

# Virtual 13<sup>th</sup> African Rotavirus Symposium

Rotavirus  
kills more  
than half a  
million  
children  
a year

50% are  
in  
Africa

## SYMPOSIUM REPORT





## PREAMBLE

The 13<sup>th</sup> African Rotavirus Symposium (ARS) was held as a virtual event during 3 & 4 November 2021. It was hosted by the University of Nairobi, Kenya and organized by the South African Medical Research Council (SAMRC) ([www.mrc.ac.za](http://www.mrc.ac.za)). The symposium was initially planned as an in-person meeting to be held in Nairobi, Kenya during May 2021; however due to the COVID-19 pandemic it was decided to hold the meeting on a virtual platform.

This biennial event - organised under the auspices of the African Rotavirus Network (AfrRN) - shapes the agenda of rotavirus research and prevention globally, attracting key international opinion leaders in diarrheal diseases. The AfrRN is a regional network of institutions conducting research on paediatric diarrhoeal diseases in collaboration with the World Health Organisation African Regional Office (WHO AFRO), Ministries of Health and other partners.

The ARS series is aimed at bringing together African rotavirus researchers, policy-makers, clinicians, public health practitioners and health officials to share ideas, expertise and learning across organizations and countries in the areas of rotavirus vaccine introduction, vaccine impact and diarrheal disease prevention and control in Africa.

Due to the COVID-19 pandemic and the concomitant travel restrictions, the 13<sup>th</sup> ARS was held on a virtual platform in the form of a webinar. The programme was limited to 3.5 hr sessions per day over the two days and consisted of invited scientific presentations and scientific presentations from selected abstracts.



## SYMPOSIUM THEME

Against the background of the global COVID-19 pandemic, the theme of the 13<sup>th</sup> ARS was:

***“Maintaining momentum for rotavirus immunization during the COVID-19 era”***



## SYMPOSIUM OBJECTIVES

The two key objectives of the 13<sup>th</sup> ARS were to discuss:



Updates on rotavirus vaccines and immunization in the context of COVID-19 pandemic



New research updates:

- Host interactions with rotavirus (immune/microbiome/etc.)
- Rapid fire updates from the field



## SYMPOSIUM COLLABORATORS

The symposium received financial and/or institutional support from several organizations. These include:

- AfrRN
- Bharat Biotech International (BBI) Ltd, India
- Bill & Melinda Gates foundation (BMGF), USA
- US Centers for Disease Control and Prevention (CDC)
- Kenya Paediatric Association
- PATH
- Serum Institute of India (SII)
- SAMRC
- University of Nairobi
- WHO Regional Office for Africa (WHO AFRO)



## SYMPOSIUM INTERNATIONAL SCIENTIFIC ADVISORY COMMITTEE

The members of the symposium International Scientific Advisory Committee (ISAC) (Table 1) played a key role in organizing and shaping the agenda of the meeting. Several virtual meetings were convened in the months leading to the meeting.



**Table 1: Members of the 13<sup>th</sup> ARS ISAC**

Name	Organisation	Country
Dr Duncan Steele (Chair)	BMGF	USA
Prof Jeffrey Mphahlele	North-West University/SAMRC	South Africa
Dr Jason Mwenda	WHO AFRO	Congo
Dr George Armah	Noguchi Memorial Institute for Medical Research (University of Ghana)	Ghana
Dr Clint Pecenka	PATH	USA
Dr Khuzwayo Jere	Malawi-Liverpool-Wellcome Clinical Research Programme, University of Malawi	Malawi
Dr Jacqueline Tate	CDC Atlanta	USA
Prof Fredrick Were (13 <sup>th</sup> ARS chair)	University of Nairobi	Kenya
Dr Carl Kirkwood	BMGF	USA
Dr Umesh Parashar	CDC Atlanta	USA
Dr Debbie Atherly	PATH	USA



## SYMPOSIUM ORGANISING COMMITTEE

The members of the symposium organizing committee (Table 2) provided administrative, technical and event management support for the meeting.

**Table 2: Members of the 13<sup>th</sup> ARS Organising Committee**

Name	Organisation
Dr Niresh Bhagwandin	Strategic Research Initiatives, SAMRC
Ms Arlene Smith	Strategic Research Initiatives, SAMRC
Ms Mandy Salomo	Conference Centre & Events Management, SAMRC
Ms Kefiloe Masemola	Conference Centre & Events Management, SAMRC
Mr Deon Salomo	Conference Centre & Events Management, SAMRC



## SYMPOSIUM REGISTRATION

Registrations opened on 1 July 2021 and at the time of the symposium, two-hundred and ninety two (292) delegates from thirty-nine (39) countries globally were registered to participate in the symposium.



## CALL FOR ABSTRACTS

The call for abstracts opened on 8 June 2021 with an initial closing date of 31 July 2021. This deadline was extended to 31 August 2021.

In keeping with the objectives of the symposium, abstracts were invited in the following thematic areas:

- Updates on rotavirus vaccines and immunization in the context of COVID-19 pandemic
- New research updates
  - Host interactions with rotavirus (immune/microbiome/etc.)
  - Rapid fire updates from the field

Forty-four (44) abstracts were received during the call period. Abstracts were received from applicants in the following countries:

- |                  |                     |
|------------------|---------------------|
| • Belgium (2)    | • Nigeria (8)       |
| • Ethiopia (1)   | • Rwanda (1)        |
| • Ghana (3)      | • South Africa (10) |
| • India (3)      | • Switzerland (1)   |
| • Kenya (2)      | • USA (5), and      |
| • Madagascar (1) | • Zambia (4).       |
| • Malawi (3)     |                     |

The abstracts were collated and divided amongst ISAC members to review, score and make recommendations on the suitability of the proposed paper for inclusion in the symposium programme. The ISAC made the final decision on which abstracts to accept for presentation.



# SCIENTIFIC PROGRAMME SESSIONS AND PRESENTATIONS

The programme consisted of invited talks and presentations from applicants whose abstracts were accepted for oral presentation. The symposium programme is shown below.



