every week. The collection of rumors was analyzed at the district levels and a consolidated report from all the districts was sent to CORE Secretariat responsible for offering Technical Assistance to PCI and other two Private Voluntary Organizations. The CORE in discussion with the PVO partners and NGO representatives devised strategies to counter the emerging rumors on a regular interval. In the process, CGPP has accumulated one of the largest reservoirs of rumors that emanated from the field with all its diversity and dynamism.

Results: The mapping of rumors on a weekly basis brought out several interesting facets. Some rumors were ubiquitous and some revolved around certain geography and mostly among specific community groups. In general, the extent of the rumor was more in rural than in urban sites. The frequency analysis of the rumors collected over six months after the second wave hit India in 2021 shows that most of the rumors were linked to the apprehension of the adverse effect of the COVID-19 vaccine. It will lead to other illnesses including deaths was the most common refrain. Over time, the rumor changed shape and the fear transformed into disdain for the low action efficacy of the vaccine and thus its usefulness. CGPP countered the ever-growing myths and misconceptions with improved risks communications and the involvement of local influencers and Community Action Groups (CAG) formed specifically to support the CMs and the government vaccination drive.

Recommendations and Conclusions: The study has found that hyperlocal solutions were the most useful strategy to tackle the rumors and it requires enormous trust between the program and the

program recipients. The use of a community cadre with years of rapport with the community is the safest bet to convey the appropriate messages along with relentless mass media campaigns.

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Keywords: Rumor, Vaccine, COVID-19, CGPP, India

Online Social Listening on Vaccine Misinformation in Nigeria

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ABSTRACT:

Background: The rapid spread of health misinformation during the COVID-19 pandemic underscored the importance of effective, agile mechanisms of tracking, identifying, and managing misinformation throughout the public health emergency management cycle, from preparedness to recovery. Misinformation has the potential to spread very rapidly, thus, debunks must be disseminated in a way that matches the speed with which misinformation spreads and on the same platforms.

To explore innovative mechanisms for tracking and managing online misinformation in real time, Nigeria Health Watch piloted a social listening project in September 2022, where online mentions on health misinformation across key focus areas/topics including maternal and child health, nutrition, etc. are monitored. In December 2022, mentions on routine immunisation were added to the list of topics being monitored, to gain insights on vaccine hesitancy/acceptance to inform demand generation for routine immunisation programs in Nigeria.

Methodology: An online social listening tool (an artificial intelligence powered app) was piloted to listen across various social media platforms (Facebook, Twitter, YouTube, Instagram, TikTok), online news sites, blogs, and fora. Mentions are set to be collected across thirty-six states in Nigeria, generated based on a list of keywords developed by the team. A team of listeners screen mentions collated by the app weekly and identify misinformation around selected topics. Identified misinformation are collated analysed and prioritized for debunking using predetermined criteria – level of engagement (number of likes, retweets, reposts, comments, shares), potential to cause harm and believability (more recently added). Desk research is then conducted to debunk prioritised misinformation using current evidence available in peer reviewed journals, public health guidelines, etc. Debunks are subsequently adapted into easy- to-digest, engaging messaging in multi-formats (infographics, videos, audio, etc.) and disseminated on the same platforms on which they were identified. Impact is measured using online polls and surveys, checking audience knowledge/exposure to the misinformation, as well as online engagement with the debunks.

Results: Over a period of six weeks of listening on routine immunization/vaccination (December 1, 2022, to January 11 2023), seven thousand five hundred and fifty-five (7,555) mentions were identified, out of which three (0.2%) were identified as misinformation across various social media platforms, all on the safety and efficacy of the COVID-19 vaccine. All three mentions' authors were from the United States, but 145 comments, 7 retweets and 10 reactions on the posts were from audiences in Nigeria, with Twitter recording the highest level of engagement. No significant differences/similarities were found in the demography and geographical location of the Nigerian audience. The pilot is set to be completed in February 2023.

Recommendations and Conclusions: The COVID-19 vaccines still dominate online discussions around vaccination/routine immunisation, and wrong perceptions on the safety of the vaccines

persist. The need to track and debunk misinformation on vaccines remains, using agile platforms that match the rapid way misinformation now spreads. There is a need to explore the impact of public perception of the COVID-19 pandemic (and the roll out of the Emergency Use Vaccines) on routine vaccines, as well as on the roll out of new vaccines for future infectious diseases.

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Keywords: Immunisation, Misinformation, Vaccine Acceptance, Vaccine Hesitancy, Social Listening

Community-Based Interventions to Mitigate COVID-19 Misinformation and Trust in Institutions in Low-Income Migrant Latino Communities

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ABSTRACT:

Background: The COVID-19 pandemic reveals existing health inequities and restrictions to access culturally and structurally competent public health information, testing, and vaccination for historically marginalized communities. Histories of mistrust in institutions (public health, government) contribute to vaccine hesitancy and COVID-19-related health inequities in marginalized communities, including low-income Latino immigrant communities (Gehlbach, et al. 2022). Community-based interventions can address vaccine hesitancy (VARN2022); one of the top ten threats to global health (WHO, 2019). We present research findings on the socio-cultural and structural factors that contribute to COVID-19 vaccine hesitancy in marginalized communities.

Methodology: This study used a community-based participatory research (CBPR) approach to collaborate with community leaders and bilingual (Spanish and English) students to develop a community-based intervention to address mistrust in vaccination among communities in the desert region of Inland Southern California. Our study focused on engaging Latinx and Indigenous Mexicans in rural agricultural communities in this region—an area that is home to many uninsured and undocumented immigrants and farmworkers living below the poverty line. We used the Analyze, Design, Develop, Implement, and Evaluate (ADDIE) model to develop a toolkit/intervention to address mistrust in institutions and the spread of COVID-19 misinformation. The intervention involved a 60-minute COVID-19 talk in which participants viewed a mural memorializing pandemic events and lives lost and a documentary with testimonials of COVID-19, and information on the vaccine—both were designed by and for the community. Pretest and posttest design and focus groups were used to evaluate the effects of the intervention on factors shaping vaccine hesitancy (i.e., mistrust, misinformation, limited English proficiency). Paired sample t-tests compared the posttest to the pretest to assess effects of the intervention on misinformation, trust in institutions, fear and insecurity around COVID-19 testing and vaccination, and language confidence in health services use.

Results: 98 participants completed pretest and posttest surveys; a subsample of x participated in focus groups (n=3). The intervention significantly decreased acceptance of misinformation and increased trust in institutions (p=.001); it did not have effects on fear/insecurity in testing and vaccination (p=.557), or language in healthcare services (p=.292). Focus group findings explicate quantitative findings indicating that structural (e.g., racism and discrimination) induced mistrust in healthcare and public health contributing to COVID-19 vaccine hesitancies. Participants commented on the role of community leaders in developing trust in research and appreciated the inclusion of culturally and structurally relevant information in the toolkit/intervention and its accessibility for those with limited literacy. They also appreciated the inclusion of testimonies in the documentary to build confidence and trust in COVID-19 vaccines.

Recommendation and/or Conclusion: Our findings provide evidence of how community-based interventions made by and for the community mitigate COVID-19 misinformation and vaccine hesitancy in marginalized communities. Our project advocates for the inclusion of community leaders in health disparities research. It recommends the need for policies and programs that address structural factors (racism, classism, and colonialism as evidenced by English- dominant systems) because these factors undermine trust in healthcare and public health systems and ultimately contribute to vaccine hesitancy.

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Keywords: community-based participatory research; marginalized communities; social listening; misinformation; trust in institutions; vaccine hesitancy.

Framing of Vaccine Messages on Key Information Platforms Over Time: The Case of Broadcast Media in the Philippines.

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ABSTRACT:

Background: Vaccine hesitancy is challenging the success of vaccination campaigns globally, and the way vaccination information is framed can impact individuals' willingness to vaccinate themselves or their children. Beyond interactions with peers and healthcare providers, traditional media continues to be a key source of vaccine-related information. While the framing of vaccination messaging in print or social media is receiving increasing attention, broadcasting media, which continues to reach large parts of populations particularly in low- and middle-income countries, is often overlooked. In our ongoing study we are developing a novel methodological approach to systematically extract vaccine-focused reports in Filipino television, and to analyze this data to determine how vaccine messages are framed and how frames are changing over time.

Methodology: The Philippines traditionally were among the countries with the highest vaccination rates before a 2017 dengue vaccine controversy resulted in plummeting vaccine confidence (1), followed by the upheaval of the COVID-19 pandemic. Television continues to be the most used and most trusted form of media in the country. However, as in many contexts, systematically accessing and qualitatively analyzing media datasets beyond English language print media remains challenging.

We therefore developed a novel approach to systematically search and extract vaccine-related Filipino TV reports and audience interactions via API-assisted YouTubeTM queries using a piloted and refined search string. After removing duplicates and videos outside our scope of interest we retained 135 videos for full analysis. To assess developments in message framing over time, videos were organized into three separate timeframes: 2005-2017 (prior to the Dengvaxia controversy): 30 videos; 2017-2020 (Dengvaxia controversy and its fallout): 46 videos; 2020-2022 (COVID-19 pandemic and associated vaccination discourses): 59 videos.

Subsequently, building on work by Foley and colleagues (2), we devised a two-step analytic approach: In a first step, we drew on a combination of inductive and deductive content analysis to develop a codebook to assess video aspects (e.g., video type, message, vaccine information relayed, platform audience interactions etc.). Results from this phase will, in a second step, inform the selection of a subset of archetypical, information-rich videos for an in-depth qualitative framing analysis to investigate how vaccine information is presented across different formats and over time.

Results: Content analytical coding is currently ongoing. We expect all analysis to conclude by April 2023, but emerging findings have underscored the spectrum of vaccine messaging available in Filipino television, with videos including comedy sketches, musical Christmas specials, and

scientific question-answer formats beyond standard news reports and interviews. Furthermore, initial findings highlight how large-scale societal vaccination discourses can impact the overall framing of vaccine messaging, including an increase in reports attempting to caution or reassure viewers.

Recommendations and Conclusions: Despite its vast reach, the presentation of vaccine messaging on television has so far only received marginal attention in the scientific discourse. Our findings will not only contribute to filling this gap but will also highlight novel pathways both for understanding dominating narratives, and for designing and presenting vaccine confidence interventions that align with the chances and challenges of broadcasting media.

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Keywords: Media analysis, framing analysis, vaccine messaging, Philippines

'I'm glad my bub has just weaned so I don't have to make that decision!': An online social listening study on breastfeeding and COVID-19 information

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ABSTRACT:

Background: The COVID-19 pandemic has dominated global attention since 2020 and the accompanying infodemic (the overwhelming amount of information, both accurate and otherwise), has presented challenges to the emergency response (1). While the infodemic exists offline and online, the spread of information and misinformation on social media has been prolific. Development and release of COVID-19 vaccines were widely reported, but exclusion of breastfeeding and pregnant women from clinical trials meant evidence-based advice for this group lagged and has at times been contradictory and confusing. Breastfeeding is an important public health issue with long lasting health benefits for infants and mothers (2,3). Health professionals were concerned that this confusion may impact poorly on breastfeeding decision-making and outcomes. This social listening study aimed to understand breastfeeding-related COVID-19 information sharing and reactions on social media during the Australian vaccine roll-out.

Methodology: The CrowdTangle platform (a public insights tool from Meta) was used to source data from public Facebook pages. The search included all pages where administrators were based in Australia and included keywords for COVID-19 and breastfeeding. Posts published between the 1st December 2020 to the 31st December 2021 were included. The study received ethical approval from the Curtin University Human Research Ethics Committee (HRE2021-0268). Posts were initially categorised to both intent and source. Posts and comments are being qualitatively analysed using a vaccine narrative taxonomy to understand how narrative trends changed over the first year of vaccine roll out in Australia.

Results: A total of 945 posts were included in the analysis, with 42,260 accompanying comments. Preliminary analysis shows a continuing concern throughout the year about the lack of evidence of the safety of COVID-19 vaccines for breastfeeding women. While breastfeeding related posts included discussion about the safety of breastfeeding if COVID-19 positive, or of keeping mothers and babies together if COVID-19 positive, narratives related to COVID-19 vaccines were dominant. While safety concerns persisted, there appears to have been changes over time from people expressing safety concerns, to questioning the need for the vaccination as Australian COVID-19 case numbers remained low, to vaccine supply and access concerns as the COVID-19 outbreak intensified. Analysis is underway, with full results expected by June 2023.

Conclusion: The results from this study will describe how users interacted with and responded to information on social media about COVID-19 over a 13-month period that covered the first release of COVID-19 vaccines globally, and the first year of roll-out in Australia. Pregnant and breastfeeding women are a priority group for vaccination, yet there are gaps in data, evidence and information.

Using social listening to understand how users react to and discuss COVID-19 related breastfeeding information on social media overtime will give important insight into how to engage with this group with vaccination and inform future health emergencies.

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Keywords: COVID-19, infodemic, social listening, vaccine, breastfeeding,

Facilitators and barriers to COVID-19 vaccination among health workers and the general population in Guinea

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ABSTRACT:

Background: The advent of an effective COVID-19 vaccine was the most anticipated in the world. However, this hope quickly turned into hesitation and denial in many countries, including Guinea [1]. Understanding the reasons for low vaccination coverage is essential to achieving herd immunity leading to disease control. As misinformation, fear of backlash and uncertainty have spread in many countries, the concept of hesitation has increasingly found its way into the literature highlighting the delay in getting vaccinated against COVID-19 [2,3]. This study aimed to understand the facilitators and barriers to COVID-19 vaccine acceptance in Guinea.

Methodology: The survey covered health workers and the general population in 4 natural regions of Guinea from March 23, 2021 to August 25, 2021. We used the Fishbein integration model to study the vaccination behaviors of healthcare workers and the general population. A joint cross-sectional study collected information, attitudes, norms and perceptions. Regression and thematic content analysis identified the main facilitators and barriers to immunization.

Results: We interviewed 3,547 health care workers and 3,663 people from the general population. The proportion of people vaccinated was 65% among health workers and 31% in the general population. For healthcare workers, the main factors associated with COVID-19 vaccination were: no pregnancy AOR = 4.65 [3.23-6.78], being supportive of AOR vaccination = 1.94 [1.66-2.27] and being an adult AOR = 1.64 [1.26 -2.16]. For the general population, the following factors increase the likelihood of vaccination: no pregnancy AOR = 1.93 [CI 1.01-3.91], favoring AOR vaccination = 3.48 [CI 2.91-4.17], being an adult AOR = 1.72 [CI 1.38-2.14] and being able to be vaccinated AOR = 4.67 [CI 3.76-5.84]. The semi-interviews revealed fear, lack of trust and the government's hesitant perception as potential barriers to vaccination.

Conclusion: This study suggests that negative beliefs and perceptions are potential barriers to COVID-19 vaccination among caregivers and the general population. Policies should focus on practical strategies to mitigate these barriers for youth and pregnant women. Finally, there is a need to improve access to vaccines in the general population.

Keywords: Barriers; COVID-19 vaccination; Facilitators; General population; Guinea

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Boosting COVID-19 vaccination with community actors in rural settings in Cote D'Voire

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ABSTRACT:

Background: On January 30th, 2020, the World Health Organization (WHO) declared the epidemic an international health emergency, followed by declaring it a pandemic on March 11th, 2020 when Côte d'Ivoire (CI) recorded its first confirmed case of the coronavirus. The government immediately took measures to contain the pandemic, including a health response plan. This was centered around eight (8) points concerning prevention of coronavirus (COVID-19) transmission; communication of the risks, social mobilization, and community engagement.

Methodology: An analysis of the management of the coronavirus (COVID-19) crisis showed that strengthening community monitoring measures is important in preparing for natural or man-made crises. Community-based monitoring incorporates an organized and rapid collection of information from the community, that could pose a risk to public health. This occurs via organized social and community mobilization. However, some rural areas are inaccessible and insufficiently targeted due to their remoteness, despite the deployment of CHWs. This requires specific approaches to be implemented using other agents rather than Community Heath Workers (CHWs). To do this, the Ivorian Ministry of Health, via the Board of Community Health, needed to boost the capacity of a number of key actors intervening at the community level closest to the populations, in 53 Health Districts (HDs). The involvement of ANADER (National Agency for Support to Rural Development), leader in the rural world, thus provided key support in crisis management, with its 1,000 Rural Development Agents (ADR) equipped with motorcycles and covering all the villages in CI, including camps. These rural agents also played an important role in the frontline response to managing the COVID-19 crisis and other epidemics, in conjunction with 10,600 CHWs, after having been properly trained, equipped and protected.

