# Use of Cholera Vaccine, NIGERIA, 2021

Dr. James Onah, Deputy Director, Disease Control Division, Department of Disease Control & Immunization, National Primary Health Care Development Agency. Nigeria
**james.onah@nphcda.gov.ng**

HISTORY OF CHOLERA

- Cholera; first notified in Nigeria on December 26, 1970, led to an epidemic of 22,931 cases and 2,945 deaths (CFR of 12.8%)

- Between 1972 and 1990, Nigeria reported very few cases

- In 1991, 59,478 suspected cases (highest number of cases in a single year prior to 2021) and 7,654 deaths (CFR 12.9%) were reported

- In 2018, following humanitarian emergencies in NE region and displacement of large swaths of populations, a major cholera outbreak was recorded – 50,719 cases and 1,136 deaths (CFR 2.2%).

- In 2021, a total of 103,589 suspected cases of cholera including 3,566 deaths (CFR 3.4%) have been reported from 401 LGAs across 32 States and FCT as at epi-week 46

- From 1991 to 2021, the outbreaks became regular, with more than 20,000 cases being reported in 1991, 1999, 2010, 2011, 2014, 2018 and 2021

Nigeria: Cholera Burden in States and LGAs, Week 1 – 46, 2021.
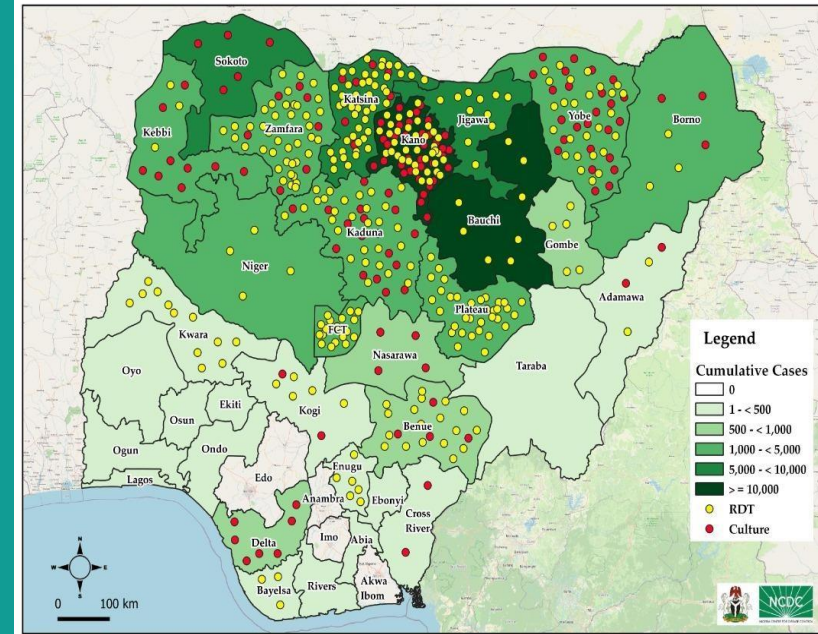
- As at November 21, 2021, a total of 103,589 suspected cases of cholera including 3,566 deaths (CFR 3.4%) have been reported from 401 LGAs across 32 States and FCT in 2021

- Of the suspected cases since the beginning of the year, age group 5 - 14 years is the most affected age group for male and female

- Of all suspected cases, 50% are males and 50% are females

- Four States - Bauchi (19,470 cases), Jigawa (13,293 cases) Kano (12,116 cases), and Zamfara (11,918 cases) account for 55% of all cumulative cases

- Twelve LGAs across five states Bauchi (4), Zamfara (4), Jigawa (2), Kano (1) and Katsina (1) have reported more than 1,000 cases each this year