**Virtual**  
**13<sup>th</sup> African Rotavirus Symposium**  
3 & 4 November 2021

Rotavirus  
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**Day 1** 3 November 2021  
CAT Time

**SESSION 1**

**Welcome and Introduction**  
Chair: Duncan Steele & Frederick Were

2:00 - 2:10  
**Welcome remarks**  
Prof Frederick Were (Symposium Chair),  
University of Nairobi, Kenya

2:10 - 2:20  
**Welcome address to conference**  
Dr Patrick Amoth, Director General,  
Ministry of Health, Kenya

2:20 - 2:25  
**Welcome address to conference**  
Prof Grace Irimu, Chair of the Department  
of Paediatrics and Child Health, University  
of Nairobi

2:25 - 2:30  
**Welcome comments from WHO AFRO**  
Dr Richard Mihigo, Dr Jason Mwenda

**SESSION 2**

**Rotavirus vaccines in Africa  
and impact of Covid-19**  
Chair: George Armah  
Facilitator: Carl Kirkwood

2:30 - 2:50  
**Rotavirus vaccine introduction in Africa:  
Progress and challenges in the COVID era**  
Prof Jason Mwenda, WHO AFRO

2:50 - 3:10  
**Impact of COVID-19 on essential  
immunization services**  
Dr Antonette Ba, UNICEF

3:10 - 3:30  
**Regional Update on COVID-19 vaccine  
rollout**  
Dr Latif Ndeketa, WHO

3:30 - 3:50  
**Impact and cost-effectiveness of  
rotavirus vaccines in African LMICs and  
other regions**  
Prof Frédéric Debellut, PATH

3:50 - 4:10  
**20 min Q&A / Discussion**

**SESSION 3**

**Programmatic use of  
rotavirus vaccines in Africa**  
Chair: Jeffrey Mphahlele  
Facilitator: Clint Pecenka

4:10 - 4:30  
**Safety of the pentavalent vaccine in  
Africa. Implications for the new vaccines**  
Dr Jackie Tate, CDC

4:30 - 4:50  
**Implementation of the lyophilized  
RotaSII vaccine**  
Dr Issa Ouedraogo, EPI Manager, MOH  
Burkina Faso  
Dr Aristide Sossou, WHO Benin Country  
Office, Benin

4:50 - 5:10  
**Implementation of RotaSII in DRC**  
Dr Elizabeth Mukamba Musenga, EPI  
Manager, DRC

4:10 - 5:30  
**Introduction/implementation of Rotavac  
in Ghana - switch challenges**  
Dr Kwame Amponsa-Achiano, MOH

5:30 - 5:50  
**20 min Q&A / Discussion**



# Day 2 4 November 2021

CAT Time

## SESSION 4

### Rotavirus Surveillance

Chair: Jackie Tate

Facilitator: Umesh Parashar

2:00 - 2:20

**Diarrhea surveillance in Africa: Results from the Global Pediatric Diarrhea Surveillance Network**

Dr James Platts-Mills, University of Virginia, USA

2:20 - 2:40

**Impact of rotavirus vaccine on the trending rotavirus strains in Ghana**

Dr Francis Dennis, University of Ghana

2:40 - 3:00

**Emerging rotavirus strain data post immunization in Malawi and other African countries**

Dr Khuzwayo Jere, Malawi Liverpool Welcome Trust

3:00 - 3:10

**Changing landscape of moderate-to-severe diarrhea among children in three sub-Saharan African countries following rotavirus vaccine introduction: The Vaccine Impact on Diarrhea in Africa (VIDA) Study**

Karen Kotloff, University of Maryland School of Medicine, United States Minor Outlying Islands

3:10 - 3:20

**Diversity of Circulating Rotavirus Genotypes in Ethiopia, 2011-2018**

Mesfin Tefera, Ethiopian Public Health Institute, Ethiopia

3:20 - 3:40

20 min Q&A / Discussion

Abstract Presenters

## SESSION 5

### Rotavirus research in Africa

Chair: Jason Mwenda

Facilitator: Khuzwayo Jere

3:40 - 4:00

**Immunogenicity of the ROTAVAC vaccine into Zambian infants**

Dr Michelo Simuyandi, CIDRZ

4:00 - 4:20

**Dose-ranging immunization study of the neonatal rotavirus vaccine, RV3-BB in Malawi**

Prof Julie Bines, MCRI

4:20 - 4:30

**10-year Rotavirus trends in the face of continued delay in the country introduction of Rotavirus Vaccine and COVID-19 pandemic in South East Nigeria**

Beckie Tagbo, University of Nigeria, Nigeria

4:30 - 4:40

**Whole-genome analysis of South African G1P[8] and G2P[4] rotavirus strains over a 14 year period: a scientific data report by the African Enteric Viruses Genome Initiative**

Peter Mwangi, University of the Free State, South Africa

4:40 - 4:50

**Whole genome sequencing-based rotavirus surveillance in Zambia reveals substantial diversity of genome constellations pre- and post-Rotarix® vaccination**

Wairimu Maringa, University of the Free State, South Africa

4:50 - 5:00

**Predicting the long-term impact of rotavirus vaccination in 112 countries from 2006-2034: a transmission modeling analysis**

Alicia Kraay - Emory University

5:00 - 5:20

## SESSION 6

20 min Q&A / Discussion

### Closing ceremony

Chair: Duncan Steele & Fredrick Were

5:20 - 5:40

Closing Remarks

Ms Veronica Denti, GAVI, Switzerland



Sponsors



BILL & MELINDA GATES foundation



Over the two days, there were 13 invited scientific presentations and 6 scientific presentations that were selected from the abstract submissions.





## TRANSLATION SERVICES

Simultaneous two-way translation from English to French was available for the entire event. The translation services were sponsored by WHO AFRO. Pre-recorded presentations or slide sets were provided to the translators and a briefing session with the translation team was held prior to the meeting.



## PREPARATIONS PRIOR TO THE SYMPOSIUM

All session chairs and session facilitators were briefed individually and sent briefing notes prior to the meeting. Presenters were also sent briefing notes ahead of the meeting. A trial run was held 2 days prior to the symposium to ensure the actual event ran smoothly.



## SYMPOSIUM WEBSITE

The link to the 13<sup>th</sup> ARS is: <http://afr-rn.samrc.ac.za/ars2021>



## SYMPOSIUM MEDIA RELEASE

The SAMRC's Corporate and Marketing Communications division collaborated with symposium partners to draft a press release which was published on 21 October 2021: [Maintaining the momentum for rotavirus immunization in Africa | South African Medical Research Council \(samrc.ac.za\)](#).





# SYMPOSIUM ATTENDANCE

Figures 1 and 2 show the attendance by country on Day 1 and Day 2 respectively.

