malaria consortium

disease control, better health

Monitoring and evaluating effective implementation of SMC: Implications for coverage and impact.

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2. How do we look at Impact
3. Implications of effective program delivery
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What is Seasonal malaria chemoprevention?

- Prevents malaria illness and deaths in children 3-59 months
- Monthly treatment courses
  - Day 1: sulfadoxine-pyrimethamine (SP) + amodiaquine(AQ) administered by community health worker
  - Day 2 & 3: AQ administered by caregiver
- Courses repeated each month for high transmission season
- Objective: to maintain therapeutic drug concentrations in the blood throughout the period of greatest risk

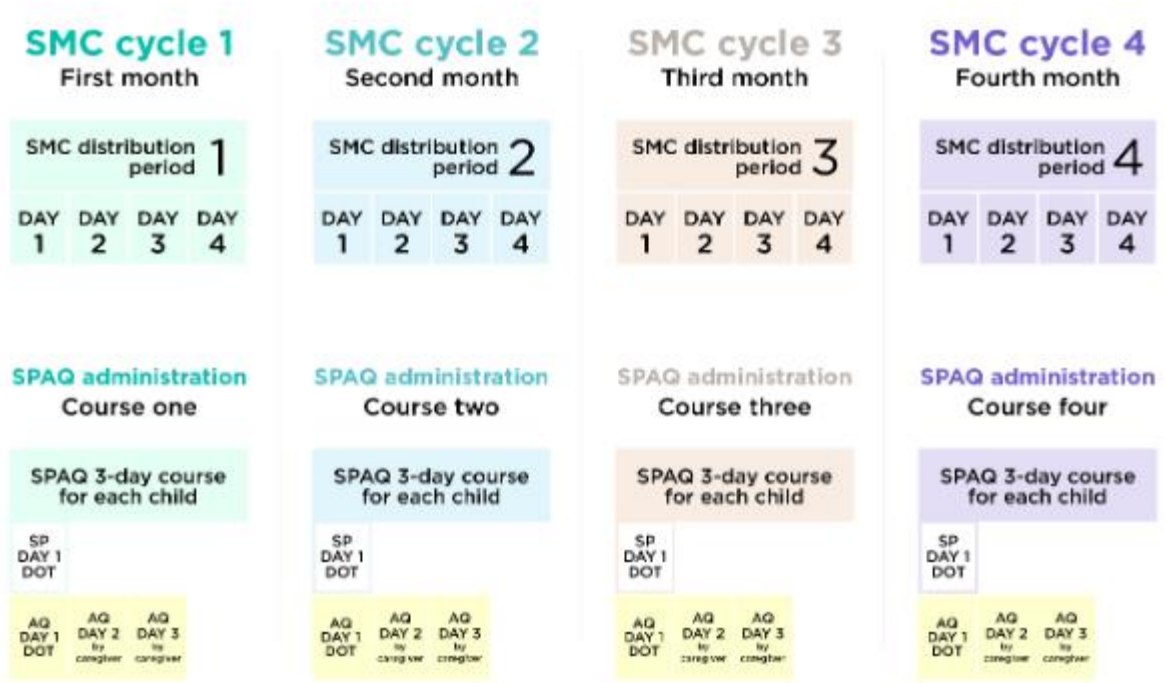
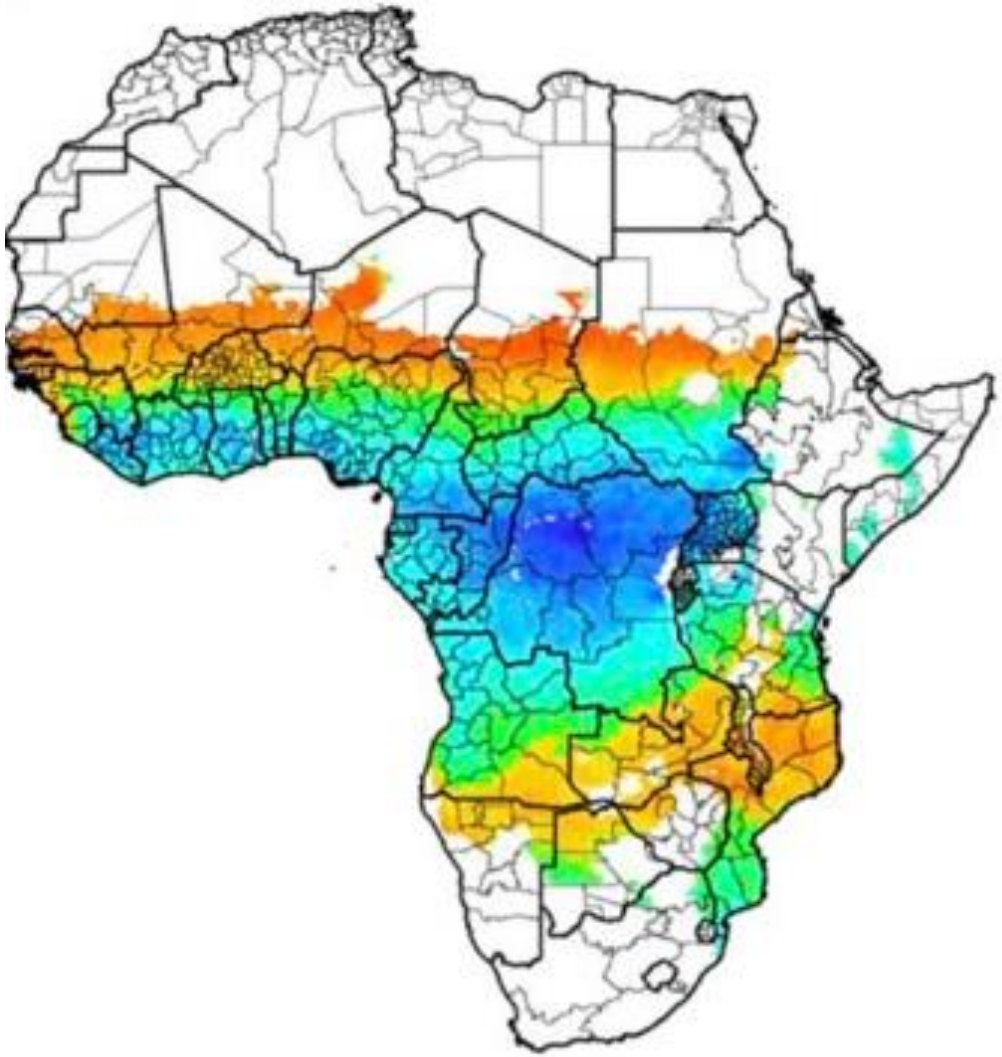