Results: At the rural level, mobilization and awareness-raising and response activities against COVID, carried out by community actors, enabled 9,501 people to take their first dose of the vaccine and 6,524 to be fully vaccinated in the health district of Didievi;15,997 people to take their first dose and 12,429 to be fully vaccinated in the health district of Tiebissou; 17,083 people to take their first dose and 9,066 to be fully vaccinated in the health district of Toumodi; and 12,926 people to take their first dose and 12,847 to be fully vaccinated in the health district of Yamoussoukro. Source (DHIS2): In some areas, the fact that the village chief agreed to be vaccinated in public led the whole village to do the same. This gives the region a performance rate of 62%, with a 31% contribution from community actors.

Conclusion: Involving community actors in the efforts to fight COVID-19 led to an increase in the percentage of vaccinated people from 49% to 66%. This intervention approach using CHWs could

be applied to other public health areas to reduce morbidity and mortality rates.

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Report by the Ministry of Health, Public Hygiene and Universal Health Coverage

Tracking Adverse Events towards COVID-19 Vaccines using Social Listening Platform – An Observational Study

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1. 3Analytics, Chennai, India

ABSTRACT:

Background: Coronavirus disease (COVID-19) which is caused by the SARS-CoV-2 virus, remains a serious global public health crisis. One effective way to combat COVID-19 was the development of vaccines. However, vaccine hesitancy remains a concern. In March 2020 the lockdown imposed by the pandemic enhanced the use of social media websites worldwide. Social network analysis has the potential to address Adverse Effects Following Immunization (AEFIs) and misinformation about vaccines and vaccination. The aim is to monitor the discussion and to identify and address barriers to vaccine acceptance, demand, and uptake amongst priority populations and to assess the AEFI-related mentions in Social Media following Covid-19 vaccination. The objective is to provide in-depth analysis of collected data by accessing the beneficiaries and their vaccine availability, cross comparing the posted adverse events with the vaccine labels, studying the spectrum of adverse events on social media following vaccination, and analyzing trends, and providing suggestions to improve vaccine uptake, especially in low and middle-income countries.

Methodology. We extracted and analyzed over 231,524 relevant Reddit (90159) and Twitter (141365) posts over a defined period (Oct 1, 2021, to Sep 30, 2022). Our inclusion criteria had an identifiable reporter, patient, drug, and Adverse Event (AE). We filtered the data through our 3Analytics platform that automatically conducts AE surveillance on social media platforms using our Named Entity Recognition (NER) + Bidirectional Encoder Representations from Transformers (BERT) - Natural Language Processing (NLP) model to extract symptoms, classify AE, and analyze the demographic, frequency, and sentiment trends related to COVID-19 vaccines.

Results: 3Analytics COVID-19 AEFI search strategy spotted 12,210 relevant Reddit (11509) and Twitter (763) posts over a year-long period. The following vaccine posts were observed. Moderna 57973 posts with 9101 valid cases, Novavax 42432 posts with 2582 valid cases, and Covishield 61567 posts with 152 valid cases. Other vaccines were Covaxin 36515 with 22 valid cases, Pfizer 13362 with 252valid cases, AstraZeneca 11353 with 128 valid cases, and Sputnik 8322 with 19 valid cases.

Recommendations and/or Conclusions: The safety profile of vaccines as discussed in social media is an important source of data that will aid in a better safety profile of the drug. The use of AI-driven data inputs and advanced statistics can help vaccine manufacturers, regulatory agencies, public health, and policymakers to have quick access and simplified data, which may help in addressing the questions with respect to vaccine safety, that may have been not seen earlier. By doing so, we trust our findings support the use of social media as a tool to enhance vaccination acceptance.

Keywords: COVID-19; Vaccines; ADRs; Twitter; Reddit

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Demand generation for routine immunization and adult immunization

June 14th, 3:30 PM - 4:30 PM

The AMBASSADORS: Young People Advocating for Vaccination in Oyo State, Nigeria

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ABSTRACT:

Background: In Africa only 3% of the almost 8 billion doses given globally have been administered, and only around 8% of Africans are fully vaccinated, compared with more than 60% in many high-income countries (WHO, 2021). Many countries, including some of the Africa`s largest, have so far vaccinated fewer than 5% of their populations. For instance, out of the over 200 million people in Nigeria, only about 3,8% have been fully vaccinated (Ritchie et al, 2022). The ratio is even lower among rural and marginalized communities (Polasek et al, 2022). Therefore, combating vaccine hesitancy especially through the engagement of young people (which makeup the highest number of people in Nigeria in rural communities in Nigeria is crucial in controlling the virus spread and alleviating the negative effects of this unprecedented pandemic. The goal of the Ambassadors Program is to equip 40 young people in hard-to-reach rural communities with advocacy skills and knowledge to serve as COVID-19 Vaccination advocates in their communities along with sensitize 8,000 young and other residents of hard-to-reach rural communities on COVID-19 vaccination and testing through media advocacy and community outreaches.

Methods: We will form a project task force who will put out a call for applications to youths from communities in Oyo state to participate as Ambassadors. The Ambassadors will be tasked with conducting baseline/situation analysis of their local communities with focus on the enabler, inhibitors and other factors that influence COVID-19 Vaccine hesitancy and uptake among members of their community. The Ambassadors will also be trained intensively for two months on conducting successful advocacy campaigns, community and media engagement tailored to address the baseline analysis reports earlier submitted by the applicants. A pre- and post-training assessment will also be conducted to assess the change in knowledge. Through collaborations with television and radio media partners, The Ambassadors will organize television and radio advocacy programs and other outreaches in local languages to promote COVID-19 vaccine uptake for three months. They will be awarded small grant to organize physical community awareness and sensitization outreaches on vaccine uptake in their community. To wrap up the program, their will be an endline evaluation of covid-19 vaccine uptake in the targeted communities.

Results: So far, a working group made up of seven members have been set up and there has been a call out for Ambassadors. The working group is presently shortlisting, interviewing and selecting the final list of Ambassadors. The Ambassadors Project pilot show be completed by June 30, 2023.

Recommendations and/or conclusions: The findings of this ongoing project would inform how young people can be leveraged to served as advocates and ambassadors for vaccination campaigns. This project leverages community-based outreaches and media campaigns, hence the comparative efficacies of these outreaches can be evaluated to guide future projects. Young people account

for about 70% of the African continent and findings from this project can be adopted and scale to aid vaccine uptake among millions of young Africans.

Keywords: young people, covid-19, vaccine, media, advocacy

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Community-based approaches to overcoming barriers to COVID-19 vaccination: an example from urban Ethiopia

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1. John Snow, Inc., Ethiopia,; 2. John Snow, Inc., Immunization Center

ABSTRACT:

Background: Ethiopia introduced COVID-19 vaccination in March 2021 for everyone 12 years and older. Uptake of COVID-19 vaccination is low in Addis Ababa, with only 28% of those eligible completing the primary vaccine series, compared to 55% nationally. Un/under-vaccinated populations include industrial workers, people under 35 years, and high school and university students. Main challenges to low vaccination are rumors and misinformation within the community, limited participation of community and workplace structures in social mobilization, and limited capacity of health care providers to communicate about the vaccine. In September 2022, USAID's MOMENTUM Routine Immunization Transformation and Equity (the project) began supporting activities to generate demand for COVID-19 vaccination among priority populations and ensure availability of services to meet that demand in three sub-cities of Addis Ababa.

Methodology: The project is training health workers on effective interpersonal communication (to answer questions and respond to rumors with accuracy and empathy) and on how to conduct community dialogues with civic associations and other groups (e.g., women's associations, neighborhood "block" residents, private companies); 240 community dialogue sessions will be conducted. The project is producing a television spot for industry/factory and other essential workers with similar settings, and social media messages for young people conveyed by local influencers on TikTok. Conducting advocacy meetings with religious leaders, teachers and other influencers and use of a communication platform in school and university communities are part of the approaches. The project is using community level data to inform bottom-up microplanning and is supporting local health facilities to conduct vaccination sessions, to ensure service delivery is coordinated with demand activities. All activities are informed by a behavioral profile that was developed as part of program planning and that outlines pathways and strategies for specific populations to engage in desired behaviors (i.e., getting vaccinated). The impact of these activities will be measured through quantitative and qualitative data collection. This will include participant intent to be vaccinated before and after community dialogues; disaggregation of administrative data reported through DHIS2 by sub-city to measure the project's contribution to COVID-19 vaccine uptake; and output indicators such as number of staff trained, partnerships supported, and service delivery sites supported.

Results: Activities are ongoing. Health worker training on interpersonal communication and community dialogues, micro plan development, support COVID-19 vaccinations through integration with other immunization services and TV spot production have started. All activities will close by the end of March 2023.

Recommendations and/or Conclusions. The anticipated results will provide information on multi-pronged, community-based approaches in urban settings where vaccination has lagged among priority populations. This work will provide practical lessons for other implementing partners who are operating within similarly short timeframes to improve COVID-19 vaccination demand and uptake.

Keywords: COVID-19 vaccination; demand; urban; community; Ethiopia

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Digital Talking Comics to improve the uptake of Pneumococcal Conjugate Vaccine (PVC) in Nuh District in Haryana in India

Ifra Anjum[1], Subhi Quraishi[1], Ilmana Fasih[1], Hilmi Quraishi[1]
1. ZMQ Global

ABSTRACT:

Background: Pneumonia is the largest cause of childhood mortality accounting for 17.1% under 5 deaths in India. In November 2018, Haryana was the first state to implement Pneumococcal Conjugate Vaccine (PCV) in India to prevent Childhood Pneumonia deaths in the state. The uptake of PCV vaccine was low due lack of understanding of Pneumonia, its causes, symptoms, and importance of the vaccine.

Methodology: ZMQ Development introduced an innovation of digital stories in 25 villages of block Punhana, District Nuh, Mewat, Haryana. The series of digital stories were based on the 'Talking Comic" 2genre as per the local context and language. Each story had built-in story level analytics and incorporated a pre-test & post-test assessment. The stories were on awareness, symptoms, identification, screening, diagnosis, prevention, increase uptake of Pneumococcal Conjugate Vaccine (PCV) 3 treatment and care & support addressing childhood pneumonia integrated with RMNCH+A mobile based platform MIRA channel and available as an independent App on android and iPhone. Furthermore, the stories were disseminated in single and group mode through house-to-house visits, community meetings, SHG meetings and by means of MIRA theatre. The outcomes of the intervention were measured on various indicators and parameters such as changes in the level of hygiene and sanitation, rate of immunization, recognition of sign & symptoms of pneumonia, seeking treatment, demand for health practitioners and uptake of PCV vaccine.

Results: The results are remarkable with 40% & 26% increase in immunization rate when videos were shown in single and group mode respectively. The rise in the levels of sanitation and hygiene are 46% in single mode and 27% in groups. Now 42% of people seek treatment for pneumonia compared to the earlier figure i.e., 12%. In total, the demand for health practitioners has increased by 49%. And 37% (single mode) & 44% (group mode) individuals can identify the sign & symptoms of pneumonia. Interestingly, the uptake of the PCV (Pneumococcal conjugate vaccine) first dose has escalated from 78% to 98%.

Recommendations and/or Conclusions: The innovative digital story genre has potential to penetrate within the communities on various other social and sustainable issues.

Keywords: Childhood Pneumonia; Pneumococcal Conjugate Vaccine; Digital Storytelling; mHealth; Immunisation

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Addressing Vaccine Hesitancy in Rural Philippines Through Upskilling and Digital enablement of Community Health Workers (CHWs)

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1. reach52[1]

ABSTRACT:

Background: According to 2021 data, vaccine hesitancy in Philippines is higher relative to neighboring ASEAN countries. Less than 2/3rds of the total population have received two doses or more of a COVID-19 vaccine. Philippines is among the top-5 zero dose countries globally, with more than 1-million zero dose babies nationally. In response, health-tech social enterprise reach52 launched a six-month campaign to improve awareness and uptake of vaccinations in select rural communities of Region VI (Western Visayas) through a holistic health system strengthening approach, enabled by offline-first mHealth technology. The campaign focused on developing knowledge and skills of community health workers (CHWs) to promote vaccination (routine immunization for U5 populations and COVID-19 vaccination for adults). These upskilled CHWs then conducted door-to-door engagement of populations to reduce vaccine hesitancy.

Methodology: reach52 developed a training program for CHWs, promoting the importance of vaccination and teaching motivational interviewing techniques to counter vaccine-hesitancy among unvaccinated households. After the training, participating CHWs were equipped with reach52's offline-first mHealth tool and were deployed to engage community resident's door-to door. CHWs collected data on personal and health information and conducted vaccine confidence profiling using WHO's Vaccine Hesitancy Identifier. Those households found to hold perspectives consistent with vaccine hesitancy were engaged with motivational interviewing, to uncover the underlying attitudes and beliefs of their objections. CHWs then countered objections with culturally relevant evidence-based rebuttals. CHWs also provided information on where to access vaccinations locally. A random sample of households were re-engaged at 30-days following engagement to measure outcomes.

Results: A total of 750 CHWs participated in the training. After the training, almost all (97%) CHWs demonstrated increased levels of knowledge on the subject. CHWs engaged 12,096 households, 26% of whom were identified as vaccine hesitant. At 30- days following engagement with CHWs, 55% of vaccine hesitant households with u5 children accessed at-least one vaccination (including COVID-19 and routine immunization). Among the adult vaccine hesitant residents without children under-five years old, 72% of subsequently accessed COVID-19 vaccines.

Recommendations and/or Conclusions: The impact of this campaign demonstrates the potential to address vaccine hesitancy and effect positive behavioral change through delegation of tasks to local community health workers equipped with offline-first mHealth applications. It is expected that this pilot will be scaled to additional municipalities in Western Visayas, Philippines in 2023.

Keywords: CHWs; mHealth; Philippines

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Information materials for healthcare professionals and caregivers to increase MMR1 vaccination in North Macedonia: from solution conceptualization to implementation and process evaluationWorkers (CHWs)

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1. UNICEF North Macedonia,; 2. University Ss Cyril and Methodius, Skopje, North Macedonia,; 3. UNICEF Regional Office for Europe and Central Asia,; 4. Behavioural Insights Team, United Kingdom

ABSTRACT:

Background: Even though childhood routine immunisation (CRI) is mandatory and enforced with fines for parents in North Macedonia, uptake of MMR1 vaccine is lower than the target of 95%. This is partly because caregivers do not trust the safety and quality of the vaccines, and healthcare professionals (HCPs) do not always provide appropriate advice regarding immunisation. Effective population-level interventions are needed to tackle these barriers and increase national CRI coverage. This study aimed to report the conceptualization, design, implementation and process evaluation (IPE) of printed information materials developed specifically for HCPs and caregivers to improve MMR1 vaccination uptake in North Macedonia.

Methodology: Intervention: A standardized and iterative behavioural insights approach informed the intervention development. In the 'Target' phase, target behaviours (i.e., encouraging on-time uptake of MMR1 vaccine) and populations (i.e., HCPs and caregivers) were identified. The 'Explore' phase involved literature reviews and qualitative research to identify barriers to, and facilitators for, receiving MMR1 vaccination. The COM-B model (Michie et al., 2011) and the Increasing Vaccination Model (Brewer et al. 2017) were used to structure the findings and inform subsequent phases. The 'Solution' phase followed a human-centred design approach to identify, pre-test and refine evidence-based and potentially scalable behaviour change interventions in this context. At the end of this phase, the following printed materials were identified for implementation: 1. 3D desk tents for HCPs with a checklist about the steps to follow during vaccination appointments (on one side); 2. and with frequently asked questions (FAQ) about the MMR1 vaccine (on the other side; 3. posters for the waiting area and consultation rooms about questions to ask from HCPs about the vaccine; 4. and about the process that is followed during vaccination appointments; a 5. leaflets and posters in the waiting area for caregivers with FAQ about the vaccine. Setting and Participants: Eligible North Macedonian health facilities included 35 health centres and 85 vaccination points where HCPs provide MMR1 vaccine, and 1185 GPs and 19 paediatricians where HCPs advise caregivers of children aged 0-3 about MMR1 vaccine. A purposive sample of HCPs and a convenient sample of caregivers were selected for the IPE. Design: IPE was selected because it was not possible to conduct a randomised controlled trial or a quasi-experimental study. This was because health clinics could not be randomly allocated to receive the intervention or a control condition, because the Ministry of Health requested the nationwide implementation of the intervention all at once. Moreover, data availability on vaccination records was scarce. Measures: Fidelity of delivery, engagement and use of intervention materials were assessed using qualitative interviews with HCPs

and caregivers. Analysis: Descriptive statistics will be used to report the characteristics of the sample. Recurring themes will be analysed in the qualitative data.