## 13th ARS Attendees - Day 1

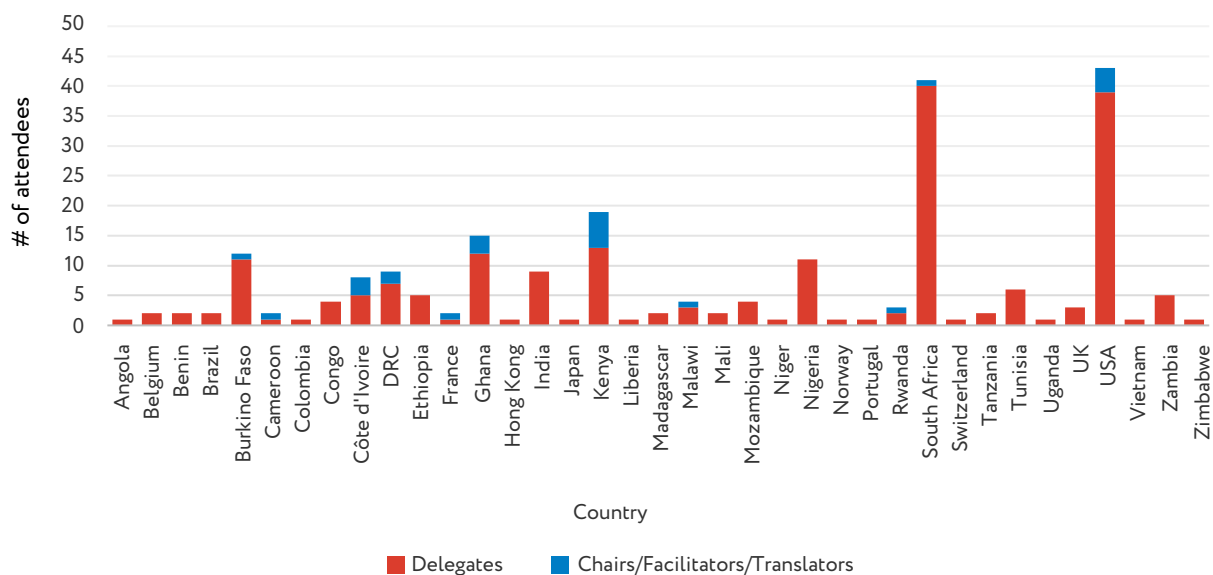


Figure 1: Day 1 attendance by country

## 13th ARS Attendees - Day 2

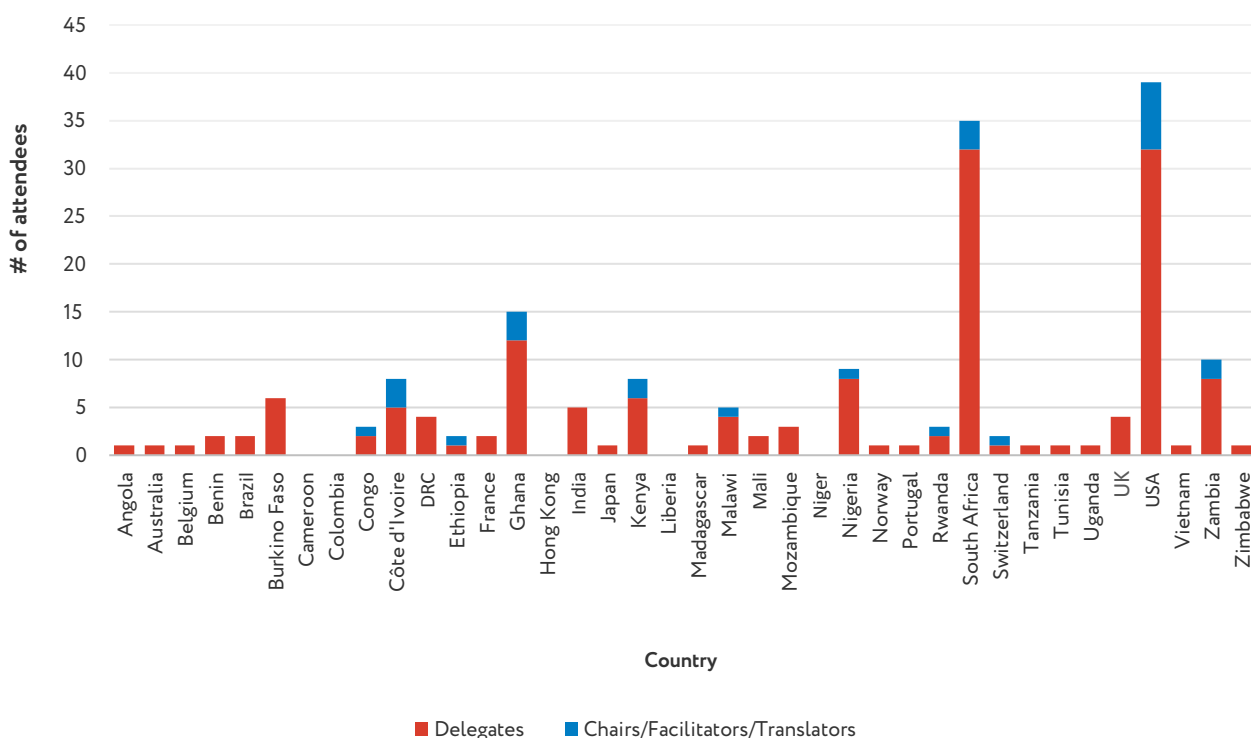
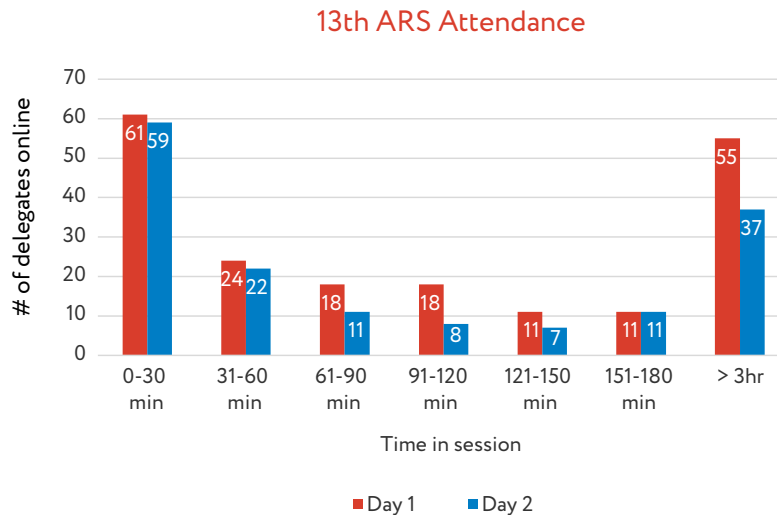


Figure 2: Day 2 attendance by country

The mean time that delegates were online was approx. 1 hr 45 min. Figure 3 shows the times in session in 30 min bands.



**Figure 3: Attendance times of delegates on Day 1 and Day 2**



## SYMPOSIUM Q & A AND CHAT BOX

Delegates were able to post questions and comments on the Q & A and Chat box facilities on the virtual symposium platform. These are shown in Annexures B and C.



## SYMPOSIUM TAKEAWAYS

Post the symposium, the SAMRC in collaboration with DefeatDD compiled a high-level summary of the meeting: [13th African Rotavirus Symposium reveals setbacks, hope in Rotavirus Vaccination efforts In Africa | South African Medical Research Council \(samrc.ac.za\)/](https://www.samrc.ac.za/13th-ars-setbacks-hope-in-rotavirus-vaccination-efforts-in-africa) [Setbacks, hope in rotavirus vaccination efforts in Africa \(defeatdd.org\)](https://defeatdd.org/13th-ars-setbacks-hope-in-rotavirus-vaccination-efforts-in-africa).