Illustration of schedule for an annual round of SMC in areas with four cycles

Target areas for implementation

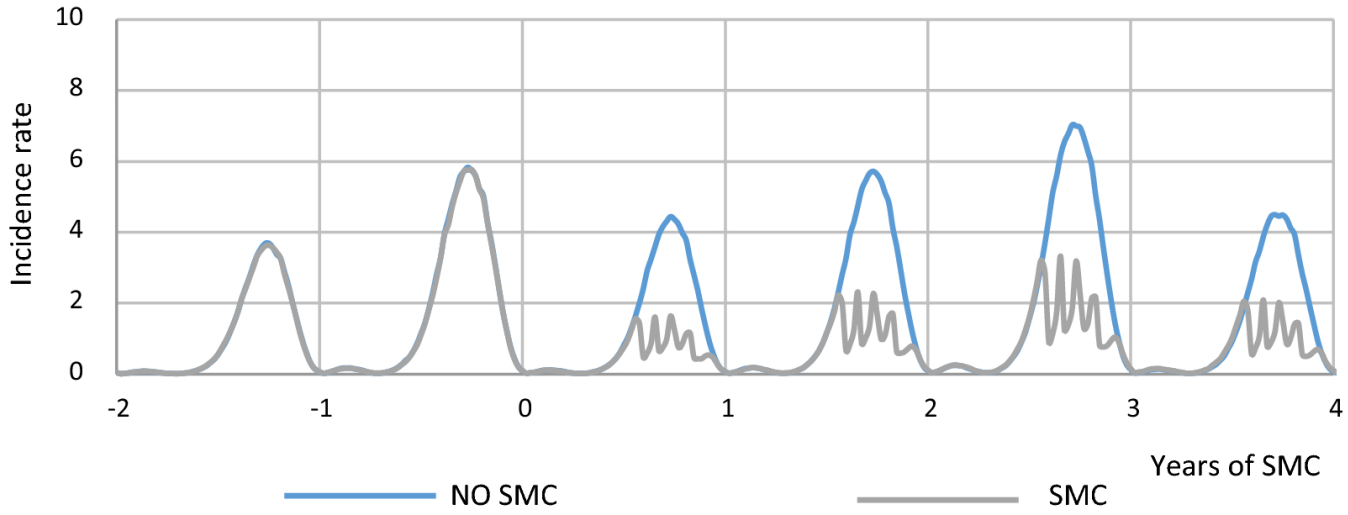
- Malaria transmission is highly seasonal with 60% of clinical cases occurring within a consecutive four-month period
- More than 60% of annual rainfall within three months
- Clinical attack rate is >0.1 malaria attacks per child per transmission season in the target age group
- SP and AQ remain efficacious (>90% efficacy)