Total number of cholera cases: 1991 - 2021(epi-week 46)
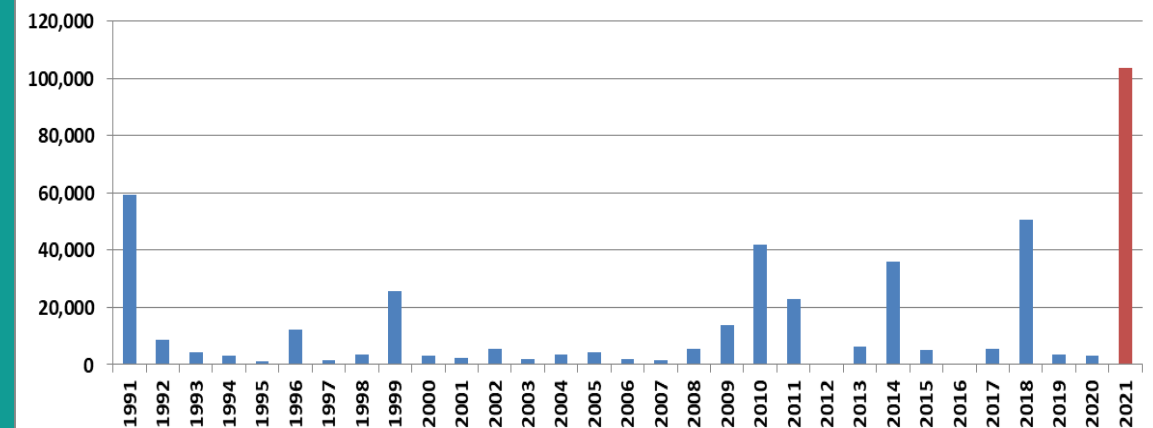
OCV USE

- Nigeria is one of the cholera – endemic countries with cases being reported throughout the year

- Main driving factors for spread include poor WaSH conditions, seasonal flooding and armed conflicts leading to humanitarian emergencies (large swaths of IDPs)

- WaSH interventions, surveillance, risk communication, case management and strong stakeholder coordination have been the mainstay of cholera control

- In Sept 2017 however, OCV campaign was conducted in Maiduguri, Borno State (NE Nigeria) in response to cholera outbreak among IDPs

- The intervention quickly led to the containment of the outbreak in Borno and in all other States where OCV campaign was done following outbreaks

- Since then, OCV has become adopted as an effective tool and integral part of multi-sectoral strategies in cholera prevention and control in Nigeria