# SYMPOSIUM FINANCIAL REPORT

## DRAFT CONSOLIDATED INCOME AND EXPENDITURE REPORT FOR THE EVENT 3-4 NOVEMBER 2021

	R
<b>- BALANCE B/D - surplus 2019 event</b>	<b>1 993 027,88</b>
- BHARAT Biotech	11 303,88
- Bill & Melinda Gates Foundation (BMGF)	1 943 330,80
- Serum Institute of India (SERUM)	38 393,20
<b>- EXPENDITURE</b>	<b>(231 995,28)</b>
<b>Funders expenses</b>	<b>(231 995,28)</b>
- BHARAT Biotech	(11 303,88)
- Bill & Melinda Gates Foundation (BMGF)	(183 283,93)
- Serum Institute of India (SERUM)	(37 407,47)
<b>-TOTAL SURPLUS</b>	<b>1 761 032,60</b>







# ANNEXURE A

## - LIST OF REGISTERED DELEGATES

No.	Surname/Last Name	Name	Organisation	Country
1	AbdelGhany	Mohammad	GSK	Egypt
2	Abdulkadir	Mohammed Baba	University of Ilorin Teaching Hospital	Nigeria
3	Abdullahi	Suleiman	WHO	Liberia
4	Addo-Yobo	Emmanuel Otopa Danquah	Kwame Nkrumah University of Science and Technology,	Ghana
5	Agbemabiese	Chantal Ama	Noguchi Memorial Institute for Medical Research, University of Ghana	Ghana
6	Agbla	Jijoho Mischaël Michel E.	National Public Health Laboratory - Ministry of Health - Benin	Benin
7	Agoti	Charles Nyaigoti	KEMRI	Kenya
8	Agutu	Clara	GSK	Kenya
9	Ahmad	Firoz	Integral University, Lucknow	India
10	Ahmad	Irfan	Skuast, Kashmir	India
11	Aileni	Vinay Kumar	Bharat Biotech International Ltd.	India
12	Alarcon	Rodolfo	NIH/NIAID	USA
13	Alice Patricia	Britoh-M'lan	Centre Hospitalier et Universitaire CHU de Yopougon	Côte d'Ivoire
14	Amadi	Irene	Kenya Paediatric Research Consortium	Kenya
15	Amadu/Dele	Amadu Dele Ohinoyi	University of Ilorin Teaching Hospital, Ilorin	Nigeria
16	Aminu	Maryam	Ahmadu Bello University, Zaria	Nigeria
17	André	Tonda Lohandjola	John Snow Inc.	DRC
18	Ani	Ebele	University of Nigeria Teaching Hospital Enugu	Nigeria
19	Ani	Ezra Okwudiri	University of Nigeria Teaching Hospital, Ituku/Ozalla	Nigeria
20	Annick	Capo Chichi Amoussou	Ministère de la santé	Benin
21	Antia	Avan	Washington University in St. Louis	USA
22	Apondi	Evans Onyango	KEMRI	Kenya
23	Apondi	Ernest Wandera	Nagasaki University Institute of Tropical Medicine-Kenya Medical Research Institute	Kenya
24	Arhin/Bernard	Bernard Arhin	Komfo Anokye Teaching Hospital	Ghana
25	Armah	George	Noguchi	Ghana

No.	Surname/Last Name	Name	Organisation	Country
26	Asare	Ernest Ohene	Yale School of Public Health, Yale University	USA
27	Atherly	Deborah	PATH	USA
28	Azubuike/ Ugochi	Azubuike Constance Ugochi	University of Nigeria Teaching Hospital Ituku Ozalla Enugu	Nigeria
29	Azuike	Emmanuel Chukwunonye	Chukwuemeka Odumegwu Ojukwu University and University Teaching Hospital	Nigeria
30	Baker	Julia Baker	CDC	USA
31	Balachandran	Neha	Cherokee Nation Assurance/CDC	USA
32	Bankole	Honoré S.	Laboratoire National de Santé Publique	Benin
33	Barnes	Kayla	MLW	Malawi
34	Barry	Amadou	GSK	Nigeria
35	Benedicto	Prisca	Malawi Liverpool Wellcome Trust	Malawi
36	Bengu	Melissa Dipuo	National Institute for Communicable Diseases Centre for Enteric Diseases (Virology)	South Africa
37	Benjamin-Puja	Chioma Uju	University of Nigeria Teaching Hospital, Ituku-Ozalla	Nigeria
38	Bernshtein	Biana	Ragon Institute of MGH, MIT and Harvard	USA
39	Bhagwandin	Niresh	SAMRC	South Africa
40	Bhat	Majid	JSI	India
41	Bibera	Gyneth Lourdes	Pediatric Infectious Disease Society of the Philippines	Philippines
42	Bonkougou	Isidore	University Joseph Ki-Zerbo	Burkina Faso
43	Boyce	Welekazi	GSK	South Africa
44	Bronowski	Christina	University of Liverpool	UK
45	Bubuluma	Rotondwa	Sefako Makgato Health Sciences University	South Africa
46	Burke	Rachel M	CDC	USA
47	Burnett	Eleanor	CDC	USA
48	Bwaka	Ado	WHO	Burkina Faso
49	Bwogi	Josephine	Uganda Virus Research Institute	Uganda
50	Byamungu	Freddy	IIA-Cliniques Universitaires de Kinshasa	DRC
51	Caceres	Diana Carolina	GSK	Colombia
52	Casey-Moore	Mary	CDC	USA
53	Cassels	Frederick J	PATH	USA
54	Castro	Brian	John Snow, Inc.	USA
55	Cates	Jordan	CDC	USA

No.	Surname/Last Name	Name	Organisation	Country
56	Chantal	Akoua-Koffi	CHU de Bouaké / Université Alassane Ouattara	Cote d'ivoire
57	Chaudhary	Varsha	Christian Medical College	India
58	Chavers	Tyler	CDC	USA
59	Chawana	Richard	Biovac Institute	South Africa
60	Chawla	Suraj	SHKM Government Medical College, Nalhar	India
61	Chawla Sarkar	Mamta	ICMR-National Institute of Cholera and Enteric Diseases	India
62	Chilyabanyama	Obvious Nchimunya	CIDRZ	Zambia
63	Chirinda	Percina	Centro de Investigacao em Saude de Manhica (Manhica Health research Center)-CISM	Mozambique
64	Chissaque	Assucênio	Instituto Nacional de Saúde	Mozambique
65	Chitambar	Shobha D.	Retired from ICMR - National Institute of Virology,Pune	India
66	Cho n'din Catherine	Boni	Université Félix Houphouet Boigny Abidjan	Côte d'Ivoire
67	Christelle	Belerheine	Istm/Kinshasa	DRC
68	Chukwubike	Chuhukwubike Chinedu Michael	Institute of Child Health, University of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu	Nigeria
69	Clifford	Allison	PATH	USA
70	Cortese	Margaret	CDC	USA
71	Crispin	Kazadi Muin-a-Ngoy	Direction PEV RDC	DRC
72	Cunliffe	Nigel	The University of Liverpool	UK
73	Dankwah	Thomas	Korle Bu Teaching Hospital	Ghana
74	Dean	Gregg A.	Colorado State University	USA
75	Deb Roy	Arup	JSI	India
76	Debellut	Frederic	PATH	Switzerland
77	Delgado	Aida	Distrito 1	Ecuador
78	Denti	Veronica	Gavi	Switzerland
79	Dernoncourt	Marie	GSK	Belgium
80	Desai	Sajjad	Serum Institute of India Pvt Ltd Pune	India
81	Dey	Shuvra	Jahangirnagar University	Bangladesh
82	Ding	Siyuan	Washington University in St. Louis	USA
83	Dunga/Kingsley	Dunga	Madonna University/Havimed Lab	Nigeria
84	Ebrahim	Hossain Ahmad		Bangladesh