The maximum proportion of annual rainfall occurring within three consecutive months. Orange-red areas are those identified as suitable for SMC based on >60% of annual rainfall in 3 months and a clinical attack rate >0.1 attacks per child.
Cairns, M. et al., 2012

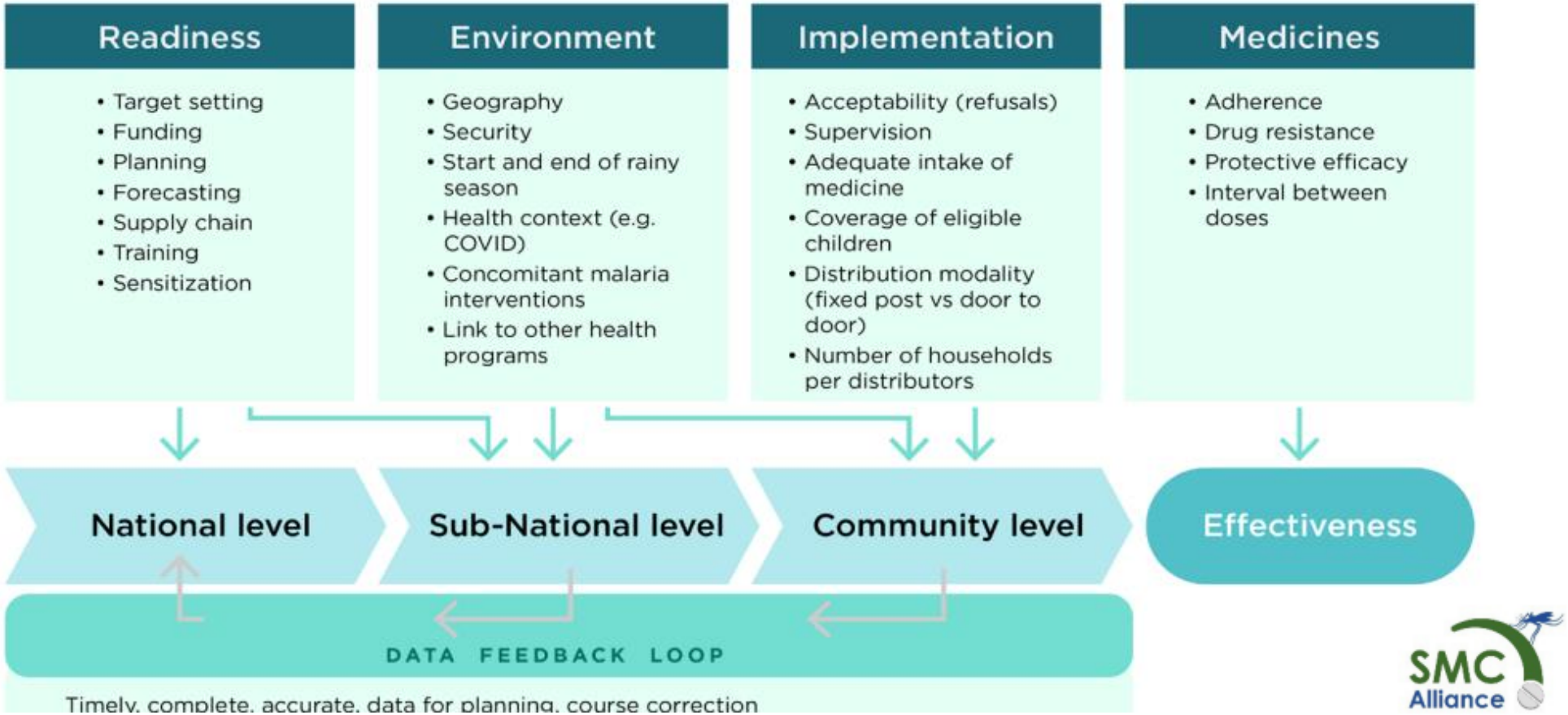
Impact of Seasonal Malaria Chemoprevention