S/N	LGA	STATE	IMPLEMENTATION DATES	ROUND	COVERAGE (%)
1	Maiduguri (MMC)	Borno	Sept 18 – 22, 2017	1st	100
2	Jere	Borno	Sept 18 – 22, 2017	1st	103
3	Konduga	Borno	Sept 18 – 22, 2017	1st	101
4	Monguno	Borno	Sept 18 – 22, 2017	1st	121
5	Dikwa	Borno	Sept 18 – 22, 2017	1st	108
6	Mafa	Borno	Sept 29 – Oct 1 & Oct 3 – 4, 2017	1st	104
7	Maiduguri (MMC)	Borno	Dec 8 – 12, 2017	2nd	93
8	Jere	Borno	Dec 8 – 12, 2017	2nd	107
9	Konduga	Borno	Dec 8 – 12, 2017	2nd	93
10	Monguno	Borno	Dec 14 – 18, 2017	2nd	111
11	Dikwa	Borno	Dec 8 – 12, 2017	2nd	100
12	Mafa	Borno	Dec 14 – 18, 2017	2nd	102
13	Bade	Yobe	May 9 – 13, 2018	1st	100.3
14	Bade	Yobe	July 2 – 6, 2018	2nd	100.6
15	Bauchi	Bauchi	May 9 – 13, 2018	1st	97.1
16	Bauchi	Bauchi	June 20 – 24, 2018	2nd	96.6
17	Gulani	Yobe	Nov 26 – Dec 1, 2018	1st	88.0
18	Gulani	Yobe	Jan 27 – 31, 2019	2nd	91.4
19	Mubi North	Adamawa	July 11 – 15, 2018	1st	98
20	Mubi South	Adamawa	July 11 – 15, 2018	1st	103
21	Maiha	Adamawa	July 11 – 15, 2018	1st	99
22	Mubi North	Adamawa	Aug 11 – 15, 2018	2nd	99
23	Mubi South	Adamawa	Aug 11 – 15, 2018	2nd	99
21	Maiha	Adamawa	Aug 11 – 15, 2018	2nd	98
24	Ngala	Borno	Nov 28 – Dec 2, 2018	1st	97.0
25	Jere	Borno	Nov 28 – Dec 2, 2018	1st	93.8
26	Maiduguri (MMC)	Borno	Nov 28 – Dec 2, 2018	1st	114.1
27	Kal-Balge	Borno	Nov 28 – Dec, 2018	1st	100.0
28	Gummi	Zamfara	Dec 3 – 7, 2018	1st	92.8
29	Gummi	Zamfara	Feb 9 – 13, 2019	2nd	115
30	Fufore	Adamawa	Feb 20 – 22 & Feb 25-26, 2019	1st	100.0
31	Ngala	Borno	March 1 – 6, 2019	2nd	100.0
32	Jere	Borno	March 1 – 6, 2019	2nd	105.3
33	Maiduguri (MMC)	Borno	March 1 – 6, 2019	2nd	102.8
34	Bama	Borno	March 1 – 6, 2019	1st	101.9
35	Damaturu	Yobe	March 2 – 6, 2019	1st	100.3
36	Michika	Adamawa	March 30 – April 3, 2019	1st	91.5
37	Argungu	Kebbi	April 1 – 5, 2019	1st	111.3
38	Damaturu	Yobe	Sept 1 – 5, 2019	2nd	100.6
39	Bama	Borno	Sept 7 – 11, 2019	2nd	103.0
40	Michika	Adamawa	Sept 10 – 14, 2019	2nd	99.4
41	Fufore	Adamawa	Sept 10 – 14, 2019	2nd	111.0
42	Argungu	Adamawa	Sept 12 – 16, 2019	2nd	98.4
43	Agatu	Benue	March, 2021	1st	-
44	Bauchi	Bauchi	July 24 – 28, 2021	1st	100.8
45	Bauchi	Bauchi	Aug 23 – 27, 2021	2nd	97.7
46	Dutse	Jigawa	Oct 20 – 24, 2021	1st	95.7
47	Birnin-Kudu	Jigawa	Oct 20 – 24, 2021	1st	96.1
48	Hadejia	Jigawa	Oct 20 – 24, 2021	1st	99.6
49	Damaturu	Yobe	Oct 24 – 29, 2021	1st	100.0
50	Damaturu	Yobe	Nov 13 – 17, 2021	2nd	100.0

OCV USE – 2

Preventive OCV Campaigns: Nov 2018 – Sept 2019

- In 2018, a hotspot mapping was done before the introduction of the new GTFCC hotspot mapping tool

- Preventive OCV campaigns were then conducted between Nov 2018 and Sept 2019 in 10 of the identified hotspot LGAs

- The campaigns witnessed massive turn-out in each case with high acceptability level of cholera vaccine among community members