Results: Data has been collected for the IPE and results will be available by June 2023.

Recommendations and/or Conclusions:This study will provide insights into how HCPs use the intervention materials, to what extent caregivers engage with the intervention and what possible mechanisms could be identified through which the intervention may foster MMR1 vaccine uptake in North Macedonia.

Keywords: behavioural insights; printed information materials; childhood routine immunization; healthcare professionals; caregivers

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Prevalence of missed opportunities and associated factors in urban and rural areas of Southwest, Nigeria

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ABSTRACT:

Background: Missed Opportunity for Immunization (MOI) is defined as missing the benefit of getting immunization by the partially or non-immunized child during a visit to a health facility for health care, when there is no absolute contraindication for that immunization as per the national policy. There are limited studies that looked into economic, political and sociocultural factors and urban -rural comparison. The study determined and compared the prevalence of missed opportunities for immunization among children aged 12-23months in urban and rural areas of southwest, Nigeria. The study identified and compared cultural, religious, and ethnic factors, political factors and economic factors associated with prevalence of missed opportunities for immunization among children aged 12-23 months in urban and rural areas of southwest, Nigeria.

Methodology: The cross -sectional study was carried out among mothers of children aged 12-23 months in urban and rural areas of southwest, Nigeria. The other participants were community leaders, opinion leaders and key informants in the area. The data was collected using semi-structured questionnaire, focus group discussion guide and in- depth guide.

Results: There was a significant difference in the prevalence for missed opportunity for immunization is 11.8% in urban as compared with 7.5% in rural areas (χ^2= 12.37, df =2, p=0.0001). BCG, HBV0 and OPV0 had higher prevalence of missed opportunity for immunization in rural areas while the antigens had lower prevalence in urban areas. The reasons for missed opportunities for immunization in both areas were non-availability of vaccines, long wait time, visit not scheduled and child brought to facility ill but not vaccinated. Demographic, ethnic and religious factors were not significantly associated with prevalence of missed opportunities for immunization in both areas. Sex of the child and place of delivery are significantly associated with the prevalence of missed opportunity for immunization. Socioeconomic factors that were significantly associated with the prevalence of missed opportunities for immunization in both areas include educational and occupational status of mothers. The other factor identified was the distance of the facilities. Most of the participants of the qualitative survey believed immunization is important as it prevents children from diseases. There were divergent views in both areas on traditions, cultures, and customs as associated factors for prevalence of missed opportunity for immunization. Government is involved in immunization as reported by participants in both areas and immunization is supported by non-governmental organizations like UNICEF, WHO and other partners.

Recommendations and/or Conclusions: Missed Opportunities for immunization is still prevalent in both areas. Reasons adduced are non-availability of vaccine, visits not scheduled and long wait time. The associated factors are mothers' education, occupation, and political will in terms of government's commitment. There is a need to continue to create more awareness on the importance of immunization in both areas, reduce long wait time and sustain government's commitment to immunization through advocacy.

Keywords: Immunisation; missed opportunity; urban; rural comparison

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Progress toward global monitoring of the behavioural and social drivers of vaccination

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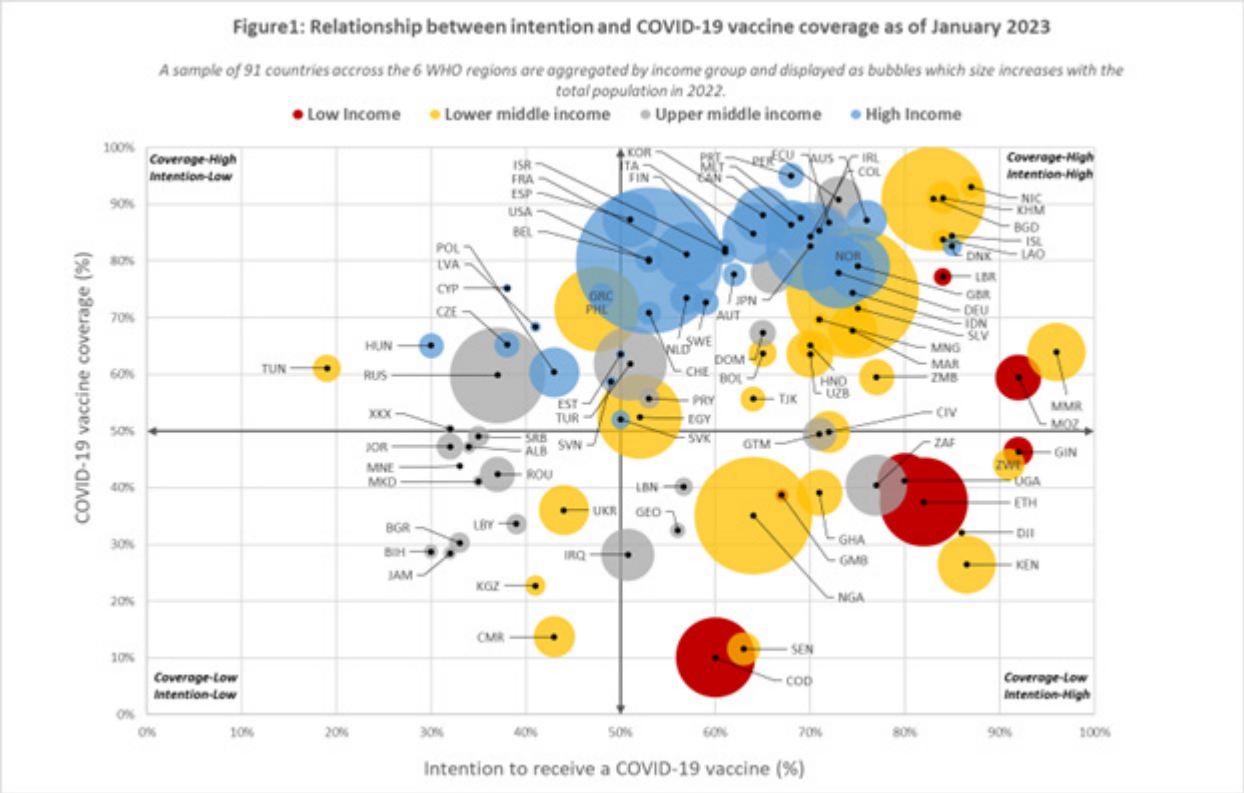
1. World Health Organization

ABSTRACT:

Background: The Immunization Agenda 2030 outlines demand as a strategic priority underpinned by four core principles: people-centered, country-owner, partnership-based and data-guided (1). To meet these objectives, the behavioural and social drivers (BeSD) of vaccination tools enable programmes and partners to systematically assess and address barriers to immunisation (2). In October 2021, the World Health Organization's (WHO) Strategic Advisory Group of Experts for immunisation (SAGE) reviewed the evidence, tools and guidance on BeSD, making related recommendations on the routine collection and analysis of BeSD data to guide programme planning and evaluation (3).

Methodology: To understand progress toward use of the globally validated BeSD surveys, the WHO reviewed and synthesised available data on BeSD of childhood and COVID-19 vaccination. Data were sourced from the WHO/UNICEF Joint Reporting Form (JRF) 2022 submissions and supplemented with the available published data sources. Given the abundance of data collected on the drivers of COVID-19 vaccination in 2020-2022, a global analysis was conducted on the relationship between coverage and the most measured behavioural construct (intention). The initial results represented herein are part of a larger effort to analyse and disseminate data on BeSD through a global dashboard, facilitated by annual JRF reporting.

Results: A review of the JRF data showed 52/194 (27%) of countries reported to have assessed reasons for under- vaccination in 2021, and 87% (45/52) of these countries included measures of BeSD. A review of published data, beyond JRF submissions, found over 120 global and national studies with questions on vaccination were conducted from December 2020 to November 2022. Of these, 41 nationally representative surveys on COVID-19 vaccination included at least one question that was identical or comparable to a BeSD question. Evaluation of these studies identified a lack of standardisation in tools and methods used to collect data, resulting in limitations for consolidated analysis. "Intention to accept a COVID-19 vaccine" is the most measured construct globally. Analysis shows that intention does not perfectly predict vaccination coverage as of January 2023 (see Figure 1). Affordability, ease of access, and social norms are less frequently measured constructs. Nearly two-thirds of studies collected cross-sectional behavioural data, with few applying a longitudinal approach. Multi-round studies mostly rely on web-based collection channels and convenience sampling, which are considered less robust methodologically.
in immunization as reported by participants in both areas and immunization is supported by non-governmental organizations like UNICEF, WHO and other partners.



Recommendations/Conclusions: The standardized use of the BeSD tools for monitoring the drivers of uptake and informing operational decision-making is not yet widespread. Increased use of the BeSD tools is anticipated based on the growing prioritisation of behavioural data for planning. Furthermore, updates to the JRF will facilitate collection of raw BeSD data from 2022 onwards to enable global monitoring. Preliminary analysis of available COVID-19 vaccination intentions data has demonstrated the limitation of assessing a single indicator without accounting for contextual factors, social norms, or practical issues. A comprehensive approach to understanding the drivers of uptake is vital to guide effective and sustainable investments in immunisation programmes. Countries should prioritise collecting data on BeSD per SAGE recommendations, with equal or added emphasis on understanding the drivers of childhood vaccination in the context of pandemic recovery.

Keywords: behavioural and social drivers, demand for vaccination, COVID-19 vaccination

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So, what do we really know? A systematic review of the socio-behavioral factors influencing childhood vaccination intentions and uptake

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ABSTRACT:

Background: Childhood vaccination uptake has been on the decline, with approximately 25 million children missing out on one or more vaccination doses in 2021(1). To support immunization demand generation, there is a need to build on previous and emerging evidence on the drivers and barriers to immunization. This includes a re-examination of the socio-behavioral factors influencing vaccination to identify contextual and emerging factors that can inform demand creation interventions. This study provides a review of the behavioral and social factors influencing childhood vaccination intentions and uptake from a global perspective.

Methodology: The review includes quantitative studies that presented data on the association between social or behavioral factors and vaccination intentions or uptake in children five years of age or below. A comprehensive search of published studies from 1st January 2002 was conducted in multiple databases. All identified studies were screened for eligibility of inclusion independently by 2 reviewers in a three- stage process based on title, abstract, and full-text review. Information was extracted using a standard data collection form. The risk of bias was assessed using the Newcastle-Ottawa quality assessment scale. An organizing framework based on the behavioral and social drivers of vaccination conceptual model (2) and behavioral theories was used to conduct a structured synthesis of the findings.

Results: A total of 4462 records were identified in the search with 82 studies being included in the review. Most of the included studies were conducted in North America (n=26) while 11 studies were from Sub-Saharan Africa. Majority of the included studies were assessed to be of fair quality (67%)Limitations were noted in the sampling procedures, outcome measurements and the reporting of results in a number of studies. The use of various measurement scales to assess similar constructs and outcomes across studies resulted in the heterogeneity of findings. Behavioral beliefs including perceived disease risk, perceived benefits, and vaccine safety were the most investigated socio-behavioral factors influencing vaccination. Other elements frequently examined included the role of injunctive and descriptive normative beliefs including vaccine recommendations from family, friends, and healthcare providers. Perceived behavioral control had varying effects on vaccination intentions and uptake. Practical factors that moderated vaccination uptake included the ease of accessing services, availability, affordability, caregiver perceptions of their relationship with health providers, and caregivers' exposure to, influence from, and use of vaccination information. Emerging factors influencing vaccination uptake included gender-based factors such as spousal approval and the mother's financial autonomy as well as caregiver emotional affect, stress, anxiety, and decisional conflict factors.

Recommendations and/or Conclusions: In this review, we identify multiple behavioral and social constructs that influence vaccination intentions and uptake. There were notable limitations in

the quality of some of the identified studies, however the diversity of extracted themes highlights the complexity of relationships between social-behavioral factors and vaccination uptake that may be contributing to the decline in vaccination uptake. Contextual research is required to extend the geographical base of evidence, and to evaluate highly localized behavioral constructs and interventions.

Keywords: Childhood, Vaccination, Intentions, Uptake, Socio-behavioral

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Observations, Social Experiment, and Survey to Understand COVID-19 Appropriate Behaviour in India

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ABSTRACT:

Background: COVID-19 affected billions of lives across the world. In India too, the first positive case of COVID-19 appeared in January 2020, followed by multiple waves of the virus, with COVID-19 infections reaching on an average 40,000 cases per day in June-July 20211. The effective management of the pandemic largely depended on communication of the pandemic and an inquiry into people's knowledge, attitudes, behaviors, and practices about it. The study was conducted in 10 cities and 12 districts across 11 states to assess the knowledge, attitudes and behaviors about COVID-19, and the practice of various preventive measures and perception towards vaccination among people across various socio-economic groups. These insights guided UNICEF and the Ministry of Health and Family Welfare in the re-designing of communication strategies and messaging around COVID-19.

Methodology: The study used a combination of methods consisting of observational survey, social experiments, and knowledge and attitude survey. The adoption of multiple approaches to gather data helped in triangulating evidence regarding the actual practice of COVID-19 appropriate behaviors. The study comprised 300 observations in each city/district to understand how the general population practices social distancing and personal hygiene in 10 common public places. The social experiment gathered immediate responses and reactions of individuals after facing questions on the non-practice of COVID- appropriate behaviors in public places and mapping the most prevalent reasons for the same. 50 random samples were selected from the 10 observation sites for the social experiment. In addition, 100 sample households representing the socio-economic diversity of the locations were purposively drawn from each selected city/district for the knowledge and attitude survey. Data analysis was carried out with particular emphasis on the study objective and requirements from a policy standpoint. The Chi-square test was used in statistical analysis to determine the significance of the association between observed variables.

Results: The findings from the study suggested that knowledge and awareness levels varied significantly between rural and urban areas, and across different urban localities, gender, age groups, and levels of education. The overall knowledge level was poorer in rural areas, among women, and those with up to upper primary education. Lack of information about the COVID-19 virus, its treatment and availability of vaccines was also higher in rural areas and among those with less education. Another segment that was found to be lacking in awareness was senior citizens, who particularly had poor knowledge about testing facilities and treatments and therefore needed targeted communication. The study also found that hesitancy in taking the vaccine was higher in urban areas and among younger age groups and women.

Recommendations/Conclusions: The findings were used to modify communication plans – focusing on rural areas, women, specific socio-economic groups. The evidence sharpened the Risk Communication and Community Engagement plans through targeted programming. The evidence

gaps from the study were used to inform other studies such as the Community Rapid Assessment. The innovative methodology of the combination of observation and social experiment was shared widely by UNICEF at the regional level and adapted by other countries.

Keywords: COVID-19; mixed-methods; cross-sectional; observation; surveillance

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Power to the people: community-led strategies for generating demand for routine immunization in India

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ABSTRACT:

Background: Demand generation is a community-oriented process to enhance access and utilization of vaccination services1. Myths and misconceptions in communities around routine immunization result in vaccine hesitancy that impairs vaccine confidence and leads to reduced vaccine uptake2,3. We aimed to introduce Social Behavior Change Communication (SBCC) strategies across all multi-sectoral levels of the Socio-Ecological Model (SEM) to effectively generate vaccination demand.