- Clinical trials indicate SMC prevents up to 75 percent of uncomplicated and severe cases if implemented to quality standards with acceptable levels of resistance
  - Timing in relation to transmission season
  - Resistance levels
  - Coverage



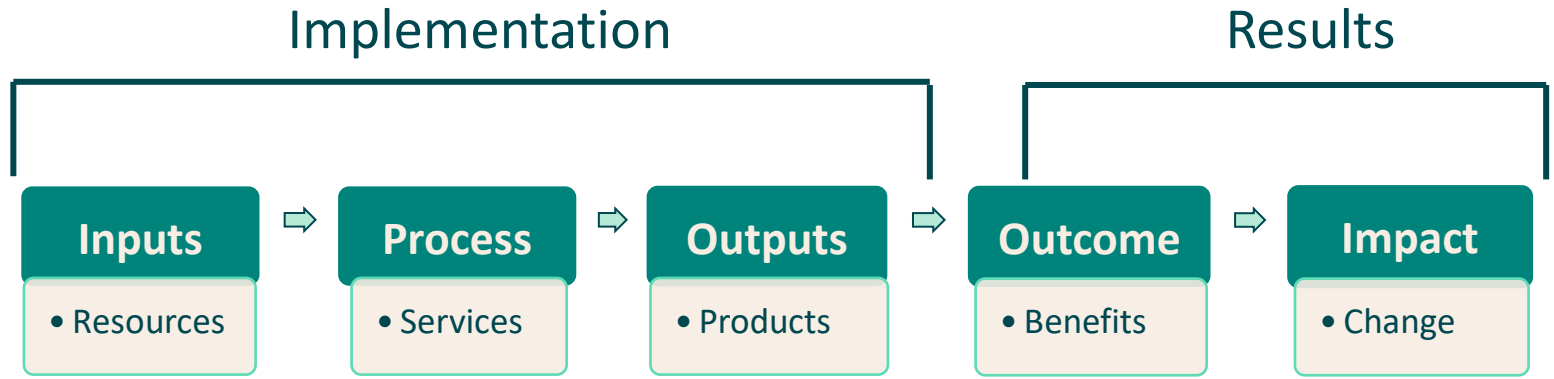
Diawara, H., et al. Cost-effectiveness of district-wide seasonal malaria chemoprevention when implemented through routine malaria control programme in Kita, Mali using fixed point distribution. Malaria Journal, 2021. 20:128