No.	Surname/Last Name	Name	Organisation	Country
85	Edu-Alamba	Chioma Chinyere	University of Nigeria Teaching Hospital Ituku Ozalla Enugu	Nigeria
86	Edward	Ukamaka	Imo State University, Owerri	Nigeria
87	Ella	Raches	Bharat Biotech International Limited	India
88	Erasmus	Linda Kathleen	National Institute for Communicable Diseases	South Africa
89	Esona	Mathew D.	CDC	USA
90	Fashola	Christiana	Clinton Health Access Initiative	Nigeria
92	Fix	Alan David	PATH	USA
93	Fodha	Imene	University Hospital Sahloul	Tunisia
94	Fourie	Corinne	University of the Free State	South Africa
95	Galo	Mary	Institute of Primate Research	Kenya
96	Gandhi	Sanjay	GSK	India
97	Gawa	Kokora Junior	CHU Bouaké	Cote d'ivoire
98	Geldenhuis	Brandon	Biovac Institute	South Africa
99	Gerste	Amelia	Johns Hopkins Bloomberg School of Public Health, International Vaccine Access Center (IVAC)	USA
100	Grassly	Nicholas	Imperial College London	UK
101	Greenberg	Harry	Stanford university	USA
102	Groome	Michelle	NICD	South Africa
103	Hailemariam	Fasil Teshager	WHO	Ethopia
104	Hasibuzzaman	Md Al	Ningbo University	Bangladesh
105	Hatyoka	Luiza	Center for Infectious Disease Research in Zambia	Zambia
106	Hazra	Soumya	PATH	India
107	Hien	Nguyen Dang	POLYVAC	Vietnam
108	Hokororo	Adolfine	Bugando Medical Centre	Tanzania
109	Hopkins	Amy Lynn	CDC	USA
110	Hou	Gaopeng	Washington University in St. Louis	USA
111	Hounsou	Blaise	Indépendant	Côte d'Ivoire
112	Istrate	Claudia	Faculty of Veterinary Medicine, University of Lisbon	Portugal
113	Iturriza-Gomara	Miren	PATH	Switzerland
114	Javes Omwansa	Gibson	Nagasaki University	Kenya
115	Jellin	Julian Meyer	Biovac Institute	South Africa

No.	Surname/Last Name	Name	Organisation	Country
116	Jere	Khuzwayo	University of Liverpool	UK
117	João	Eva Dora da Cruz	Manhiça Health Resercher Center	Mozambique
118	John Samuel	Otomba	WHO	DRC
119	Joshi	Madhuri	ICMR- National Institute of Virology	India
120	Kallen	Laura	PATH	USA
121	Kamanga	Kapambwe Mwape	Center for infectious disease research in Zambia	Zambia
122	Kambhampati	Anita	CDC	USA
123	Kaur	Amanjot	JSI	India
124	Kekane	Vuyiswa	Biovac Institute	South Africa
125	Kgosana	Lerato Peggy	Sefako Makgatho Health Sciences University	South Africa
126	Khagayi	Sammy	Kenya Medical Research Institute	Kenya
127	Khalil	Ibrahim	University of Washington	USA
128	Khamadi	Samoel Ashimosi	Kenya Medical Research Institute	Kenya
129	Khumalo	Andile	Sefako Makgatho Health Sciences University	South Africa
130	Kirkwood	Carl	BMGF	USA
131	Kiulia	Nicholas	Institute of Primate Research	Kenya
132	Kofi	Kofi N'zue	OMS	Côte d'Ivoire
133	Koshal	Seema Singh	JSI	India
134	Kraay	Alicia Nicole Mullis	Emory University	USA
135	Kruger	Tersia	National Institute for Communicable Diseases	South Africa
136	Kulandaipalayam Natarajan	Sindhu	Christian Medical College	India
137	Kumar	Apoorv	Bharat Biotech International Limited	India
138	Kurokawa	Natsuki	Bristol Myers Squibb K.K.	Japan
139	Kwofie	Sabina Efua Mensiwah	Noguchi Memorial Institute for Medical Research	Ghana
140	Kyesi	Furaha Prosper	Ministry of Health	Tanzania
141	Laetitia Mbangi	Laetitia	GSK	Belgium
142	Lartey	Belinda	Noguchi Memorial Institute for Medical Research, University of Ghana	Ghana
143	Lo	Mahadeb	ICMR-NICED	India
144	Lopman	Benjamin	Rollins School of Public Health   Emory University	USA
145	Lopokoityit	Rosemarie	Kenya Paediatric Association	Kenya

No.	Surname/Last Name	Name	Organisation	Country
146	Luchs	Adriana	Adolfo Lutz Institute	Brazil
147	Lumka	Nothemba	Biovac Institute	South Africa
148	Ma	Ouattare	OMS	Burkina Faso
149	Mabasa	Vusumuzi	Sefako Makgatho Health Sciences University	South Africa
150	Maddison	Aurore	GSK	Belgium
151	Magagula	Nonkululeko	Sefako Makgatho Health Sciences University	South Africa
152	Magwira	Cliff Abdul	DPRU, SMU	South Africa
153	Makhoana	Morena	Biovac Institute	South Africa
154	Makori	Timothy	KEMRI-Wellcome Trust	Kenya
155	Makune	Makune	WRAIR - US Mission	Tanzania
156	Malamba-Banda	Chikondi	Malawi Liverpool Wellcome Trust	Malawi
157	Mandolo	Jonathan Jasson	Malawi Liverpool Wellcome Trust	Malawi
158	Mandomando	Inacio	CISM	Mozambique
159	Manjate	Filomena Arlindo	Manhica Health Research Center	Mozambique
160	Maratha	Ashwini	Bharat Biotech International Ltd	India
161	Marie Paul	Lusinga Matumona	Hopital Pediatrique de Kalembe Lembe	Congo-Kinshasa
162	Mategula	Donnie	Malawi Liverpool Wellcome Trust	Malawi
163	Mattison	Claire	CDC	USA
164	Mayimele	Nsovo	TUT	South Africa
165	Mbangu	Laetitia	GSK	Belgium
166	Mbatha	Sinegugu Nosipho	Sefako Makgatho Health Sciences University (DPRU)	South Africa
167	McNeal	Monica Malone	Cincinnati Children's Hospital	USA
168	Mecca	Lucy	Ministry of Health, National Vaccines and Immunization Program	Kenya
169	Mengouo Marcellin	Nimpa	WHO	DRC
170	Meriam	Benhamida	Faculty of pharmacy	Tunisia
171	Mhango	Chimwemwe	Malawi Liverpool Wellcome Trust Clinical Research Programme	Malawi
172	Michael	Fausta Selemani	Ministry of Health	Tanzania
173	Middleton	Bianca	Menzies School of Health Research	Australia
174	Mingle	Samuel Nii Kpakpo	Noguchi Memorial Institute for Medical Research	Ghana
175	Mirza	Sara A.	CDC	USA