Methodology: We conducted a study on co-creating demand for childhood immunization in Mewat district of Haryana, that has one of the lowest routine immunization rates in India. We designed activities for three distinct SBCC approaches – 1) advocating vaccine benefits through SBCC activities such as bike rallies, puppet shows, and street play; and co-creation workshops on posters, slogans, and role plays; 2) building confidence in vaccine safety by launching two vaccine knowledge hubs for conducting trainings and workshops on addressing vaccine myths and misconceptions led by community-based mobilizers including faith leaders, self-help groups, school teachers, and elected village leaders; 3) overcoming barriers to vaccine access through training sessions for frontline health workers on rapport building in the community, mobilization tools such as appointment reminders and confidence on addressing vaccination side effects. Using qualitative methods (interviews and focus group discussions) we captured participant experiences at intrapersonal, interpersonal, institutional, community, and policy levels of the SEM model. We analyzed data using thematic analysis to understand the effectiveness of the SBCC activities across the SEM layers in generating demand to access routine immunization services.

Results: SBCC activities such as bike rallies, puppet shows, and street plays encouraged a two-way dialogue where community members could discuss their beliefs and practices and address myths and misconceptions about vaccinating their children. Male participants expressed that there was an improvement in awareness levels about their significant role in accessing child vaccination services that complements the traditional role played by mothers and female frontline workers. Participants reported that co-creation of campaign materials such as slogans, posters and role plays and their uptake by local schools, community radio and faith-based groups enhanced the collective community understanding about the significance of routine immunization. Responses from school teachers and local elected politicians suggested that inclusion of vaccine education in schools and inclusion of immunization as a priority election topic, respectively, could enhance vaccine uptake in the community.

Recommendations and/or Conclusions: Our study suggested that SBCC platforms bring key multisectoral stakeholders together to understand their duties, ownership, and accountability towards child health. These platforms offer a safe space for learning and unlearning processes on child vaccination knowledge, attitudes, and beliefs. Introducing SBCC strategies cutting across the SEM layers through their interactive, innovative, and integrated approaches show promising results

in co-creating demand for routine immunization that may result in demonstrable improvements in vaccine uptake.

Keywords: demand generation; SBCC; Socio-Ecological Model; India

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Reaching the Unreached: Differential Planning for COVID-19 Vaccination in Tribal Areas in Jharkhand, India

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ABSTRACT:

Background: Jharkhand is a predominantly tribal and forested state of India, Of the total population of 32.9 million (Census 2011) in the State, 26% population belongs to schedule tribes. Most of the Tribal population lives in rural areas and some of these areas are hard to reach and media dark areas. Tribal people have their own customs, traditions, and languages. As most of the tribal people live in rural and hard to reach areas, where reach of mainstream media is quite limited. Although Hindi is the main language of Jharkhand, tribal people have their own rich languages and dialects. Due to this lingual diversity, hard to reach and media dark areas, reach of correct information to tribal people is a big challenge. During Covid-19 pandemic when strict lockdown was imposed and movement of people was limited; internet, radio, television, and social media became primary platform for information sharing. Even if some tribal areas have internet connectivity the content of messages was in Hindi therefore it was difficult for people to understand the messages related to covid vaccination and covid appropriate behaviours. Due to this initially it was very difficult to initiate covid vaccination program in some tribal pockets and that area needed differential programming.

Methodology: Considering the situation UNICEF supported government to have differential plan for tribal districts especially low vaccination tribal blocks. Following were the key components:

1. Identification of low coverage and hard to reach tribal blocks
2. Translation of communication materials in five tribal languages
3. Engagement of local tribal influencers and leaders
4. Engagement of social mobilisers from same villages to mobilize people
5. Village and Panchayat level vaccination camps
6. Mid-media and local folk-shows to promote covid vaccination
7. Regular monitoring of activities through field trips, data review and reports
8. Specific Tribal Immunization strategy designed to promote Routine Immunization in tribal blocks
9. Vast bank of communication materials in five tribal languages developed in issues such as Covid Appropriate Behaviours, Covid Vaccination, Routine Immunization Water and sanitation and Nutrition.

Results: There is significant change in vaccination status of 7 districts where UNICEF started intervention. More than 5000 community influencers identified and engaged.

Recommendations: Differential approach in planning is essential to reach out and engage tribal and hard to reach population for Routine Immunization and other health services. This approach is specifically useful for Routine Immunization where usually hard to reach and media dark areas remained unreached. Use of tribal languages for communication is another important component which will help to provide contextualized information in local languages. Engagement of tribal

leaders and community influencers should be strengthened for promotion of other health, nutrition behaviours. Engagement of community influencers will help in resolving vaccine hesitancy and clarifying myths and misconceptions. This will also help in bridging the gap and develop confidence between service providers and community.

Keywords: COVID-19 vaccination; tribal areas; community influencers; India

Implementation Strategy Mapping to Enhance Vaccine Acceptance in India: What Lessons Can We Draw from Polio Eradication?

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ABSTRACT:

Background: Implementation strategies are recognized as necessary for realizing the public health benefits of evidence-based practice. It represents the 'how to' component of changing healthcare practice. There is evidence that despite developing strategies to overcome barriers, implementors are not able to utilize the findings of research study because of inconsistent labelling and poorly described strategies. The objective of the study is threefold; a) To study the implementation strategies, treatment specification used in different geographies to address vaccination hesitancy as part of the polio eradication program in India; b) To conduct strategy mapping exercise of those implementation activities using Proctor's guidelines (name, define, specify, action, action target, temporality, dose, implementation outcome affected and justification) c) To translate knowledge for identifying and addressing barriers to vaccine acceptancy, demand and uptake among marginalized communities in India. This paper draws on work from Synthesis and Translation of Research and Innovations from Polio Eradication (STRIPE), a multi-phase project which aims to map, package, and disseminate knowledge from polio eradication initiatives as academic and training programs.

Methodology: STRIPE is a multi-phase implementation research study, utilizing an explanatory sequential mixed- methods design, drawing from explicit and tacit knowledge derived through research activities. STRIPE conducted four research activities: scoping review, survey, key informant interviews and health system analysis during knowledge mapping phase. Data collection was conducted during 2018- 2019 to explore context, implementation strategies and intended and unintended outcome of polio eradication activities in seven countries: Afghanistan, Bangladesh, the Democratic Republic of Congo, Ethiopia, India, Indonesia, and Nigeria. The analysis presented here focuses on India. We performed the review of published literature and grey literature collected during STRIPE to conduct implementation strategy mapping using Proctor's guidelines and identifying the strategies for demand generation and community-based approaches helped in mitigating vaccine rumors and misinformation. We also mapped and defined the strategies found in India for mitigating rumors and misinformation regarding polio. Finally, we used materials from discussions in a webinar series to identify which strategies from polio eradication in India were used to address vaccine hesitancy during COVID, and which weren't. In India, major barriers for polio program implementation included: geographical inaccessibility, vaccine hesitancy, competing health priorities, and social and structural determinants of health inequalities that include poverty, racism, and discrimination. From the Polio Program, the bundling of the services, stakeholder engagement, identifying the right influencer including religious leader (Underserved strategy) to penetrate the resistant households, involving children as a change agent, celebrity persuaders and media advocacy and sensitization. Social Mobilization and Multipronged mass media were key strategies that helped in building trust and gaining confidence among the resistant community. As per Proctor's guidelines, the specification

of Underserved Strategy is Strategy Definition (Social mobilizers identify right community influencer or religious leaders who helped them in articulate the issues related to polio and its eradication (community outreach activity), Actors (Religious Leaders Imams, Madarasa in charges, Hajis, Maulvis from the community), Action (Promote Vaccination and message them benefits of vaccine through announcements during Friday prayers, fairs, community gatherings, setting of Polio and religious meetings)Action Target (Resistant Communities), Temporality (Weekly Mosque Announcement), Dose (Monthly Meeting), Outcome Affected (Adoption, Feasibility, Acceptability, equity). The specification of Celebrity Persuaders Strategy is Strategy Definition (Involving Celebrities or mega star Amitabh Bacchan persuaders for Polio campaigning), Actors: (Film Celebrity like Amitabh Bachchan to rekindle interest), Action Target (Resistant Population), Temporality (Weekly Public Service Announcement), Dose (Weekly), Outcome Affected (Adoption, Feasibility, Acceptability, equity). By taking the lessons from GPEI, organization worked in partnership to ensure that communities and individual caregivers were provided with facts about covid 19 and covid vaccine to combat the spread of health misinformation and ensure that communities and caregivers were equipped with the knowledge they need. Amitabh Bacchan's interactive voice response used uninterruptedly during covid also.

Recommendations/Conclusions: The purpose of this study is to find the lessons learnt from the Global Polio Eradication Initiative in terms of implementation strategies that worked well in different geographies, and to identify missed opportunities to reach the vulnerable group. During GPEI, many Implementation Strategies have been tried and tested and continuously evolved over time to ensure that the community stays engaged with the program. Underserved strategy played a significant role in changing the perception of the minority community and increasing the vaccination rate. Implementation strategies if 'packaged' in specific protocols helped in guiding how a given innovation/intervention is to be enacted. It would facilitate meta-analysis and replication (in both research and practice) and would increase the comparability of implementation strategies by allowing them to be used in the real world to address the issue.

Keywords: Implementation Strategies, knowledge Translation, Vaccine Acceptancy, Polio Eradication, Implementation Research

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Using a Massive Open Online Course (MOOC) to Empower Peer-to-Peer Conversations to Improve Vaccine Acceptance

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ABSTRACT:

Background: In the United States uptake of COVID-19 vaccines for adults and children has been suboptimal. A major hurdle to COVID-19 vaccine uptake globally is due to distrust in government and healthcare systems - including the vaccine development and approval process, vaccine delivery, and public health recommendations. Given that public distrust toward government, scientific institutions, and even healthcare providers has been growing over time, it is crucial to identify trusted messengers who can provide credible information, dispel misinformation and rumors, and promote vaccine confidence. Peer-based communication approaches are an effective method to reduce vaccine hesitancy and may be particularly important in reaching communities where distrust of public health institutions is prevalent

Methodology: We developed a free Massive Open Online Course (MOOC) on the popular Coursera platform with the aim of equipping parents, school staff, and the general public with the knowledge and skills to navigate vaccine conversations with their peers with the primary goal of supporting COVID-19 vaccine uptake for children and a secondary goal of supporting uptake for adults. To guide the development of this resource, we convened an advisory board of 6 parents (some of whom were teachers or school administrators) from 6 U.S. states. Guided by their recommendations, we developed a 60-minute short online course comprised of four modules: 1) understanding vaccine hesitancy; 2) understanding the immune system and SARS CoV-2; 3) effective communication techniques; and 4) identifying and mitigating misinformation. The advisory board emphasized the importance of keeping each segment of the training concise and engaging, with short videos. Thus, our course delivery emphasized "bite-sized" components reminiscent of social media content including, self-paced informational slides, quizzes, and short animated videos. Since the course was made available in January 2022, nearly 30,000 learners have completed the training.

Results: 2,000 learners were randomly selected to complete an evaluation survey after completing the course, with 1,005 completing the survey. A large proportion of respondents self-reported high levels of agreement in their confidence in being able to: explain why a parent should vaccinate their 5-11-year-old child (96%), discuss why someone might be concerned about the COVID vaccine (97%), use at least one communication strategy to talk to others about the COVID vaccine (96%), and use at least one technique to identify misinformation (96%). Ninety-seven percent felt the course was presented in a clear and logical manner and 90% felt the overall experience of the course was excellent.

Recommendations: As vaccine hesitancy is one of the greatest threats to public health, equipping individuals outside of the medical and public health community with the skills and knowledge to have empathetic conversations about vaccines is critical. We found that members of the public were eager to play a role in mitigating the pandemic in their own communities by promoting greater

vaccine confidence and uptake, supporting further research and investment in empowering peer messengers in health promotion.

Keywords: peer approaches, online training, US, adult learning

Overcoming Vaccine Hesitancy and Building Vaccine Confidence: Lessons Learnt from Engaging Faith Based Organizations (FBOs) to Increase Uptake of COVID19 Vaccination in Tanzania

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ABSTRACT:

Background: The outbreak of COVID-19 was confirmed in United Republic of Tanzania on 16th March 2020. As of 30 October 2022, more than 40,000 cases including 845 deaths were confirmed. Yet, Tanzania did not introduce any form of public health restrictions in the peak of COVID-19. As of 20 June 2022, only 7.7% Tanzanians have received at least one dose of a COVID-19 vaccine, though vaccines are available in more than 7000 health facilities across the country. Studies confirmed that people knew where, why and have high intentions, yet not getting vaccinated. On April 12, 2022, Tanzanian Ministry of Health, with technical support from WHO, UNICEF and partners rallied leaders of faith-based organization under the umbrella of Tanzania Interfaith Partnership (TIP) to overcome COVID-19 hesitancy and enhance confidence in the vaccine among religious devotees in the country. More than two dozen religious leaders of Christian, Jewish, and Muslim faiths got vaccinated in public. Worship centres turned vaccination centres to make vaccines available to people at zero transport cost and convenience. Vaccine education campaigns featured many faith-based leaders on television and radio programmes. In the health sector, faith-based organizations are frequently on the front lines of service delivery. For many reasons, faith-based organizations are important partners in advancing global health priorities. McElfish et al (2022) compared community-driven COVID-19 vaccine distribution methods by Faith-based organizations vs. outpatient clinics. In many instances, the faith-based leaders have extensive social networks and infrastructure and, perhaps most importantly, are trusted by the communities they serve. In addition, faith based leaders can often have a profound impact on norms, values and behaviors and can influence healthy lifestyles. For the purpose of this conference, this paper shall focus on the activities of Tanzania Interfaith Partnership using the Evangelical Lutheran Church Tanzania (ELCT) as a case study.

Methodology: Although, millions of Tanzanians have been administered with COVID-19 vaccine, many people are still hesitant about getting vaccinated. This can stem from a number of factors, like misinformation or even theological objections to the content of certain vaccines. ELCT leaders, with the technical support of WHO, UNICEF, and partners, boosted vaccine confidence in their communities by getting vaccinated in public and participating in vaccine education campaigns; set up vaccination sites in places of worship to improve vaccine access; sponsored mobile vaccination units and unified messages regarding vaccine acceptability, such as:

- Science and faith are not enemies, but partners.
- Social distancing, mask-wearing—are part of how we love our neighbor as ourselves.
- It is the highest commandment in our faith to save another's life. By taking the vaccine and encouraging others to do so one is potentially saving many lives. Not to take the vaccine may cause another's death.

Other strategies included sponsoring mobile vaccination units at parks and other places where families gather, encouraging members of the community to share on social media when they've been vaccinated and establishing vaccine education campaigns featuring leading faith voices.Aside from opening worship places as vaccination sites, mapping of locations where hesitancy and lack of confidence determined where the project was implemented. Hence, focused activities were implemented in Dar es salaam, Dodoma, Mororgoro, Manyara, Arusha, among others.

Results: Vaccination coverage obviously increased in geometric progression across Tanzania since mid-year 2022, vaccine acceptance in regions where faith-based organizations were more actively is indicative.

Recommendations: Religious and spiritual connection with positive health behaviors make faith-based organizations natural partners for planning and implementing health initiatives to improve the health of the community. Conclusions are to continue collaborative efforts between FBOs and traditional health services in order to overcome hesitancy and sustain confidence.

Keywords: Faith Based Organizations; COVID-19 Vaccinations; Tanzania; Vaccine Hesitancy; Tanzania Inter-faith Partnership

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"BATAAL" (Syringe) Project

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ABSTRACT:

Background: Through the Expanded Program on Immunization, Cameroon's sectoral health strategy has set the goal of reducing the mortality and morbidity rate of vaccine-preventable diseases, aiming to reach each district[1]. However, data on vaccination coverage highlight many disparities across regions and environments.

In the past few years, the environment to carry out this program has been disrupted by the persistence of socio-political unrest in the northwest, southwest, and far north regions of the country, where the terrorist sect Boko Haram is rampant. This situation is exacerbated by the COVID-19 pandemic, as well as growing misinformation about vaccines[2]. The latest vaccination health survey report shows that with a national coverage rate of 70% in a 12-24 month period, the northern regions record alarming scores well below the national coverage of 39% in the far north; 36% in the north and 38% in Adamawa[3]. We see a gap between regions that have suffered the same crises, which raises issues concerning equity and social inequality. Why do regions in this part of the country have such low coverage?