Implications for coverage and impact

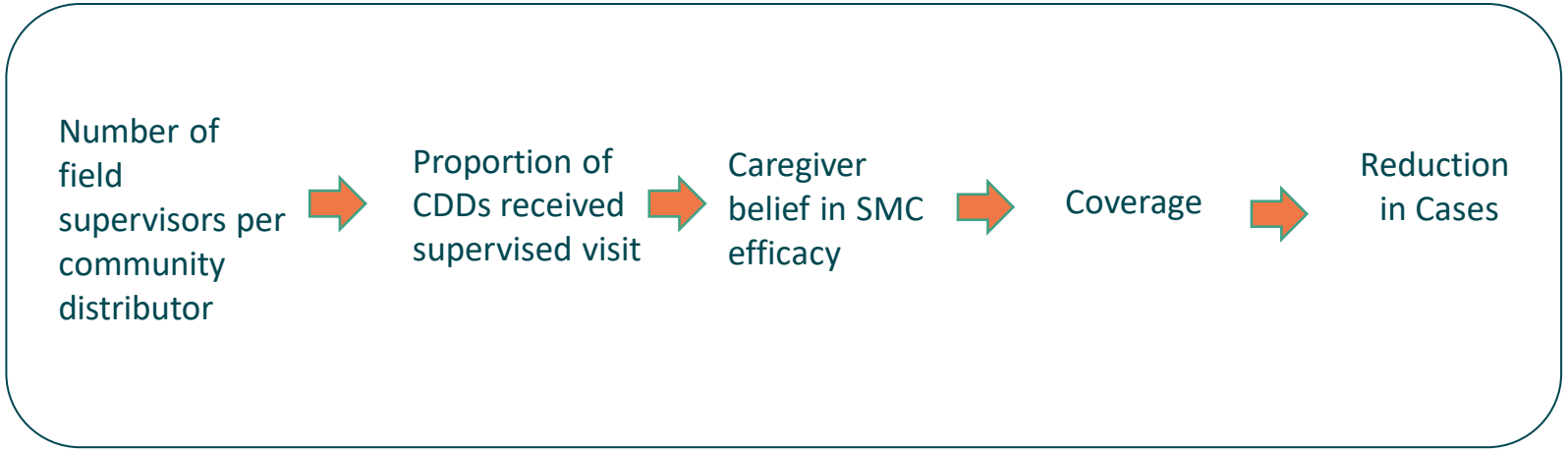


Linking inputs to impact

- Are we reaching target coverage levels – ***why or why not?***
- Triangulating coverage estimates with program performance
- Factors affecting impact
- Timeliness for fast response
- Tracking inputs and performance overtime as we scale up to new geographies
- Standardized approach across multiple countries



Example Indicators



Operationalizing the framework

Step 1

Framework Definition

- Liaised with programme staff across various program aspects including operations, M&E, research, and management
- Cross country comparisons
- Developed of overall goal, objectives, and indicators

Step 2

Data Sources

- Mapped out the flow of data sources, responsible, timelines
- Reviewed existing data sources for ease of data entry and integrating any new indicators

Step 3

Presenting Results

- Created forms for upload of tools to a centralized database
- Pre-developed dashboards for live updates

SMC M&E Framework: How we assess implementation

- **Goal:** To safely prevent malaria cases in eligible children living in areas targeted by the Seasonal Malaria Chemoprevention (SMC) programme supported by Malaria Consortium within the intended period of protection

Objective	Description
Supply and demand	Ensure provision of appropriate inputs to meet programme demands in relation to the place, time and person
Quality	Ensure the highest-possible quality of all programme aspects
Fidelity	Achieve the highest-possible fidelity of programme delivery
Knowledge, attitudes and perceptions (KAP)	Secure the highest-possible degree of acceptability among caregivers of eligible children
Decision-making	Gather, and make effective use of, information obtained from monitoring and evaluation activities to inform decision-making, and promote short- and long-term programme improvements
Coverage	Maximise the number of eligible children reached and receiving the correct dose of SPAQ in targeted areas
Safety	Ensure complete reporting of, and minimize occurrence of, adverse events following drug administration, and monitoring contraindications and other reactions to treatment to ensure safe use of SPAQ

Preliminary Results

Tracking inputs

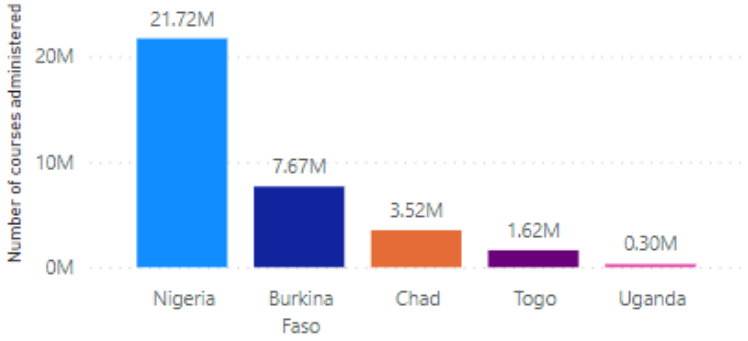
Supply and demand

Year 2021

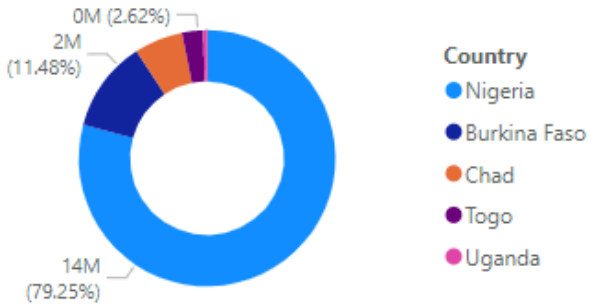
Objective: Ensure provision of appropriate inputs to meet programme demands in relation to the place, time and person