Preventive OCV Campaigns: Nov 2018 – Sept 2019

| State	LGA	Name	Target	Date Round 1	Number Vaccinated	Coverage (%)	Target	Date Round 2	Number Vaccinated	Coverage (%)
Borno	LGA 1a	MMC	323,875	Nov 28 – Dec 2, 2018	369,418	114.1	359,640	March 1 – 6, 2019	369,841	102.8
Borno	LGA 1b	Kal-Balge	51,680	Nov 28 – Dec 2, 2018	51,680	100.0				
Borno	LGA 2	Jere	399,367	Nov 28 – Dec 2, 2018	374,782	93.8	374,782	March 1 – 6, 2019	394,533	105.3
Borno	LGA 3	Ngala	142,640	Nov 28 – Dec 2, 2018	138,382	97.0	152,640	March 1 – 6, 2019	152,640	100.0
Zamfara	LGA 4	Gummi	286,552	Dec 3 – 7, 2018	265,860	92.8	286,552	Feb 9 – 13, 2019	293,984	102.6
Yobe	LGA 5	Gulani	162,550	Nov 26 – Dec 1, 2018	143,000	88.0	164,005	Jan 27 – 31, 2019	149,980	91.4
Adamawa	LGA 6	Fufore	280,432	Feb 20 – 22 & Feb 25-26, 2019	280,331	100.0	280,283	Sept 10 - 14, 2019	311,228	111.0
Adamawa	LGA 7	Michika	216,197	March 30 – April 3, 2019	197,788	91.5	197,788	Sept 10 - 14, 2019	196,631	99.4
Kebbi	LGA 8	Argungu	247,402	April 1 – 5, 2019	275,297	111.3	270,700	Sept 12 - 16, 2019	266,343	98.4
Yobe	LGA 9	Damaturu	88,014	March 2 – 6, 2019	88,251	100.3	127,675	Sept 1 - 5. 2019	128,455	100.6
Borno	LGA 10	Bama	394,503	March 1 – 6, 2019	401,817	101.9	382,415	Sept 7 - 11, 2019	394,064	103.0
	TOTALS		2,593,212		2,586,606		2,596,480		2,657,699	

- Total number of OCV doses received for the 2 Rounds: 5,329,752
- Total population targeted: 5,189,692
- Total number of doses administered: 5,244,305
- National coverage: 101%
- Coverage survey: The aggregated weighted coverage for the 2 LGAs included in the survey in Borno State was 87%
- AEFI was of negligible significance in all the campaigns

OCV USE – 3

Reactive OCV Campaigns: 2021

State	LGA	Round	Target Population	Implementation Dates	No of Doses Administered	Coverage (%)
Benue	Agatu	1	-	March, 2021	40,658	-
Bauchi	Bauchi	1	782,779	July 24 – 28, 2021	789,189	100.8
Bauchi	Bauchi	2	782,779	August 23 – 27, 2021	764,860	97.7
Yobe	Damaturu	1	141,556	October 24 – 29, 2021	141,555	100.0
Yobe	Damaturu	2	141,556	Nov 13 – 17, 2021	141,555	100.0
Jigawa	Dutse	1	362,818	October 20 – 24, 2021	347,333	95.7
Jigawa	Birnin-Kudu	1	461,916	October 20 – 24, 2021	443,888	96.1
Jigawa	Hadejia	1	155,697	October 20 – 24, 2021	155,104	99.6

- Targeted population in 7 LGAs across 4 States: 2,566,093
- Total number of doses approved by ICG for 2 Rounds: 5,132,186
- Total number of doses received from ICG: 3,348,872
- Total number of doses administered so far: 2,783,484
- National coverage of conducted campaigns: 98.4%
- Coverage survey: Weighted average for survey in Bauchi LGA: 87.8%
- AEFI was of negligible significance in all the campaigns
- At present, impact evaluation is yet to be conducted at national level.