An analysis of health data from this area shows us a low birth rate in health facilities in these regions: 38% in the far north, 36% in the north, and 42% in Adamawa; while the number of home births is very high: 53.9% in Adamaoua, 62.2% in the far north, and 63% in the north[4].

Knowing that vaccination is strongly linked to the provision of health services, could this low coverage rate be explained by low attendance in health facilities? In addition, the rate of prenatal visits is also low, the latter being strongly linked to tetanus vaccine coverage, which would also explain these figures. With this in mind, could the low rate of vaccine coverage in these regions be attributed to home deliveries and low rates of prenatal visits? If so, how can we measure the impact of home births and the absence of prenatal visits on demand for vaccines? And what might be the solution to this problem.

To answer these questions, we suggest carrying out a project in the health district of Maroua third, with the:

[1]Full Multi-Year Expanded Immunization Program Plan: Letter endorsing the multi-year plan.
[2]Demographic health survey report PP 196 Child Health
[3]Demographic health survey report PP 199 Child Health graph 10.4 vaccine coverage by region
[4]Demographic health survey report PP 184 maternal and neonatal health. Table 9.5 places of delivery

Main objective:
Support the local communities of 5 villages in the search for solutions to increase the demand for vaccination services, to ensure protection against deadly diseases for everyone, through local actions.

Specifically:
- Measuring the impact of home births on vaccination rates
- Identifying and structuring local tontines to encourage vaccinations
- Strengthening the capacities of these local actors

The project would aim to highlight the relationship between home birth rates and prenatal visits on vaccination rates in the northern regions.

Methodology: To reach our objectives, our approach will consist of intervention research developed over 2 phases:

The first phase will be data collection to measure the impact of home births and prenatal visits on the use of health services. We will conduct individual interviews and groups will be with female and male parents or guardians of children, and health providers. Literary journals and health facility registers will also be consulted.

Expected Outcomes:
- The data collected will be analyzed to measure the impact of home births and prenatal visits on vaccine coverage.
- Local tontines will be identified and supported by local development associations to promote vaccination
- Local tontines will encourage vaccination
- Recommendation
- Provide evidence on the ratio of home births to prenatal visits on vaccine coverage
- Strengthen the capacities of local actors for vaccine promotion
- Facilitate access to immunization services through help to increase the demand for vaccines
- Involve local tontines as they are accessible and frequented by a large number of women

Keywords: Vaccine coverage; Home births; Prenatal visits; Local tontines; Maroua Health District third.

Knowledge, Risk perception and Uptake of Hepatitis B Vaccine among Youths in Ido Local Government Area of Oyo State, Nigeria

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ABSTRACT:

Background: The World Health Organization has estimated that 20 million Nigerians are infected with Hepatitis B Virus and about 5 million die as a result of the consequences. Approximately nine in ten Nigerians who live with chronic Hepatitis B Virus are unaware of their infection status and are unable to take preventive measures to reduce transmission. Despite the availability of effective vaccines, the prevalence of Hepatitis B infection among Nigerians has remained high as there is little advocacy on the need for vaccination among the general population. This study, therefore, aims to investigate the knowledge, risk perception, and uptake of Hepatitis B vaccination among youths.

Methodology: Multistage sampling technique will be employed for this study. Simple random sampling was used to select one zone in Oyo State. Ibadan zone was selected from the five zones that make up Oyo state, while Ido Local Government area was also randomly selected from the Eleven LGAs that make up the Ibadan zone of Oyo State. In Stage two, seven wards will be selected from the ten wards that make up Ido LGA using simple random sampling by balloting, and these will be considered the study sites. At the final stage, a convenient sampling method will be adopted to select the respondents. Four hundred and twenty-two eligible youths living within Ido LGA who meet the inclusion criteria will be considered for this study. The inclusion criterion will consider youths (In school and out of school) aged 18 to 35 living within the sampled communities of Ido Local Government Area, who give their consent to participate in the study. Data will be collected with the use of a structured questionnaire, while numbers will be assigned to questionnaires for easy identification. Data will be sorted and cleaned while a coding guide for data entry will be developed. Analysis of data will be conducted using SPSS version 26.

Results: The projected date of data analysis and report writing is between the 20th of March 2023 and to 31 of March 2023.

Recommendations: The results from this study could be used by individuals, Donor Organizations, Non-Governmental Organizations, Civil society Organizations, Ministry departments and Agencies, and program planners to increase knowledge and raise awareness among the youths about hepatitis B viral infection. It would also help in developing interventions that are geared towards the primary prevention of the disease, for example, sensitization, health education talks, vaccination program, and treatment of identified cases.

Keywords: Vaccination; Hepatitis B Vaccine; Social Behaviour Change; Adult Immunization; Primary Health Care

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Human-centered design (HCD) insights from the promotion of COVID-19 vaccination in the context of touristic events in Madagascar

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1. UNICEF

ABSTRACT:

Background: In mid-September 2022, only 5.20% of the Malagasy population have been fully vaccinated against Covid-19. However, accelerating COVID-19 vaccination and children immunization in Madagascar is a high priority to ensure the health of the population and the re- emergence of the economy, particularly the tourism sector. Thus, UNICEF Madagascar, in collaboration with other health partners are supporting the Ministries of Public Health and Tourism to organize a COVID-19 vaccination campaign and raise awareness about COVID-19 vaccination in major touristic sites between October 2022 and June 2023.

Methodology: To promote COVID-19 vaccination in major tourist areas, it was integrated among the main activities of the celebration of 2022 World Tourism Day in October 2022, in the rural commune of Ampefy, then of the first whale shark Festival "Marokintana" in Madagascar under the high patronage of the President of the Republic on the island of Nosy Be, in early November 2022. The objective was to vaccinate 1,500 people as part of each touristic event. Outreach and mobile strategies were implemented in markets and popular gathering places one week before and during tourist events in addition to health parks at official celebration sites which integrated COVID-19 vaccination and other health services. The Ministry of Public Health counted daily the number of people vaccinated. UNICEF Madagascar technically and financially supported human-centered design (HCD) approaches, among others: dissemination of posters and flyers; setting up a health information box for hesitant and refractory persons; free concert with testimonials and awareness by famous national vaccinated artists; incentives for vaccinated people (snacks, caps, t-shirts, and a pin with the inscription "I am vaccinated"); mobilization of a float and revelers for awareness raising on vaccination and health during the carnival parade attended by the presidential couple; mobile animations. Key messages were focused on health and economic benefits of the COVID-19 vaccination[1].

Results: The promotion of touristic benefits of COVID-19 vaccination, supported by various incentives for vaccinated people (snacks, pins, caps and t-shirts, free concert with awareness by famous vaccinated artists), by integration with other health benefits of interest to adults, and by the implementation of advanced and mobile strategies on the most frequented places, made it possible to bring a part of the hesitant population to receive the COVID-19 vaccination during tourist events, with a peak on days of free shows[1]. According to the Ministry of Public Health, "1224 people were vaccinated in Ampefy in October 2022, and 1,718 people in the island of Nosy Be in early November 2022 as part of the touristic events"[2]. Health stakeholders are currently planning to promote COVID-19 vaccination with children immunization and primary health care during the Jazz Festival in the Sainte Marie Island in April 2023.

Recommendations and/or Conclusions: This is the first time in Madagascar that vaccination has been

promoted in the tourism sector and that incentives have been offered to those vaccinated. The most effective innovative approaches will be scaled up to accelerate the catch-up of zero-dose and under-vaccinated children and the use of maternal and children health services.

Keywords: COVID-19, vaccination, Human-centered design (HCD), demand generation, tourism

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Impact of Result Based Community Engagement (RBCE) planning on Immunization: A practical case of Balochistan, Pakistan

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ABSTRACT:

Background: On August 2020, the fear of infection of COVID coupled with prevailing mistrust pushed the Polio vaccine refusals in Balochistan to its peak i.e., 9.37% of target population, highest ever in history of Polio eradication program. Consequently, the pressure to provide concrete and quick results on team of COMnet (Communication Network) Balochistan, increased. Irrevocably, social, and behavioral change is a process that takes time for individuals, groups, and social institutions to accept and adapt to. Contrary to this, donors, partners, and the government demand demonstrable outcomes from community engagement (CE). Community engagement is conducted at micro level, and the outcome of the activity usually gets diluted by looking at the bigger picture. The indicators of community engagement are mostly based on outputs i.e., number of CE activities conducted, number of people engaged, number of people received information. Arguably, there is limited work done on planning tools that provide short- or medium-term outcomes of community engagement. To address this challenge, the study proposed a tool that ensures result-based community engagement planning. The tool is named Community Engagement Planning & Assessment tool (CEPAT). The purpose of the paper is to highlight the need of result-based community engagement planning in promotion of immunization, share the extraordinary results associated to CEPAT in reducing the refusals, managing the performance of staff, and developing a mechanism of self-motivation.

Methodology: Result Based Community Engagement (RBCE) investigates cause-and-effect relationship to provide concrete results in terms of change in behavior. A region, province or district is divided into smallest possible geographical segment. Later based on some indicators for instance, number of refusals, number of harassment cases the segments are prioritized. After careful necessary analysis community engagement plan is scientifically devised. After implementation of SBC interventions, the pre and post situation is compared. Finally, the cumulative results of all patches or segments of region/district is demonstrated to explains the outcome of community engagement activities.

Results: RBCE planning was piloted in August 2020 in one of the core reservoirs of Pakistan i.e., Quetta block. In first six months the refusals of Polio vaccine reduced by 52% and the figures kept reducing and in October 2022 campaign refusals diminished to unprecedented lowest levels 1.7% of target population. The switch from output indicators to outcome indicators of CE raised the standard of the work and created a strong framework for monitoring. The cause-and-effect comparison confirms the implementation and quality of CE activities. RBCE has helped in quantifying the contributions of field staff. This brings objectivity to the annual performance evaluation exercise of staff. The RBCE has become a source of self-motivation. The social mobilizers

at field make trend analysis graph with their hands and demonstrate their performance.

Recommendations/Conclusions: The CEPAT is a model of success, and it can be applied globally to promote immunization and deal with anti-vaxxers. There is a dire need for research to develop planning tools such as CEPAT, that not only address the output indicators but also provide short- or medium-term outcomes. These outcomes will ultimately define the future of the overall impact of SBC interventions.

Keywords: Result Based; Community Engagement; Planning; Immunization

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Community-based nudges: demand generation for adult and routine immunization in Kenya

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1. UNICEF Kenya,; 2. Fraym

ABSTRACT:

Background: In Kenya, supply of COVID-19 vaccines started flowing in the second half of 2021. On the other hand, a Johns Hopkins Knowledge, Attitudes, and Practices (KAP) study revealed some of the structural barriers reported by people who are willing to receive a COVID-19 vaccine but remain unvaccinated. 1 County health officials in Migori requested support in sharpening their demand generation strategies. UNICEF Kenya provided financial and technical support to Migori county using Fraym data.

Methodology: Fraym's hyperlocal geospatial population data was estimated down to 1km2 through Fraym's machine learning powered software using nationally representative georeferenced household survey data. The computer assisted telephonic interview (CATI) survey consisted of 4,800+ adults with nested quotas for province, gender, and age, weighted nationally by socioeconomic status. This included indicators on the individual determinants of vaccine hesitancy as well as individual use of all major traditional and social media channels as news sources. Data was produced nationally and analyzed in Migori to inform the county specific demand generation strategy, which was implemented from April 2022 to January 2023. The county strategy includes analysis using the 3C (Convenience, Confidence and Complacency) model to address vaccine hesitancy;2 use of community opinion leaders, community influencers and other key stakeholders; private-sector partnership with bike taxi drivers; working with community to identify target audiences in the institutions and community groups; endorsement of vaccination by religious leaders (Christian, Muslim and Hindu) and offering vaccination at the places of worship; simultaneous online-offline awareness raising on Internet of Good Things (IoGT) platform3, and youth engagement through U- report. Efforts are ongoing to increase the coverage of people with disabilities and to leverage data, analysis, strategies, and policies to inform demand strategies for routine childhood and adult immunization beyond COVID-19. Efforts are ongoing to increase the coverage of people with disabilities and to leverage data, analysis, strategies, and policies to inform demand strategies for routine childhood and adult immunization beyond COVID-19.

Results: The adult COVID-19 vaccination coverage in Migori county stood at 29.5%, close to the national rate of 29.8%, on 31 March 2022. Following the campaign, it has increased to 44.5% in Migori county as of 31 December 2022, which is now significantly higher than the national average of 37.0%. We anticipate that additional support in translating findings and strategies to routine immunization will have a similar impact on improved demand generation and subsequent immunization rates in Migori county.

Recommendations/Conclusions: Previously, there was limited social and behavioural data for immunization at the local level. With Fraym's hyperlocal (1km2) geospatial population data, it became

possible to provide more customized support to county health stakeholders at the community level. Evidence-informed strategies combined with local knowledge of community and participatory approaches lead to successful demand creation activities. These findings and data will be able to improve demand generation for routine immunization as well.

Keywords: Hyperlocal data, County health stakeholders, 3Cs of vaccine hesitancy, Religious endorsement, Vaccination at places of worship

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A socio-ecological comparison of the COVID-19 vaccine decision-making processes among pregnant and lactating women: Findings from Kenya and Bangladesh

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ABSTRACT:

Background: Pregnant women are at increased risk for severe disease and poor health outcomes from COVID19. Despite being mostly excluded from COVID-19 vaccine trials, real-world evidence suggests that COVID-19 vaccines are safe and effective for pregnant and lactating women (PLW). However, the vaccine decision-making process for this group is complex, as these persons are influenced by numerous social, psychological, and structural factors. In this study, we used a socioecological approach to explore and compare factors influencing the decision-making process for COVID-19 vaccination among PLW in Kenya and Bangladesh.

Methodology: We conducted 133 in-depth interviews with a variety of stakeholders across urban and rural settings in Kenya (n = 84) and Bangladesh (n = 49), including 53 PLW; 36 healthcare workers including nurses, midwives, doctors, and frontline workers; 34 community members including family members of PLW; and 10 gatekeepers including community and faith-based leaders. We applied a grounded theory approach to identify emerging themes.

Results: We identified individual-, interpersonal-, community-, and policy-level factors that informed the vaccine decision-making process among PLW. At the individual level, women in our study overwhelmingly believed that the vaccines were able to prevent disease and the negative effects of COVID-19. Women also had a high level of risk perception related to COVID-19 disease severity and susceptibility. Lactating women specifically had concerns regarding the effect of the vaccine on breast milk. At the interpersonal level, husbands and peers were the greatest influence on vaccine decision-making, with many women indicating that what others did and their partners attitude as being influential in their decision-making process. At the community level, the recommendation of a health care provider was crucial in informing PLWs' decision-making process and in fact, health care providers were the primary source of vaccine information for PLW. At the policy level, vaccine mandates were important influences. Several commonalities exist across the COVID-19 vaccine decision-making processes of PLW in Kenya and Bangladesh, including perceived severity of COVID-19, the influential role of healthcare workers, and confusion regarding vaccine eligibility and safety for PLW. Results also point to several distinct differences between the countries, including the prevalence of myths, influence of interpersonal norms, and the influence of religion.

Recommendations and/or Conclusions: Maternal immunization is a life-saving intervention, yet pregnant and lactating women have been largely excluded from COVID-19 vaccine research. This study demonstrates how vaccine decision-making among PLW across global regions comprises both shared experiences and unique challenges. Understanding these experiences and challenges is essential to inform immunization policy and demand generation activities for future vaccines. For communication strategies to create demand for vaccines, they must address concerns specific to

communities. The results derived from this study can aid to tailor communication efforts to increase vaccine acceptance and inform future maternal vaccine delivery strategies.

Keywords: maternal immunization; pregnant women; Kenya; Bangladesh; COVID-19

"God protects us from death through faith and science": A qualitative study on the role of the faith-leaders in building COVID-19 vaccine trust in Addis Ababa, Ethiopia

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ABSTRACT:

Background: Despite the availability of the COVID-19 vaccines, hesitancy to get vaccinated has been a challenge in low -income countries where religion is the fundamental component of the social and moral fabric (1,2). Hence, faith-leaders have a significant influence on the behaviors within their constituency (3). This study aimed to explore faith-leaders' perspectives on the COVID-19 vaccine and their role in building COVID-19 vaccine trust in Addis Ababa, Ethiopia.