No.	Surname/Last Name	Name	Organisation	Country
176	Mlambo	Dumile	SAMRC	South Africa
177	Mngomezulu	Siboniswa	Sefako Makgatho Health Sciences University	South Africa
178	Mohan	Krishna	Bharat Biotech International	India
179	Mokomane	Margaret	University of Botswana	Botswana
180	Mosali	Ashika Ranjani	Bharat Biotech International limited	India
181	Mpabalwani Evans	Mpabalwani	University of Zambia, School of Medicine	Zambia
182	Mphahlele	Jeffrey	North-West University	South Africa
183	Mtatambi	Sisanda	Biovac Institute	South Africa
184	Mubanga	Cynthia	Center for Infectious Disease Research in Zambia	Zambia
185	Mudibo	Evans	KEMRI Wellcome Trust Research Programme	Kenya
186	Mugisha	David	Ministry of Health - Uganda (Mulago National Referral Hospital)	Uganda
187	Mujuru	Hilda Angela	University of Zimbabwe	Zimbabwe
188	Mukamba	Elisabeth	WHO	DRC
189	Mukuku	Olivier	Institut Supérieur des Techniques Médicales de Lubumbashi	DRC
190	Mukwela	Jean	Centre Hospitalier de kingasani Rdcongo	DRC
191	Mulenga	Bavin	Cidrz	Zambia
192	Mumba	Mutale	WHO	Zimbabwe
193	Muni	Shashi Kanth	Bharat Biotech International Limited	India
194	Munlela	Benilde António	Instituto Nacional de Saúde-INS	Mozambique
195	Mutinda	Catherine	Kenya Paediatric Association	Kenya
196	Mutua	Maurine Mumo	KEMRI	Kenya
197	Mwanga	Mike	KEMRI Wellcome Trust	Kenya
198	Mwangi	Peter Nthiga	University of Free State Next Generation Sequencing Unit and Division of Virology	South Africa
199	Mwenda	Jason Mathiu	WHO AFRO	Congo
200	Mwila-Kazimbaya	Katayi	Center for infectious disease research in Zambia	Zambia
201	N. Christelle	Neya/Ouedraogo	Direction de la Prevention par les Vaccinations	Burkino Faso
202	Nadan	Sandrama	National Institute for Communicable Disease	South Africa
203	Namikelwa	Dorcus Nabucha	ICIPE	Kenya
204	Narh	Clement Tetteh	Department of Epidemiology and Biostatistics, School of Public Health, University of Health and Allied and Sciences	Ghana

No.	Surname/Last Name	Name	Organisation	Country
205	Ndeketa	Latif	WHO AFRO	Malawi
206	Ndemwa	Morris	MEMRI - Nagasaki University Institute of Tropical Medicine	Kenya
207	Nelson	Tony	The Chinese University of Hong Kong	Hong Kong
208	Ng'ethe	Jedida	GSK	Kenya
209	Nsiari Muzeyi Jose	Biey	WHO	Burkina Faso
210	Ofori	Henry Benjamin	NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH	Ghana
211	Ogwel	Billy Graham	KEMRI-CGHR	Kenya
212	Oh	Kyu Bin	GSK	Belgium
213	Okafor	Chinasa Ogedi	Chukwuemeka odumegwu Ojukwu University teaching hospital Awka	Nigeria
214	Okeke-Nwolisa	Benedictta Chinweoke	Nnamdi Azikiwe University Nnewi Campus, Nnewi, Nigeria	Nigeria
215	Okpalaji	Chiagoziem Cindy	Nnamdi Azikiwe University	Nigeria
216	Olowookere	Temitayo	GSK	Nigeria
217	Omolo	Erick	Institute of Primate Research	Kenya
218	Omoro	Richard	KEMRI	Kenya
219	Onyando	Richard Omoro	KEMRI	Kenya
220	Otieno.	Hildah Akinyi	NUITM KEMRI.	Kenya.
221	Owor	Elizabeth	Makerere University	UK
222	Oyinloye	Tinuola Olayemi	Aminu Kano Teaching Hospital	Nigeria
223	Page	Nicola	National Institute for Communicable Diseases	South Africa
224	Parasar	Labanava	JSI	India
225	Parashar	Umesh	CDC	USA
226	Patil	Vijay	Serum Institute of India Pvt Ltd	India
227	Patnaik	Mrinal	All India Institute of Medical Sciences Bhopal	India
228	Paz	Enrique	John Snow and MIHR Momentum project	USA
229	Pecenka	Clint	PATH	USA
230	Pinski	Amanda	Washington University in St. Louis	USA
231	Polra	Krunal	Imperial College London	UK
232	Prasad	Minakshi	LUVAS	India
233	Quadri	Syed Fakhruddin	John Snow Inc	India
234	Raboba	Julia Liliane	Ministry of Health	Madagascar

No.	Surname/Last Name	Name	Organisation	Country
235	Rakau	Kebareng	Sefako Makgatho Health Sciences University	South Africa
236	Ramineni Damodhar	Yashwanth	Hindu Rao Hospital	India
237	Ranshing	Sujata	ICMR-National Institute of Virology	USA
238	Rivera	Tori	PATH	USA
239	Roger Quantier	Ngoya Ebiguide	Mother and Child Centre of Chantal Biya Foundation	Cameroon
240	S	Gayathri	Christian Medical College, Vellore	India
241	Sabale	Rajendra Narayan	Serum Institute of India Pvt. Ltd	India
242	Sabiu	Saheed	Durban University of Technology	South Africa
243	Saha	Ritubrita	ICMR-NICED	India
244	Saha	Priyanka	ICMR-NICED	India
245	Samodien	Ebrahim	SAMRC	South Africa
246	Sanni	Abass Ademola	GSK	Nigeria
247	Sanogo	Tiaria	CHU de Kati	Mali
248	Saúte	Denise Cândida Emanuel	Universidade Eduardo Mondlane (UEM)	Mozambique
249	Savhasa	Fulufhedzani	Sefako Makgatho Health Sciences University	South Africa
250	Shad	Ahmad	Integral University	India
251	Silva-Sales	Marcelle	Federal University of Goiás	Brazil
252	Silwimba	Obert	Ministry of Health	Zambia
253	Simbu Elisabeth	Pukuta	Institut National de Recherche Biomedicale	DRC
254	Simuyandi	Michelo	Centre for Infectious Disease Research in Zambia	Zambia
255	Sivaramakrishnan	Venkatraman	Bharat Biotech International Ltd	India
256	Siyambango	Muyunda	CIDRZ	Zambia
257	Smati	Ammar	GSK	Algeria
258	Soeters	Heidi	CDC	USA
259	Son	Juhee	Washington University in St. Louis	USA
260	Sossou	Aristide Roch	OMS	Benin
261	Sounan Fidele / Toure	Toure Sounan Fidele	Chu de Bouake	Cote d'ivoire
262	Steele	Duncan	BMGF	USA
263	Strydom	Nadia	National Institute for Communicable Diseases	South Africa
264	Sukwa	Nsofwa	Centre for Infectious Disease Research in Zambia	Zambia