National Epi-curve, Week 1 – 46 (2021)
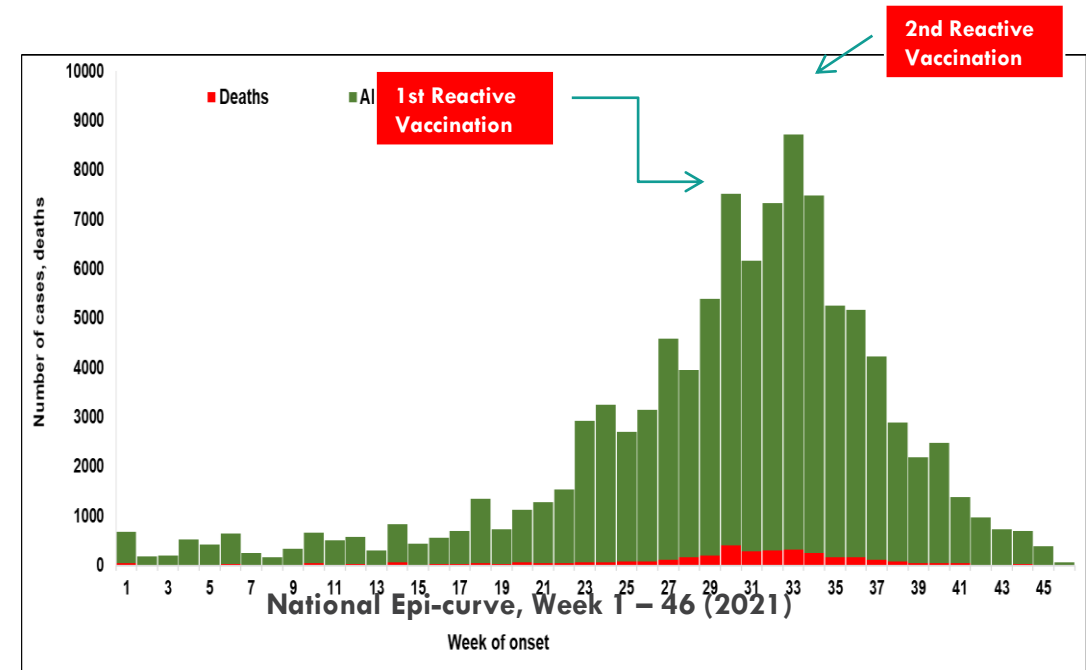
- Following a massive outbreak of cholera in 2021 (>100,000 suspected cases), the ICG approved a total of 5,132,186 OCV doses for reactive vaccination in 7 high burden LGAs across 4 States

- Both rounds were conducted in Bauchi and Yobe States whereas the 1st round was conducted in Jigawa State

- However, the 2nd round in Jigawa and the 2 rounds in Zamfara State are still pending the availability of vaccines

WASH COMPONENT

In the short term, the following WaSH interventions are being implemented in the affected LGAs and communities:

- provision of safe water, water chlorination, household disinfection and hygiene promotion
- Intensive risk communication through radio and television jingles as well as distribution of IEC materials
- Prioritization of hotspots for ongoing construction of motorized solar powered water boreholes

In the medium and long terms, major WaSH projects are being implemented by different development partners in collaboration with the FMWR;

- **SHAWN** – Sanitation, Hygiene and Water in Nigeria (Kano, Kaduna, Jigawa, Katsina, Bauchi, Benue, Zamfara and Yobe States by UNICEF/DFID)

- **RUSHPIN** – Rural Sanitation and Hygiene Promotion in Nigeria – (Benue and Cross River States by WSSCC – Water Supply and Sanitation Collaborative Council)

- **CHISPIN** – Community – Led Health Improvement through Sanitation and Hygiene in Nigeria – (3 LGAs in Cross River State by United purpose/DFID).

- The FMWR and UNICEF are supporting communities;

  - To form water, sanitation and hygiene committees (WASHCOMs) empowering them to be able to recover operations cost

  - To maintain WaSH facilities and demand improved services from the duty bearers ensuring sustainability[1]

---

1. The 2018 Nigeria Demographic and Health Survey (2018 NDHS)

CHALLENGES AND WAY FORWARD

Increased number of reported cholera cases is usually observed at the end of dry season and during rainy season (June to October) followed by a sharp decrease from mid-November

Also, cholera epidemic in Nigeria has been observed to occur in waves of 2 to 3 years

Therefore, timing of seasonal outbreak preparedness response plan has to align with these trends

Plans have been made to ensure that targeted hotspot LGAs are vaccinated before the onset of the outbreak seasons

However, the success of these plans will depend on effectiveness of WaSH and other interventions as well as OCV stockpile availability