36	297	50M
Number of States/Pr...	Number of LGAs/Di...	Number of doses procured

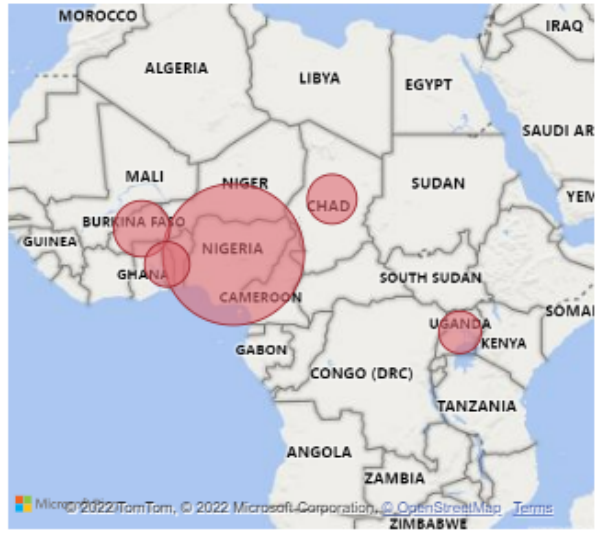
Number of courses administered by Country



Under 5 target population by Country



Target population by Country



Filters

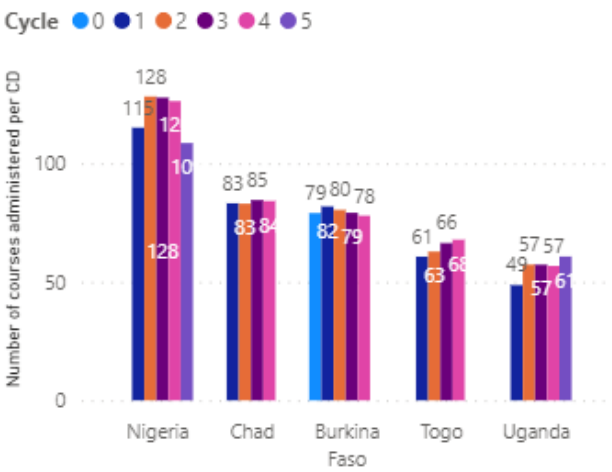
Country: All

LGA/District: All

Cycle: All

Country	Field Supervisors recruited and selected	Average number of community distributors recruited and selected per cycle	CDDs per field supervisor team	Distributors per capita of target population (per 1000)
Togo	1140	6292	11	13.64
Uganda	142	1345	19	12.02
Burkina Faso	6284	22404	7	11.14
Chad	278	10518	76	9.82
Nigeria	19572	43358	4	7.75
Total	**27416**	**83917**	**6**	**8.99**

Number of courses administered per CD by Country and Cycle



Triangulating coverage and program delivery

Coverage

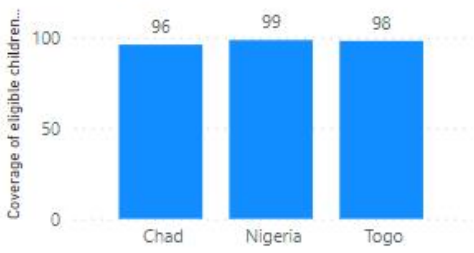
Year 2021

Objective: Maximise the number of eligible children reached and receiving the correct dose of SPAQ in targeted areas

Coverage of ineligible children 60–119 months

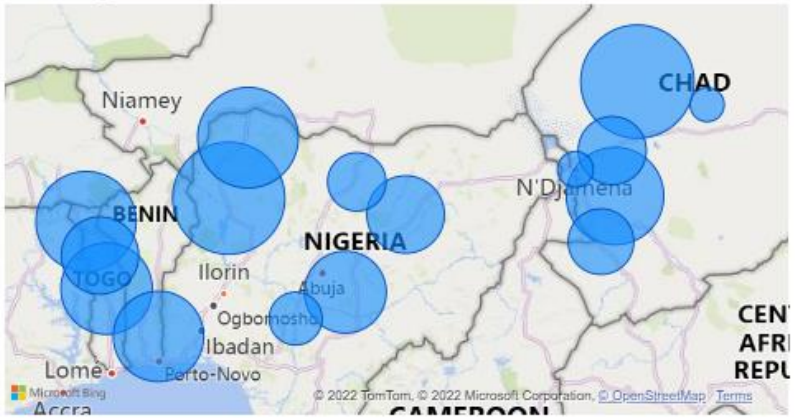
Country	Coverage of ineligible children 60–119 months
Savanes Region	7.15
Nigeria	34.36
Bauchi	33.93
Kano	44.19
Kebbi	34.35
Kogi	20.07
Nassarawa	35.13
Plateau	49.92
Sokoto	23.09
Chad	23.17
Total	30.69