No.	Surname/Last Name	Name	Organisation	Country
265	Tagbo	Beckie	University of Nigeria/ University of Nigeria Teaching Hospital	Nigeria
266	Talukdar	Juthika	JSIPL	India
267	Tate	Jacqueline	CDC	USA
268	Tatte	Vaishali	National Institute of Virology	India
269	Taylor	Maureen Beatrice	University of Pretoria	South Africa
270	Tefera	Mesfin	Ethiopian Public Health Institute (EPHI)	Ethiopia
271	Tesfaye	Kibrom Abraham	MOH	Ethiopia
272	Tewari	Tushar	PATH	India
273	Thobane	Tshegofatso Benedict	University of the Free State, Microbiology and Biochemistry Department.	South Africa
274	Thomas	Juno	National Institute for Communicable Diseases	South Africa
275	Thutloa	Alfred	SAMRC	South Africa
276	Tippoo	Patrick	Biovac Institute	South Africa
277	Trabelsi	Abdelhalim	University Hospital Sahloul	Tunisia
278	Traore	Adjaratou	Teaching hospital of Bouaké	Côte d'Ivoire
279	Tsutsui	Naohisa	Tohoku University	Japan
280	Varghese	Tintu	Christian Medical College Vellore	India
281	Velu	Milomba Rachel	Centre for Infectious Disease Research in Zambia	Zambia
282	Vilander	Allison	Colorado State University	USA
283	Vita	Dikudila Glória	Faculdade de Medicina da Universidade Agostinho Neto	Angola
284	Wachira	Mary Njeri	NUITM	Kenya
285	Wanda	James	Kenya Paediatric Research Organisation	Kenya
286	Were	Frederick	University of Nairobi	Kenya
287	Wikswa	Mary	CDC	USA
288	William	Rachna	John Snow India	India
289	Willio	Ritha	WHO	Tanzania
290	Yapi	Moise	WHO	DRC
291	Yawson	Abena Ahwianfoa	Bharat Biotech International Ltd	Ghana
292	Zultak	Laure-Anais	Clinton Health Access Initiative	Rwanda





# ANNEXURE B

## – Q & A (UNEDITED)

### Day1

No	Question	Answer(s)
1	Hi. I am in. How do I get to speak?	
2	Why are countries switching from Rotarix to Rotavac/Rotasil? why countries are not switching from Rotasiil Lyophilised to RotaSiil Liquid which is WHO pre-qualified with the same viruses and ready to use form , no need of reconstitution.	live answered
4	what is the wastage cost of Rotavac in a 5 Dose presentation	

### Day 2

No	Question	Answer(s)
1	I would like to thank Dr. James for the interesting presentation. I do have two questions for you: (1) It seems as if the introduction of rotavirus vaccines altered diarrhoeal etiologies and made bacterial agents more pronounced. What is the reason for this? Why were bacteria more frequently detected in patients after rotavirus vaccination? (2) It seems as if this study only included male patients, if so then why?	Nadia, I hope my answer to your first question in the Q+A session was clear. As to (2), sorry if that was not clear -- 58% were male, not all.
2	Question for Dr. Francis: Can you say that there were any potentially virulent vaccine derived strains which may pose a threat to human health in the future?	No. we did not observe any such strains. During the period for which data was presented, Ghana was using Rotarix, a G1P[8] live attenuated rotavirus oral vaccine. We detected only on case of RV diarrhoea that was nearly identical with Rotarix.
3	One question for the thioipian study, is the increase of G12 rate after introduction of vaccine mains that the vaccine is ineffective against G12, this gives me concerns about the use of vaccine it can select resistant strains and increase the severity of te disezmadr, so I would like to ask if you Ave any increase of this same severity in your country after vaccine introduction	thank for the pinpointing such important question, G12 P8 was indeed in decline in post vaccine and account 16 % and observed only in 2017, G3P8 was 44% in 2017, 29% in 2016
4	Dr. Simuyandi - did you only look at IgA? Do you plan to test other isotypes?	live answered, Hello Biana. Yes we only looked at IgA being a standard measure that has been used in other studies, but we do plan to look at ther Isotypes. Happy to hear more about your thoughts on the isotypes your interested in

No	Question	Answer(s)
5	Thanks Dr. Simuyandi, I will follow up by email. One more question - I was wondering - did you also compare immunogenicity of ROTAVAC to Rotarix?	Welcome. my Email is Michele.Simuyandi@cidrz.org. We did not compare ROTAVAC-ROTARIX comparison due to challenges in assays used to evaluate the two vaccines because they use different virus strains antigens. but we are discussing how to do that in future using the same samples
6	Wonderful presentation Prof. Bines. Would it be an added advantage to start with a birth dose of RV3-BB and complete the schedule with other rotavirus vaccines like Rotarix, Rotateq or Rotasiil	
7	@warimu. great work. what is the clinical presentation of the child who had the divergent P8 strain compare to other strains?	Thank you for your question. The child presented with diarrhoea for 4 days (4 episodes in 24 hours), no vomiting and temperature of 39C
8	@Kraay, Where did you generate the data (especially from Nigeria) used for your comparison study when the presenter from Nigeria said there was a delay in the introduction of Rota vaccine in Nigeria. Thanks	This was based on the estimated date of vaccine introduction from GAVI.
9	To prof Beckie. 86% drop in rota enrollment in Nigeria due to Covid 19 was huge. pls what are your plans to improve enrollment	







## ANNEXURE C

### – CHAT BOX (UNEDITED)

#### DAY 1 - CHAT

Corinne Fourie:	What a powerful presentation, thank you Dr Mwenda!
Beckie Tagbo:	Well done Jason!
Amadu Dele:	thank you Jason
Laure Belerheine:	Thanks you Jason
Niresh Bhagwandin:	Question for Jason: What are the challenges faced by countries with low immunization rates?
Adriana Luchs:	Why some African countries are switching the rotavirus vaccines? does it have anything to do with vaccine efficacy?
Jean Mukwela:	Merci beaucoup pour la présentation de Jason mais je proposerai que nous puissions mettre en place une stratégie de récupération des enfants éligible non vacciné en rapport avec la politique sanitaire de chaque pays
Jean Mukwela:	Merci beaucoup Jason pour cette belle présentation
Amadu Dele:	Question for Jason: any specific date for vaccine rollout for Nigeria
Dr Latif Ndeketa , WHO:	To Martin Nyanga, thank you for that important question. WHO with support from SAGE are currently reviewing the evidence from studies that are currently on going and WHO has released an interim statement on this: <a href="https://www.who.int/news/item/10-08-2021-interim-statement-on-heterologous-priming-for-covid-19-vaccines">https://www.who.int/news/item/10-08-2021-interim-statement-on-heterologous-priming-for-covid-19-vaccines</a>
Corinne Fourie:	Prof Frédéric, thank you, there's a lot of research going into the production of subunit vaccines for rotavirus instead of live attenuated vaccines. I'm interested to know how, if at all, this will affect cost effectiveness
Frédéric Debellut, PATH:	Hi Corinne, I'm unsure how the production modality would impact cost effectiveness. The factors that may positively affect CE would include: higher efficacy of subunit vaccines leading to higher health impact, lower price than what is currently seen on the market and maybe ease of use if that was to decrease the cost to administer vaccines.