Methodology: This qualitative study draws on in-depth interviews with twenty-one faith-leaders from the seven religious groups represented in the Inter-Religious Council of Ethiopia. A purposive sampling technique was used to recruit participants. From the seven religions, one person per hierarchy, at three different positions of each religious entity were selected in consultation with each religion's head office highest representative body and interviewed using an interview guide. Qualitative thematic analysis was done using Atlas.ti software version 7.5.16.

Results: The thematic analysis revealed three themes. Firstly, faith-leaders clearly understand the risks of COVID-19 pandemic, although most ascribed a spiritual meaning to the advent of the pandemic. The pandemic seriously affected the faith communities inflicting financial losses. Secondly, faith-leaders were important allies during the pandemic by effectively collaborating with government and health professionals in COVID-19 prevention activities and public health interventions using spiritual reasoning. They were actively informing the community about the importance of the COVID-19 vaccine whereby many faith-leaders were publicly vaccinated to build trust in the vaccine. Thirdly, despite this faith-leaders faced multiple questions from the congregation about the vaccine, including rumors, which they struggled to address.

Recommendations/Conclusions: This research showed that faith-leaders played crucial roles in encouraging vaccines use but limited in their persuasion power because of intense rumors and misinformation. Empowering faith-leaders with latest evidence and the skills to counter rumors and misinformation on vaccines should be prioritized for future pandemic preparedness.

Keywords: COVID-19; faith-leaders; vaccine, hesitancy; Ethiopia; religion

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Shifting Expectations: A Time Series Representative Community Rapid Assessment of COVID-19 Vaccine Uptake, Routine Immunization, and MNCH Services in Six Eastern and Southern Africa Countries

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ABSTRACT:

Background: In Eastern and Southern Africa, the COVID-19 pandemic has had an enormously negative impact on the ability to demand and uptake essential health services including immunization and has lowered trust in the entire health system. By looking at six countries with the lowest uptake of COVID-19 vaccines in the region, the present project will examine how these developments have spilled over into routine immunization (RI) and maternal, newborn and child health (MNCH). At three consecutive timepoints between November 2022 and April 2023, adults in Angola, Comoros, Ethiopia, Madagascar, Malawi, and Tanzania are assessed regarding demand for and uptake of immunization and MNCH services. In-depth qualitative study by country will complement the quantitative data, allowing for detailed understanding of drivers.

Methodology: In a Community Rapid Assessment (CRA) approach that utilizes a random digital dialing data collection method in all six participating countries, a 21-item survey is administered through live calls to 1,000 adult participants per round, in three rounds from November 2022 to April 2023. Repeated for each of the rounds, mobile phone owners are randomly drawn from country specific sampling frameworks that are balanced by location (urban/rural) and gender (male/female). For each country, the same survey is translated into the most important local languages, asking about the behavioral and social drivers of health care demand and uptake in the areas of COVID-19 vaccination, RI, and MNCH, such as perceived importance, social norms, willingness, and access). A tailored qualitative component will accompany the survey study in each country, dealing with a specifically vulnerable and/or under vaccinated population groups, such as women or people with a disability.

Results: Findings will be presented round by round (R1. November 2022, R2. February 2023, R3. April 2023), also including the qualitative country component. Frequencies at item-by-item level (e.g., not at all, a little, moderately, very much; no not sure, yes) facilitate the evaluation by country and other demographics. Population segments by country and timepoint will show similarities and differences in approval of health care, whether people are sceptic, for example, and whether proportions by country can vary, and change across time. Finally, the association of COVID-19 vaccination with other health domains will be tested, potentially in the form of effect-sizes or moderation. Country-specific qualitative findings add an interpretative framework to the survey for vulnerable groups.

Recommendations/Conclusions: According to 2021 WUENIC data: "Between 2019 and 2021, the number of zero-dose children rose from 13 million to 18 million globally, an increase of more than a third. There was a sharp increase, too, in the number of under-vaccinated children, which rose by 6 million to 25 million." The findings of the present study will enable the development of targeted

interventions to increase the demand and uptake of essential health services by women, children, and their families. The focus on similarities and differences across country, including both gender and geographical location differences, benefits a strong contextualized approach, with optimal tailoring of recommendation to users in the Eastern and Southern Africa region.

Keywords: COVID-19 pandemic; maternal healthcare; vaccine demand and uptake; equity; gender

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Building effective adult immunization and life-course vaccination programs

June 13th, 4 PM - 5 PM

Knowledge and Factors Associated with the Willingness to Accept Tuberculosis ReVaccination among Abattoir Workers in Nigeria

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ABSTRACT:

Background: Zoonotic TB is a form of tuberculosis in people caused by Mycobacterium bovis (El-Sayed et al., 2016). Cattle are the most critical animal reservoir for M. bovis. Zoonotic tuberculosis has resulted in substantial economic losses and trade barriers, with a significant impact on the livelihoods of poor and marginalised communities (Ejeh et al., 2014). The BCG vaccine has been used to prevent active tuberculosis for over 100 years yet zoonotic tuberculosis (ZTB) remains a substantial occupational threat to animal handlers, abattoir workers and veterinarians (Mangtani et al., 2014). The study aimed to evaluate zoonotic tuberculosis knowledge and factors associated with accepting tuberculosis re-vaccination among abattoir workers in Nigeria.

Methodology: The study assessed zoonotic tuberculosis knowledge and used the health belief model (HBM) to determine the factors associated with the acceptance of tuberculosis revaccination among abattoir workers in Nigeria by using an online (Google form) self-administer, non-repeated questionnaire from March 2021 to September 2022. We recruited four thousand target participants via social media. Data obtained were retrieved in excel and imported into SPSS version 20.0. The data were presented using descriptive statistics. Chi-square, ANOVA and logistic regression were used for inferential statistics. A p-value <0.05 was considered significant.

Results: Four hundred and thirty-one (431) abattoir workers consented and completed the online questionnaire. The majority 140 (32.5%) of the respondents were 30-39 years old, and 219 (50.8%) belong to the low-income category. The overall zoonotic tuberculosis mean knowledge score was 4.520±1.520 (range: 0-7). Most (351, 81.4%) of the respondents were willing to accept the TB vaccine. We observed significant difference in the TB vaccine acceptance among age groups (χ2 = 14.994; p = 0.002), knowledge category (χ2 = 6.555; p = 0.038) and income groups (χ2 = 23.681; p = 0.000). Middle-income earners, 150 (93.2%) were more willing to accept the TB vaccine compared to others in the group. The age groups 30-39 (AOR: 0.211; 95% CI: 0.058- 0.773; P = 0.019) and 40-49 (AOR: 0.119; 95% CI: 0.035-0.406; P = 0.001) were associated with 73.4% and 84.3% decrease in tuberculosis vaccine acceptance compared to the age group 50 years and above. Having average knowledge about zoonotic tuberculosis (AOR: 3.834; 95% CI: 1.594- 9.222; p = 0.003), and middle-income earner (AOR: 6.461; 95% CI: 1.720-24.268; p = 0.006) were related to about 4.6, and 6.5 times increase in tuberculosis vaccine acceptance. The belief that one could contact ZTB if they did not take preventive measures (COR: 2.200; 95% CI: 1.208-3.757; p = 0.004), believing that living with an animal is a risk factor for contacting ZTB (COR: 2.245; 95% CI 1.371-3.675; p = 0.001) were associated with the acceptance of tuberculosis revaccination.

Conclusion: Tuberculosis re-vaccination intention among abattoir workers in Nigeria was high. It depends on the knowledge of zoonotic tuberculosis (ZTB), socio-demographic characteristics, perception of seriousness and other health belief model constructs. We recommend that agencies involved in public health orientation communicate the risk associated with tuberculosis to abattoir workers. This is not to frighten the public but to build confidence in informed health decision making regarding vaccine-preventable zoonoses at the animal-human interface.

Keywords: Global health; Infectious disease prevention; Immunization; Vaccine hesitance; Animal-human interface

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Decolonizing Global Health and Strengthening Vaccination Programs Using Online Platforms: A Bottoms-up Approach

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ABSTRACT:

Background: Vaccination advocacy programs have traditionally relied on in-person gatherings to design and implement interventions. It is long-known that physical gatherings have the potential to reinforce hierarchical structural barriers and power dynamics by limiting participation from certain groups and neglecting voices who may be most impactful in strengthening vaccination programs. As the COVID- 19 pandemic disrupted researchers' ability to physically connect with stakeholders, our team aimed to identify creative virtual stakeholder engagement strategies that incorporate community voices to strengthen vaccination uptake.

Methodology: Community stakeholders, including potential end-users, came together to design and implement an intervention to strengthen vaccine acceptance and ensure long-lasting success in Haryana, India. Two virtual human-centered design workshops were conducted to understand barriers to vaccination, discuss potential solutions, and design a prototype of an intervention that would be successful in their community. Personal mobile phones and government-sanctioned tablets were used to access virtual meetings that brought people together and encouraged active participation. The community-oriented six-pronged intervention incorporated the following online activities: involving faith leaders in vaccine discussions, creating electronic pamphlets of messages from local vaccine champions for dissemination to caregivers, creating short videos of local leaders advocating for vaccines, implementing communication training exercises for community health workers, and implementing strategies to strengthen coordination between health workers and supervisors. The impact of the intervention was assessment using qualitative in-depth and semi-structured interviews with stakeholder.

Results: We found that online sessions were consistently attended by men and women of a wide range of ages, with diversity in terms of religion, social standing, and employment. Bringing together voices who may have been left out of traditional vaccine research strengthened the diversity of participants, providing a space for more marginalized groups to speak up, and minimize logistical barriers to attendance. Frequent sessions were possible. Virtual engagement provided the opportunity to combat systemic barriers, as in-person meetings can be exclusionary in terms of gender, race, and background. Our workshops brought together a high number of women who are typically unable to participate in these types of activities due to societal expectations or logistical household barriers. Additionally, the online platform allowed for young adults to have the opportunity to speak up. Post-intervention qualitative interviews with community health workers suggested that they felt more empowered and supported to promote vaccination, particularly as they were involved in the design of promotion strategies, and that community members were more willing to accept vaccines as a result of these efforts.

Conclusion: Our study suggested that using online platforms to design and facilitate advocacy strategies decolonizes public health interventions, and enables communities to have a larger voice in the planning of research activities and the creation and implementation of interventions. Leveraging online platforms shows promising results in engaging stakeholders who may have been previously neglected in vaccination intervention designs. Bringing together these voices shows promise in strengthening equity among stakeholders and co-creating effective strategies to support health workers in vaccination promotion and delivery.

Keywords: vaccination; bottom-up research; decolonization; community health workers

National KAP Study on Vaccine Acceptance: Cameroon COVID-19 Vaccine Pre-introduction Acceptance Results and Action Points

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ABSTRACT:

Background: In preparation of the introduction of Covid-19 vaccine, the ministry of health in collaboration with UNICEF realized from January to March 2020 a study to determine the acceptability of the COVID-19 vaccine and the barriers/expectations of populations through their knowledge, attitudes, practices, and logic in Cameroon. The study aimed at analyzing community immunization intent for Covid-19 vaccine, perceptions on existing Covid-19 vaccines and risks of disease and death.

Methodology: Quantitative study, descriptive and transversal approach

Sample Type: Random + Empirical Combination
- Two Degree Survey
  - 12 divisions considered: 10 Regions + Yaoundé & Douala
  - Primary Sampling Unit (Health Areas)
  - Secondary Sampling Units (Households)
  - Selection of respondents according to predetermined criteria

Sample size: Calculated based on parameters.
- Variable acceptance rate: General population [(30%-40% Centre & Littoral), 60% other Regions]; Health personnel: 60%
- Accuracy (d): 15%
- CI: 95%
- Cluster effect (x2)
- No response rate: 10%

The theory of associations developed in the sociology of translation is used here (Latour, 2006). More precisely, these associations, paradoxically considered as a proliferation of hybrids in the context of modernity (1997), allow us to account for the reasons why targeted groups accept vaccination.

Results: Specific group of health workers: 1/2 health workers (50.8%) said they were in favour of introducing a vaccine against covid-19 in Cameroon; and 54.5% were ready to be vaccinated in case an effective and quality vaccine was available.

The acceptance rate is 63.2% among male health workers, which is relatively higher than among female health workers with 48.0% (p=0.000).

In the general population: 1/2 people (52.3%) do not intend to be vaccinated if an effective vaccine is introduced in Cameroon. 8% are undecided while 39.7% expressed a desire to be vaccinated in case a vaccine was introduced.

The acceptance rate is 42.9% for women, which is relatively higher than for men at 36.0% (p=0.009).

For community leaders' group: 3/5 community leaders (63.7%) say they would be ready to be vaccinated if an effective and quality vaccine were available. The acceptance rate is 67.2% for men, which is relatively higher than for women at 41.7% (p=0.027).

Discussion: The perspective of the introduction of the COVID-19 vaccine is a source of mistrust, controversy and contradictions that animate the social and medical field (Ward & Peretti-Watel, 2020). Beyond the science, the hesitation and non-use of vaccination by targeted groups highlight reasons that are of the order of belief, feelings, susceptibility to profane discourse, particularly from social networks, incomprehension and anger, family and community influences, and revolt against institutional constraints.

Conclusion: This vaccine pre-introductory study shows that the adherence to new vaccines depends on transparency and pedagogy to facilitate an informed decision. The findings of the research contributed to develop the National communication plan for the introduction of Covid19 vaccine, the development of a national strategy to raise awareness concerned of Covid19 vaccine among health personnel and the organization of the first national immunization campaign to reach out the general population.

Keywords: vaccine; COVID-19; pre-introduction; acceptance; target group

Understanding behavioral and social drivers of COVID-19 vaccine and childhood immunization demand and uptake in Addis Ababa and Oromia, Ethiopia: a qualitative assessment

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ABSTRACT:

Background: The COVID-19 pandemic continues to challenge immunization systems globally, affecting implementation of both childhood immunization and COVID-19 vaccination. In Ethiopia during the COVID-19 pandemic, childhood immunization coverage for key antigens decreased significantly, and only 65% of the population has received the first dose of a COVID-19 vaccine.1 To examine these critical changes in the immunization landscape, we conducted a qualitative assessment in Ethiopia to identify behavioral and social drivers affecting childhood immunization and COVID-19 vaccine demand among health care workers (HCWs) and caregivers of young children.

Methods: In May 2022, we conducted six focus group discussions (FGDs) with caregivers of children 6-59 months, 12 key informant interviews (KIIs) with HCWs providing immunizations, 12 KIIs with district immunization focal persons, four KIIs with zonal health officers, and four KIIs with regional health bureau officers in Addis Ababa and Oromia (where COVID-19 burden was high). Transcripts from audio recorded discussions were coded deductively and inductively. Thematic analyses highlighted key barriers and facilitators to childhood vaccination and COVID-19 vaccine demand and uptake.

Results: Three key themes emerged highlighting barriers to childhood immunization during the COVID-19 pandemic: 1) caregivers' fear of getting COVID-19 infection at the health facility and their perception that HCWs were a source of infection negatively affected caregiver immunization-seeking behavior, 2) lack of transportation prevented caregivers from traveling to health facilities during lockdown, and 3) stock-outs of routine vaccines in early phases of the lockdown prevented them from getting their children vaccinated. HCWs providing outreach education to inform caregivers on continuing childhood vaccines during the pandemic was a key facilitator. Three key themes for barriers of COVID-19 vaccine demand and uptake were: 1) vaccine supply chain and management issues resulting in shortage supplies, 2) fear of severe side effects from the vaccine (e.g., blood clots) among caregivers and HCWs, and 3) negative advice from influential religious leaders who recommended not getting the vaccine.

Caregivers also reported hearing misinformation about COVID-19 vaccine ingredients and adverse effects (e.g., infertility). Facilitators of COVID-19 vaccine uptake were: 1) high disease risk perception among HCWs, which motivated them to get vaccinated, 2) vaccinated HCWs who served as role models for vaccine uptake among peers and in the community, and 3) community members with chronic conditions had high risk perception of COVID-19 and sought COVID-19 vaccines. Participants also shared that social mobilization by health extension workers, community leaders, and mothers' groups facilitated increased awareness and uptake of COVID-19 vaccines in the community.

Conclusion: This assessment highlighted disruptions during the COVID-19 pandemic for routine immunization systems. Routine immunization demand was influenced by high COVID-19 disease risk perception and lockdown restrictions. The introduction of COVID-19 vaccines challenged the system with misconceptions about the risk of immunization and disease, underscoring the need to address COVID-19 vaccine misinformation through credible sources. Lastly, the assessment also highlighted the commonality in implementing mitigation strategies such as continuing and intensifying social mobilization through community actors to increase awareness and promote both routine and COVID-19 vaccines.

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Empower Public Private Partnership to Reach Elderly and People with Disability through Volunteer-based Humanitarian Agency, University and Social Network in Central Java and South Sulawesi, Indonesia: A Pilot Intervention Lesson Learned

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1. Australia Indonesia Health Security Partnership

ABSTRACT:

Background: Australia Indonesia Health Security Partnership (AIHSP), a 5-year health security program, has supported Government of Indonesia in Central Java and South Sulawesi delivered COVID-19 vaccine through an outreach program. Elderly and people with disability are two main participants to be reached. Those are vulnerable groups with high morbidity and mortality from COVID-19. People with disability (PwD) is not specific listed in national COVID-19 vaccination data dashboard.1 AIHSP tried to reach elderly and people with disability more effectively through public private partnership.

Methodology: AIHSP collaborated with the Central Java Red Cross, Universitas Hasanuddin Faculty of Community Medicine (IKM-IKK) and IDCOMM to reach the elderly and PwD. The intervention is aimed at improving the outreach of elderly and people with disability. Central Java Red Cross empowered their volunteer to reach elderly and PwD in the village level of 9 districts. IKM IKK conducted structured rapid community assessment, developed social behavior-based counseling cards, trained volunteers, and deployed educators, social mobilizers, and medical staff to support primary health care reaching the elderly and PwD in Maros district, South Sulawesi. IDCOMM was advocate inclusive vaccination through disability rights awareness discussion, collaborative network, and high- level discussion with local government in 5 districts, in South Sulawesi. Then supported the government agency and People with Disability organizations at the district level and actuated an inclusive vaccine event.

Results: Central Java Red Cross worked in 9 districts of Central Java from April to August 2022. They delivered 168,800 doses. They reached 49.6% males and 50% females in total. They were giving vaccines to 21,142 elderly and 229 people with disability. IKM IKK reached 13,810 people; 1,386 elderly and 45 people with disability from June to August 2022. Meanwhile, IDCOMM worked from July to August 2022, delivered 5 inclusive events of vaccination, and reached 760 people, 186 people with disability and 32 elderly. The proportion of People with Disability from Central Java Red Cross | IKM IKK| IDCOMM were 0.13% | 0.3% | 24.4%. Meanwhile, an elderly proportion that reached through Central Java Red Cross | IKM IKK | IDCOMM were 12.5% | 10% | 4.2%. Dose per vaccine cost which was spent by Central Java Red Cross | Universitas Hasanuddin | IDCOMM on average was IDR 5,915 (AUD 0.5) | 156,995 (AUD 15) | 487,532 (AUD 48).

Recommendations: Advocating disability rights, creating an enabling environment, and involving community-based organizations are potential approaches to reach people with disability. Meanwhile, delivering outreach through a local grounded humanitarian agency (i.e., Red Cross) can be a potential approach to reach the elderly, especially at village level at a lower cost. Public Private Partnerships between government agencies, Public Health Faculty, humanitarian agencies, and CSO are needed to empower. Advocacy from the local authority to the community level is a crucial part of delivering public health programs.

Keywords: COVID-19 vaccine, People with Disability, Elderly, last mile vaccination, advocacy, public private partnership

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Does Enforcement in COVID-19 Vaccination Uptake Effective in Improving Vaccination Effective?

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ABSTRACT:

Background: Indonesia has achieved significant COVID-19 vaccination coverage. Until January 2023, 87% of target recipients have received the first dose, and more than 74% have received a complete dosage(Kementerian Kesehatan Republik Indonesia, 2022). However, debate at the community level about the fors and againsts of the COVID-19 vaccination persists. The study aims to understand the community's perceptions, acceptance, concerns, and attitudes towards COVID-19 vaccination to further improve childhood and adult immunisations communication & health promotion strategy.

Methodology: Between November 2021 and January 2022, a qualitative study was conducted in 8 districts in 4 provinces in Indonesia, namely Bali, Yogyakarta, Central Java and South Sulawesi using PRECEED-PROCEED framework (Glanz et al., 2008). The study employed qualitative methodology with focus group discussions and in-depth interviews. The focus group discussions were conducted with six different gender-segregated groups in each district, including people with disability, elderly, and general population groups. The in-depth interviews were carried out with district health officers and health workers or vaccinators at the respective districts. The study used the precede-proceed framework to understand the predisposing, reinforcing, and enabling factors employed by the respondents that affected their decision-making process regarding COVID-19 vaccination uptakes.

Results: Results from this study indicate that the Indonesian government's measures to roll out the COVID-19 vaccine have significantly increased vaccine coverage. Indonesia has utilised every level of governments structure down to the village, as well as the military to expand vaccine coverage. Vaccination policy also imposed administrative sanction to those who refuse to be vaccinated. The study found that the perceived risk of administrative consequences if not vaccinated, such as the termination of social assistances and access to public services, was the most prominent reinforcing factor contributing to vaccine uptakes across the 4 study provinces, especially among men. In addition, influence from family, peers, clinicians, community leaders and religious leaders reinforced elderly men and women to be vaccinated.

Public perceptions of COVID-19 susceptibility, severity, and fatality, along with the benefits of vaccines, were found to be the predisposing factors that determine whether individuals were more or less likely to be willing to get vaccinated.

Regardless, it was found that even though individuals' perceptions towards vaccination were negative, they still got vaccinated due to the reinforcing factors mentioned. Meanwhile, individuals with positive perceptions towards vaccination were still concerned and felt they lacked information regarding the vaccine and its potential effects to their long-term health.

Conclusion: In conclusion, this study discovers that even though the enforcements were effective in increasing the COVID-19 vaccination, they were found ineffective in achieving risk communication objectives to help people make informed decisions amidst the crisis (WHO, 2008). This may not only slower the COVID-19 vaccination uptake, but also decrease further demand for routine childhood and adult immunisations. The study recommends a more sustainable and inclusive communication & health promotion strategy, especially for vulnerable groups such as people with disabilities, the elderly, and women as they experience pandemics and health conditions differently.

Keywords: Risk Communication; COVID-19 Vaccination; Perceived Risk; Adult Immunisation; Health Promotion

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Strategy to Improve COVID-19 Vaccination for Vulnerable Groups in Indonesia: Localization of Risk Communication & Community Engagement and Inclusive Vaccination

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1. Australia Indonesia Health Security Partnership

ABSTRACT:

Background: The COVID-19 vaccine is a key intervention to reduce morbidity and mortality together with non-pharmaceutical intervention (NPI). Before the vaccine arrived, all governments in the world focused on NPI and trialed new treatments. COVID-19 behavior-related data revealed that 64.2%-72.6% of unvaccinated people are planning to get vaccinated1. Therefore, vaccine logistics and vaccine access, and positive acceptance of vaccines are needed to improve vaccine coverage. Australia Indonesia Health Security Partnership (AIHSP), 5 years health security program, supported the Government of Indonesia (GoI) to improve vulnerable groups' acceptance of COVID-19 vaccination and preventive behavior.

Methodology: AIHSP supported GoI in Central Java, Bali, Yogyakarta, South Sulawesi, and NTT through Save the Children Indonesia to implement risk communication and community engagement (RCCE) and vaccination outreach. The framework started with a formative review, develop Provincial-Districts level RCCE framework, key messages, train agents of change. Agent of change will disseminate risk communication key messages, conduct rumor tracking, and support community case management (CCM). CCM is aimed to detect rumors, influenza-like illnesses and educate/mobilizing suspected people to Primary Health Care to get early diagnosis. All risk communication activity will be done through a community engagement framework. Community engagement activities will be conducted by local community-based organizations (CBO), civil society organizations (CSO), Disabled-People Organization (DPO) and Faith-Based organization (FBO). Meanwhile, the local partner is organized to meet and support government agencies in reaching the elderly and People with disabilities (PwD). It will be done through close coordination between government, and local partners/organizations and conduct door-to-door vaccination, mobile vaccination, and inclusive event vaccinations. The project has started from June 2022 to June 2023. The data collection will be conducted in May 2023.

Results: In December 2022, the project developed the COVID-19 RCCE guide handbook and finalized the Province-District level RCCE framework. There were 52 CSO, 71 CBO, 39 DPO, and 21 FBOs in 5 Provinces that will actuate RCCE. Vaccination outreach has reached 37,090 people, consisting of 28,198 males and 37,090 females. The project has contributed to get 8,187 elderly and 1,010 PwD from July to December 2022.

Recommendations and/or Conclusions: The project will contribute to enrich strategy to improve COVID-19 vaccination through risk communication and community engagement. The project will identify and recommend which key message that improves vaccine confidence. Localization is taking place in this intervention and empowers health security through prevention (risk communication), detect (rumor tracking, CCM), response (rumor tracking, vaccination outreach), and coordination (public-private partnership -local CSO – primary health care). Integration of

RCCE with vaccine outreach through local organizations suppose to improve vaccine coverage for vulnerable groups.

Keywords: Risk communication and community engagement, vaccination, health security, public-private partnership, inclusive, vulnerable group

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Interventions to Increase Vaccine Uptake in Prisons: A Global Systemic Scoping Review

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ABSTRACT:

Background: Lack of vaccine uptake is a key global challenge in controlling the spread of infectious diseases in prisons. Based on the international research project "Reaching the hard-to-reach: Increasing access and vaccine uptake among prison populations in Europe (RISE-Vac)" funded by the EU Health Program, we will report the implementation of interventions to increase vaccine uptake among people who live and work in prisons.

Methodology: Operationalizing the "Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) extension for scoping reviews" criteria, we searched five databases of peer-reviewed literature—PubMed, ISI Web of Science, Cochrane library, Science Direct, and EBSCO—as well as 14 databases of grey literature to access publications between 2012 and 2022. Suitable publications were reviewed by two researchers independently and the quality of these publications was assessed through established quality assessment tools.

Results: Of the 11,281 publications identified and reviewed, 17 met the inclusion criteria. For people who live in prisons, the following interventions have been implemented to improve their vaccine uptake: 1) knowledge dissemination through educational courses and open focus group discussion; 2) distribution of learning materials, e.g., posters, factsheets, pamphlets; 3) implementing rapid-schedule vaccination services; 4) revision of the existing vaccination protocols; and 5) prioritizing these individuals in national vaccination programs. For juveniles, the development of virtual forums with youth, guardians, and community partners has been adopted to increase vaccine uptake in prisons. For people who work in prisons, e- learning courses and follow-up information through email communication are the main interventions implemented to increase their vaccination uptake.

Conclusion: Considering that most of the people who live in prisons will eventually return to their community and that those who work in prisons return to their community daily, increasing vaccination uptakes as per the measures above should be a key priority for public health investment.

Keywords: immunization; vaccines; prevention; infectious diseases; prisons

Effective Practices and Lessons Learned Vaccinating High Priority Populations in Africa and Integration of COVID-19 Vaccine into Routine Care

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ABSTRACT:

Background: As the COVID-19 pandemic evolves, managing vaccination efforts among high priority populations—including health workers, older adults, immunocompromised persons, and pregnant women among others—is a complex undertaking requiring knowledge sharing, coordination, and continuous learning among stakeholders (WHO, 2021). The Knowledge SUCCESS project, on behalf of the United States Agency for International Development (USAID) COVID-19 Response Team is conducting knowledge exchange efforts, in-depth interviews (IDIs), and focus group discussions (FGDs) among USAID staff and COVID-19 vaccine implementing partners. This work aims to document overarching lessons learned and effective practices from the COVID-19 vaccine response regarding integration of vaccination into primary health care and strategies to vaccinate high priority populations in Africa, including health workers. It will also document recommendations to inform the next outbreak response and general health systems strengthening efforts.

Methodology: This assessment is ongoing. All data collection and analysis will be completed by June 2023. This qualitative assessment includes several data sources. The primary source is IDIs and FGDs with approximately 30 USAID-funded COVID-19 vaccine implementing partners and USAID Mission staff representing 10-20 countries in East, West and Southern Africa. Data collection tools will include an IDI and FGD guide. Participants will be recruited via email using purposive sampling. Each FGD and IDI will be conducted virtually via Zoom, lasting approximately one hour, and conducted in French or English. The FGDs and IDIs will be recorded, translated and transcribed.

The data will be coded and analyzed using grounded theory to identify common themes. The findings will be shared with the IDI and FGD participants and other vaccine technical experts in a one-day consensus building event to vet the lessons learned and recommendations before finalizing and sharing the findings more broadly among the vaccine technical community. Secondary data sources include findings from two Learning Circle cohorts. Learning Circles are highly interactive small group-based workshops for global health professionals and will be used to discuss what works and what doesn't in COVID-19 vaccine implementation. Two regional cohorts will be conducted — one in English and one in French. They will be in-person over a three-day period and include approximately 40 participants, including vaccine implementing partners and USAID Mission staff, from over 15 countries.

Results: Analysis has not yet begun; however, the findings will include effective practices, lessons learned, and recommendations from the COVID-19 vaccine response that can be used to inform and strengthen current COVID-19 vaccine efforts among priority populations, future outbreak responses and general health systems strengthening.

Topics will cover reaching and increasing vaccine acceptance among high priority populations, including community-based approaches and strategies for integrating vaccines into primary health care systems. Actionable recommendations for current and future vaccine response efforts will be shared.

Conclusion: This information will support COVID-19 vaccine implementing partners, host country governments, and institutions to identify, document, and apply lessons learned to inform the current COVID-19 pandemic and strengthen future emergency response and health system strengthening efforts. Sharing these qualitative insights is critical for creating a culture of constant improvement, adaptive response, and applied learning.

Keywords: COVID-19 vaccination; Lessons learned; Integration; Priority populations; Health workers

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COVID-19 Vaccination Status and Access to Health Services among Men who have Sex with Men and Transgender Women in India: Findings from a hybrid-mode cross- sectional survey

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ABSTRACT:

Background: Disparities in healthcare access among key populations, such as men who have sex with men (MSM) and transgender women (TGW), remain a global health concern. The COVID-19 pandemic could potentially exacerbate existing health inequities on mental health, HIV risk and access to services, including COVID-19 vaccination, among at-risk communities in resource-constrained countries. We conducted a cross-sectional survey to assess COVID-19 vaccination status and access to health services among MSM and TGW in India.

Methodology: Between September and December 2022, we conducted both offline (interviewer-administered) and online (self-administered) surveys among 250 MSM and 250 TGW in Chennai, a South Indian city. The survey assessed socio-demographic characteristics, perceived risk for contracting COVID-19 ("I think my chances of getting infected or re- infected with COVID are [0-100]%"; the responses were dichotomized - Low risk: 0% to 49%, high risk: 50% and above), the status of COVID-19 vaccination (completed two doses – yes or no), socio-economic stressors and access to various health services during COVID-19. Participants were recruited through community-based organizations implementing HIV prevention interventions in Chennai. Descriptive statistics are reported.

Results: The mean age of MSM and TGW participants was 30 (SD 6.8) and 29 (SD 5.7), respectively. About three-fifths (62%) of MSM and 47% of TGW had completed a diploma or a college degree. Engagement in sex work was more common among TGW (90%) when compared to MSM (29%). Compared to TGW (49%), a higher proportion of MSM (67%) perceived themselves to be at higher risk of contracting COVID-19. Similar pattern was observed for COVID-19 vaccination status: 84% of MSM compared to 65% of TGW had completed at least two doses of covid vaccination. Both MSM and TGW reported that they could not access health services during COVID-19: 54% of MSM and 30% of TGW could not access condoms when required; 24% of TGW could not access gender-affirmative hormone therapy; and 56% of MSM and 28% of TGW could not access treatment for sexually transmitted infections. Pandemic-related socio-economic stressors experienced by study participants were: job loss (96%), salary cut (81%), failure to repay loans (69%) and procuring new loans (60%).