Beckie Tagbo: For Jackie.

Jean Mukwela: Merci beaucoup Jackie, en cas de perte de la carte de vaccination par les parents, quel mécanisme a faire pour récupérer ses données de vaccination si le centre de santé ne dispose pas les registres de vaccination merci Mr Jean

Jean Mukwela: Merci beaucoup Dr quel stratégie avez vous misse en place pour récupérer les enfants abandonnés pour la couverture vaccinal soit améliorer Mr Jean

Biey Nsiari Jose: Le Burkina Faso a connu des retards dans la reception de vaccin Rotasiil qui parfois etait recu en quantite insuffisante est ce que la RDC a connu le meme probleme ????

Jean Mukwela: est-il possible de nous parler sur les plans d, amélioration en rapport avec les difficultés

Veronica Denti: Such a rich, useful presentation, thank you !

Peter Mwangi: For the DRC case, do you consider to perform whole-genome characterization to fully assess the impact of vaccine introduction on circulating strains pre and post vaccine introduction?

Beckie Tagbo: Ghana. How did you overcome network challenges in virtual trainings at grassroot levels?

Jean Mukwela: Merci beaucoup,

Biey Nsiari Jose: How EPI Ghana is working with surveillance to follow up on impact and intusception surveillance

Veronica Denti: Merci, bien suivi

Emmanuel Otopa Addo-Yobo: @Ghana: usually there is vaccine coverage attrition following subsequesnt doses of multiple dose vaccines. Did you observe/ anticipate this with the new vaccine and what could be the new strategies to sustain coverage?

Veronica Denti: Rotasiil Liquid version became available later, too

Mesfin Tefera: The presentations and discussion were really enjoyable, thank you all

Beckie Tagbo: Thank you everyone. Great presentations and discussions.

Laure Belerheine: Merci beaucoup à tous nous avons passé une très belle journée des échanges

## DAY 2- - CHAT

Niresh Bhagwandin:	Follow twitter feed @MRCza #ARS2021
Jean Mukwela:	bonjour, est ce que les enfants inférieur à 5ans ont été inclus dans cette étude étant vulnérables ? merci
Brandon:	Was there a correlation between disease severity and the different strain types?
Duncan Steele:	Francis - have you had an opportunity to examine the genetic sequences for the proposed antigenic epitope domains within the VP7 and VP4? I'm interested in understanding those more focused changes in the predominant antigenic domains within the two major neutralization antigens.
Kebareng Rakau:	What is driving the year to year strain fluctuations? strain disappearing?
Duncan Steele:	Building on Kebareng's question - we should really understand the major biological challenges to the strain persistence. It was suggested several years ago that it could be related to maternal exposure the season before and giving enhanced neutralizing antibodies in the mothers for the next season (both transplacentally and via breast milk). If it is simply antigenic drift, what makes one strain competitive over the others? Any thoughts from the Panel?
Beckie Tagbo:	Would you say there was strain replacement following vaccine introduction?
Amadou Barry:	Any idea about rotavirus vaccination coverage during study period?
Duncan Steele:	Thank you Khuzwayo - that is great work on the neutralization epitopes.
Duncan Steele:	Does endless exposure with potential for zoonotic infections and virus reassortment, mean that we might expect to see a continuous molecular diversity of strains emerging?
Nicola Page:	Hi Duncan. A successful strain would transmit well (perhaps suggesting replication to a higher titre?) and would infect well (able to escape binding by maternal antibodies or binds to target cells well).
Nicola Page:	What role do mixed pathogen infections play in the residual rotavirus disease?
Dr Francis Dennis, University of Ghana:	Hi Brandon. We did not find any such correlation between disease severity and infecting strain type. In the early days, we used to think G2P[4] strains accounted for more severe disease (they are antigenically distinct), but we changed our minds on that long ago. We also note that co-morbidities are high in this part of the world, so it is not so straightforward to associate severity to infecting strain

Brandon:	Thank you Francis
Dr Francis Dennis, University of Ghana:	Hi Duncan, we examined the antigenic epitopes for VP7 (G1 and G2) and VP4 (P[8] and P[4]). We did not observe any specific changes conserved exclusively to either pre- or post-vaccine era.
Duncan Steele:	Thank you Francis and Nicci
Jean Mukwela:	Merci beaucoup pour la présentation
Adelabu Adeyemi:	Thank you Dr Peter for the wonderful presentation.
Laura Kallen:	Just to note: PATH's rotavirus vaccine cost calculator can help countries estimate full vaccination program costs using different vaccine products. <a href="https://www.path.org/resources/rotavirus-vaccine-cost-calculator/">https://www.path.org/resources/rotavirus-vaccine-cost-calculator/</a>
Adriana Luchs:	thank you all for the amazing symposium
Kebareng Rakau:	Thank you
Eva Joao:	Thank you.
Michelo Simuyandi:	Thank you all.
Jeffrey Mphahlele:	Brilliant and thanks to all participants and SAMRC for organising
Mandy Salomo:	Thank you everyone
Belinda Lartey:	Thank you
Isidore Bonkougou:	thank you all
Dr Khuzwayo Jere, Malawi Liverpool:	Thank you all.
Nigel Cunliffe:	Thanks everyone, really enjoyed it!
Dr Francis Dennis, University of Ghana:	Thank you everyone. It's been brilliant
Chinedu Chukwubike:	Thank you all
Makune Makune:	Thanks everyone, great symposium
Guillaume MWAMBA:	Thanks Everyone
Dikudila Glória Vita Vita:	Thank you all
Claudia Istrate:	Thank you. Hope to see you in the future.
Laure Belerheine:	je vous remerci pour cette belle opportunité
Yempabou LOMPO:	Thank you all
John Samuel OTOMBA:	Thanks merci beaucoup et aksanti sana
Peter Mwangi:	Thank you all
Clement Narh:	Thank you all for the great symposium and presentations :)

Thank you for your  
participation.

See you at the  
**14<sup>th</sup> ARS**  
planned for 2023.