Conclusion: COVID-19 vaccination uptake among key populations such as MSM and TGW needs to be examined against the backdrop of socio-economic stressors and service access-related barriers faced by them. By drawing findings from a low-middle-income country like India, this study recommends a contextual and intersectional assessment of factors influencing COVID-19 vaccine uptake.

Keywords: COVID-19, Vaccination, Health Care Access, MSM, Transgender women, India

Engaging Youth-Led Innovative Strategies to Engender Behavior Change and Vaccine Uptake in Nigeria

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1. Inspire World International Foundation

ABSTRACT:

Background: WHO's vaccination report as of the start of our project in March 2022, about 9.5 million out of a population size of over 206 million people was fully vaccinated in Nigeria. This was just 4.6% of the country's population[1]. This low vaccine uptake was a public health concern that required intervention. Some barriers that contributed to low COVID-19 vaccine uptake includes, religious myths/misconceptions/misinformation about vaccines, inadequate access to culturally appropriate COVID-19 education[2], poor access to vaccination services, past unethical healthcare researches and government mistrust[3].

To address these barriers, we set out to improve COVID-19 education, prevention and vaccine confidence and uptake across 7 States in Nigeria using three major youth-led innovative strategies, which were to: 1. Identify and equip young community influencers within communities across 7 states in Nigeria to become COVID-19 credible messengers, mobilizers and advocates. 2. Work with these young people to develop/adapt culturally and linguistically appropriate science-based COVID-19 communication materials to educate young people and encourage vaccine uptake. 3. Increase vaccination opportunities and enhance provider partnerships with Primary Health Care Centers and their health workers.

Methodology: 57 young community influencers between the ages of 18 – 30 across 7 States in Nigeria were equipped with knowledge, skills and resources on COVID-19 and vaccination to implement a 6- month mobilization project. Along with these young people, culturally and linguistically appropriate COVID-19 key messages for in-person community outreaches were develop. 42 community outreaches were conducted using unique innovative approaches as tools to address COVID-19 misinformation in rural communities and improve access to COVID-19 vaccination and uptake. Partnerships with the Primary Health Care Centers, health workers and Community Based Organizations (CBOs), schools and religious institutions were established to address transportation and language barriers. We set up temporary vaccination sites within communities, schools and churches, provided transportation support for community members to aid vaccine uptake, and provided interpretation and translation services in four local Nigerian languages. We measured impact by documenting the number of people who got educated and vaccinated during the project. We also conducted an after-project survey to ascertain the number of people who obtained vaccination due to our education outreach.

Results: 5,425 community members were reached with in-person COVID-19 education. 65% of the trained community influencers received the COVID-19 vaccine within months of the project implementation. 20% of target population reached got vaccinated. 15% of target population reached got vaccinated due to our COVID-19 education outreaches.

Partnerships were established with 13 Primary Health Care Centers, 46 health workers, 8 CBOs, 14 schools, 4 orphanage homes and 4 churches in 42 communities across 7 States in Nigeria.

Conclusions: Trusted young community influencers and CBOs should be identified and equipped with science- based knowledge, skills and resources on COVID-19 and vaccination, to enable them collectively develop innovative strategies and culturally appropriate key messages. This will effectively support health workers in vaccination promotion and strengthening delivery interventions. Their unique innovative approaches, driven by science-based information and partnerships with relevant stakeholders within their communities will contribute towards influencing behavior change among community members and enhancing vaccine uptake.

Keywords: Vaccination, COVID-19, Partnership, Education, Youth-Led

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When families closed their homes to vaccines: Stories of hesitancy, mistrust and structural challenges – evidence from a large-scale qualitative study in urban and rural Philippines

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ABSTRACT:

Background: Vaccine hesitancy has received widespread recognition for having a significant impact on successful and cost-effective immunization programs around the world (1). This phenomenon potentially affects the already fragile immunization structures of low- and middle- income countries, particularly the Philippines (2, 3). Here we aim to explore the perceived concerns about vaccines among Filipino families, healthcare workers (HCWs), and local actors in rural and urban communities of the Philippines.

Methodology: We employed qualitative research design, utilizing data collection techniques such as in-depth interviews (IDIs), focus group discussions (FGDs), records review, and observation in selected health facilities in the Philippines. Between May to June 2022, we performed: 1. IDIs among parents or caregivers of under two, pregnant mothers, senior citizens, parents of adolescents, and adolescents (with at least one person with a disability across the target population); 2. IDIs and FGDs with HCWs, 3. Observations of public health facilities; and 4. IDIs with local stakeholders. All interview data were recorded, transcribed, and translated into English. Themes emerging from daily debriefings or covered in interview guides formed the basis of a codebook. Data analysis was guided by the tenets of grounded theory and coding was performed using NVivo 12 software.

Results: A total of 134 IDIs, eight FGDs, and four observations were conducted across target populations. Family and community vaccine concerns (across vaccines: childhood, maternal and COVID-19 vaccines) centered on resource-constrained public health care systems (about vaccine timing, proximity to the health center, migration to other communities, and unbearable length of time spent at the health facilities), household disagreements about vaccination decision-making and healthcare personnel intimidating attitudes emphasizing the risks of noncompliance or postponed immunizations. Concerns and mistrust about new vaccinations among the general public were greatly influenced by the Dengvaxia controversy, which also had an effect on vaccination rates. The widespread misinformation via fear and panic narratives on social media has led to a lack of public involvement and increased decisiveness.

The "no vaccine, no ride" and "no vaccine, no work" campaigns have compelled a sudden, widespread behavioral shift among the populace in favor of the COVID-19 vaccines. Although the goal of the COVID-19 vaccine policy was to promote vaccination among the general public, the message was perceived as a "mandatory policy," which led to counter-intuitive effects and had a long-term detrimental effect on the people's waning trust.

Conclusions: Our findings implicate a more targeted, well-supported alignment of contextual narratives, reinforced by strategic policy level changes, such as the introduction of social dynamic vaccine promotive education in social media platforms, which could facilitate uptake and retention among these populations. Systemic approaches at higher levels of social organization – such as communities or health facilities – are paramount.
While our study reveals significant vaccination challenges, it also reminds us of the chances and actions we should take, which focus on inclusivity, equity, and responsiveness. Our insights could help strengthen our shared hope and vision of leaving no one behind – where families allow vaccines back into their homes and lives.

Keywords: Vaccines, Vaccine Hesitancy, Vaccine Intentions, Caregivers, Philippines

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Toward a more inclusive vaccination program: A case of People with Disabilities (PwD) during COVID-19 Vietnam

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ABSTRACT:

Background: In low middle income countries, the COVID-19 pandemic has magnified inequalities in health services and information access that PwD must endure (ReliefWeb, 2021). In Vietnam, information related to pandemic responses, including vaccination programs, are remotely accessible to PwD, indicating an inconsistent implementation of social inclusion principles in the pandemic response plans (Rohman, 2022). When the pandemic peaked in June- December 2022, pandemic-related information specifically dedicated to the need of PwD was minimal. Our project addresses that gap in the provision of accessible information for PwD.

Methodology: Three organizations of PwD in Hanoi, Ha Nam, and Thai Binh provinces organized 5 online information sessions from late 2021 to early 2022 when major cities in Vietnam were on lockdown. In total, 209 PwD participated. In each session, medical experts from The Ministry of Health and Department of Rehabilitation and Assessment, Agency of Health Examination and Treatment shared about pandemic and vaccination related information with participants. After the session, the participants were asked to answer this question 'On a scale of 1 (strongly disagree) to 5 (strongly agree), how do you rate this statement: Attending this information session helps increase my confidence in COVID-19 vaccines?' what information do you need, what information sources do you use, and what do you suggest to how to improve the inclusiveness of vaccination programs?

Results:

- All 28 (13.4%) of the unvaccinated PwD reported that they became more confidence in taking the vaccine after attending the session.
- PwD's information needs revolved around vaccine procedures and side effects. Those already took the second dose were interested in when and how to get the third one. Information related to the vaccines' side effects to PwD's specific health conditions was salient, in addition to general information regarding the Omicron variant.
- Mass and internet based-media were the top two information sources from where PwD sought vaccine-related information. Respectively, television and Facebook were mentioned 72 and 7 times while Zalo, the Vietnamese messaging app, was mentioned 12 times. E-health apps were the least used information source.
- PwD suggested the government to use more accessible formats and content for delivering vaccine-related information to PwD.

Recommendations:

- To become more inclusive, vaccination programs, as a part of pandemic response plans, need to consistently implement disability rights.
- In Vietnam, PwD are inclined to take vaccines but making a range of information sources accessible to PwD can help better communicate the side effects of the vaccines to PwD's specific health conditions.
- In a volatile time, such as during the COVID-19 pandemic, available information is often limited or overlooks PwD's diverse needs. Strengthening the capacity of organizations of PwD to be able to independently organize such events is imperative to stronger protect PwD in future pandemics.

Keywords: COVID-19 vaccines; people with disabilities; disability rights; Vietnam; social inclusion

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Assessment of Hepatitis-B Vaccination Status through an Intersectionality Lens: A Cross-sectional Study among MSM and Transgender Women in India

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ABSTRACT:

Background: Sexual and gender minority (SGM) communities such as men who have sex with men (MSM) and transgender women (TGW) experience higher sexual risk and inequitable healthcare service access due to various structural inequalities and healthcare stigma. Available evidence from India reveals a high prevalence of substance use, condomless sex with multiple partners and engagement in sex work among them, which can be considered as risk factors for acquiring Hepatitis-B infection. Hepatitis-B Vaccination (HBV) is a cost-effective measure for preventing Hepatitis-B, available for free in public hospitals. We conducted a cross-sectional study to assess the status of HBV among a cohort of MSM and TGW in a South Indian city.

Methodology: Between September and December 2022, we conducted online (self-administered) and offline (in-person, interviewer-administered) surveys among 500 SGM adults (MSM: 250; TGW: 250). The data were collected on the socio-demographic characteristics, the prevalence of mental health conditions and HBV status (3-dose schedule). Multivariable Poisson regression models were used to identify significant predictors of HBV status. Age, educational status, anxiety and depression (past 2 weeks), sexually transmitted infections (STIs) (past 3 months), and inconsistent condom use (past 2 months) were the relevant covariates included in TGW models. MSM models, in addition, also included engagement in sex work as a covariate.

Results: Mean age of the participants was 30 (SD 6.80) for MSM and 29 (SD 5.70) for TGW. Nearly half of the survey participants (54.5%) had a college degree or diploma. While 62% of TGW reported engagement in sex work, MSM in sex work were only 29%. TGW had more non-regular male sexual partners (Mean=86.4$\pm$58.5) in the past month than MSM (Mean=5.4$\pm$9.5). Compared to MSM (43%), more TGW (86%) reported being afraid of contracting HIV. Further, the prevalence of depression (65%), anxiety (90%), inconsistent condom use (83%), and STIs (8%) was also higher among TGW when compared to MSM (depression: 19%; anxiety: 55%; inconsistent condom use: 43%; STIs: 2%). Similarly, a majority (75.8%) of the study participants (TGW: 85.3%; MSM: 66.4%) reported that they have never taken HBV. Only 13.4% (MSM: 24.4%; TGW: 2.4%) participants reported having completed a 3-dose HBV vaccination schedule. Multivariable analyses among the MSM sample revealed that those who were depressed were 72% (IRR=0.28, 95% CI 0.10, 0.76, p=0.01) less likely to have completed HBV. Among the TGW sample, those who use condoms inconsistently were 88% (IRR=0.12, 95% CI 0.02, 0.69, p=0.02) less likely to have completed HBV. However, each unit increase in age was associated with a 10% (IRR=1.10, 95% CI 1.03, 1.19, p=0.01) higher likelihood of having completed HBV.

Conclusions: The Hepatitis-B vaccination status was found to be low among SGM adults, in particular among TGW, despite their engagement in sex work and inconsistent condom use. These findings indicate an urgent need for developing effective interventions aimed at increasing awareness, vaccine acceptance and uptake among SGM communities, involving community members and stakeholders to understand the barriers and challenges. Further, existing HIV-prevention interventions implemented by NACO need to incorporate an educational component on HBV.

Keywords: Healthcare access, Hepatitis-B vaccination, MSM, Transgender women, India

Debottlenecking Misinformation-induced barriers for COVID-19 vaccination: findings from Bihar

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ABSTRACT:

Background: Safe/effective vaccines were central to the global efforts to combat COVID-19 pandemic. Still, this successful journey was frequently impeded by vaccine hesitancy, one of the top ten global health threats (WHO). Incomplete or misinformation/fake news (around false intrigue theory and fraud, ineffectiveness, side-effects) spreading through hearsay and internet (Facebook/ YouTube/Instagram/Pinterest/Twitter....) faster than correct knowledge were often instrumental.[1,2] Trust-building through early involvement of community was suggested as a potential solution along with media literacy promotion.[3] System preparedness required evidence about the nature and magnitude of the influence of the misinformation.

Methodology: To determine the burden and role of misinformation, a cross-sectional study was undertaken involving 1172 representative sample of adults, in Bihar, a resource-poor Indian state with 3rd highest population in the country, feared to have pandemic effects exacerbated by poverty, low education and fragile public health infrastructure. To demystify vaccine hesitancy, a context/ behavior-specific phenomenon,[4] Vaccine Acceptance (VA) Index, as overall measure for trust/ confidence in health system,[5] was designed, comprising of number of doses of COVID vaccination, attitudes towards routine immunization, beliefs about safety, efficacy, and usefulness of vaccines. Incorrect knowledge about COVID, reliance on fake news and lack of verification of information before believing/sharing constituted misinformation index. Descriptive, stratified and multivariable logistic regression analyses conducted to determine the distribution and impact of misinformation on VA.

Results: Poor VA and less trust were found among 40%, while VA had strong positive association (aOR=3.7, p<0.0001) with higher trust. The higher was the misinformation (overall prevalence 27%), the lower the odds of VA for lower (aOR=0.5, p=0.0042) and upper (aOR=0.3, p<.0001) age groups, both sexes (aORfemale=0.5, p=0.0083, aORmale=0.5, p<0.0001), Hindus (aOR=0.5, p<.0001), and for both marginalized (aOR=0.4, p=0.0154) and non-marginalized castes (aOR=0.5, p<0.0001). The likelihood of VA remained associated positively with trust and negatively with the level of misinformation across tertiles of wealth and strata of education. While subjects belonging to middle-wealth tertile appeared to be maximally vulnerable to mistrust and misinformation, illiterates seem to be less influenced by variations in the quality of information.

Conclusions and Recommendations: Misinformation was thus found to be a crucial deterrent in vaccine acceptance, requiring immediate attention. Medical/public health experts/pharmacists engaged in public health communications,[6] partnering with trusted individuals/organizations with relevant expertise are critical to combat misinformation.[7] With UNICEF, Government hosted a communication awareness workshop, to promote Covid-appropriate behaviors and bust myths surrounding Covid-19 vaccines especially for hard-to-reach. Efforts were there through print & social media, cellphone and internet service providers' automatic messaging, publishing articles by identified experts to build vaccine confidence and dissemination of fact-check videos by key experts.[8] Continued communication using these tested platforms with targeted approach appear to be the need of the hour.

Keywords: Vaccine Acceptance, Trust, Misinformation

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Sabin's Vaccine Acceptance & Demand Initiative

The Sabin Vaccine Institute is a leading advocate for expanding vaccine access and uptake globally, advancing vaccine research and development, and amplifying vaccine knowledge and innovation. Unlocking the potential of vaccines through partnership, Sabin has built a robust ecosystem of funders, innovators, implementers, practitioners, policy makers and public stakeholders to advance its vision of a future free from preventable diseases. As a non-profit with more than two decades of experience, Sabin is committed to finding solutions that last and extending the full benefits of vaccines to all people, regardless of who they are or where they live. At Sabin, we believe in the power of vaccines to change the world.

Through the Vaccine Acceptance & Demand Initiative's Vaccination Acceptance Research Network, Sabin supports experts in exploring the factors that can drive vaccination acceptance, demand, delivery, and uptake in low-resourced settings. To learn more about the initiative and its programs, scan the QR code below.

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