Coverage of eligible children taking AQ doses on day 2 and 3



Country	Coverage of eligible children taking AQ doses on day 2 and 3
Chad	96.03
Nigeria	98.56
Sokoto	98.91
Gada	100.00
Gwadabawa	100.00
Kware	100.00
Shagari	97.33
Sokoto North	98.21
Yabo	97.89
Plateau	97.83
Nassarawa	97.37
Total	97.83

Coverage of compounds/households visited by a CD by State/Region/Province



Country	Coverage of compounds/households visited by a CD
Nigeria	84.33
Kano	82.76
Kumbotso	77.73
Bagwai	87.78
Kogi	85.00
Lokoja	85.00
Nassarawa	86.82
Karu	86.82
Chad	85.74
Hadjer-Lamis	82.50
Karal	82.50
N'Djamena (capital)	85.71
N'djamena Nord	85.71
Mayo-Kebbi Est	89.00
Total	84.93

Triangulating coverage and program delivery

Country	Coverage of heard of SMC	Coverage of knowledge of age of protection	Coverage of Knowledge of eligibility	Coverage of knowledge of AQ importance	Coverage of knowledge of purpose of SMC	Coverage of town announcer
Chad	**89.20**	**91.70**	**93.74**	**96.21**	**96.30**	**93.21**
Nigeria	**85.62**	**83.41**	**91.97**	**93.24**	**94.01**	**91.39**
Bauchi	80.77	71.72	88.50	84.02	90.88	92.42
Kano	94.44	89.96	97.27	98.83	98.47	97.39
Kebbi	87.16	95.95	97.20	98.75	97.39	96.58
Kogi	88.82	75.20	85.67	91.25	89.08	83.25
Nassarawa	73.78	82.11	94.61	92.90	93.11	85.82
Plateau	80.37	73.15	79.06	87.15	89.32	87.73
Sokoto	93.66	91.44	97.50	97.52	97.43	93.77
Togo	**68.10**	**70.59**	**79.49**	**86.85**	**91.91**	**94.68**
Total	**83.09**	**84.03**	**90.22**	**92.74**	**94.31**	**92.94**

Triangulating coverage and program delivery

	Implementation					Results	
Country	Field Supervisors recruited and selected	Average number of community distributors recruited and selected per cycle	CDDs per field supervisor team	Distributors per capita of target population (per 1000)	Number of courses administered	Coverage of compounds/households visited by a CD	Coverage of day 1 SPAQ administered to eligible children
Togo	**1140**	**6292**	**11**	**13.64**	**1620727**	**97.12**	**95.62**
Uganda	**142**	**1345**	**19**	**12.02**	**301942**		
Burkina Faso	**6284**	**22404**	**7**	**11.14**	**7147449**		
Chad	**278**	**10518**	**76**	**9.82**	**3520955**	**95.42**	**95.64**
Nigeria	**19572**	**43358**	**4**	**7.75**	**21047206**	**96.80**	**96.94**
Plateau	3092	8024	5	7.84	3432906	97.21	96.57
Kebbi	4194	9532	5	7.82	4058402	99.38	99.29
Kogi	1384	2688	4	7.77	1737122	93.48	95.19
Nassarawa	2500	8363	7	7.71	2914315	96.37	96.96
Bauchi	4948	6413	3	7.71	5228883	95.93	95.55
Sokoto	3706	8956	5	7.69	3955948	98.23	97.89
Total	**27416**	**83917**	**6**	**8.99**	**33638279**	**96.43**	**96.18**

Subnational analyses

Coverage

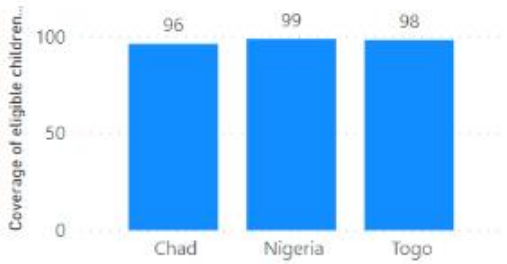
Year 2021

Objective: Maximise the number of eligible children reached and receiving the correct dose of SPAQ in targeted areas

Coverage of ineligible children 60–119 months

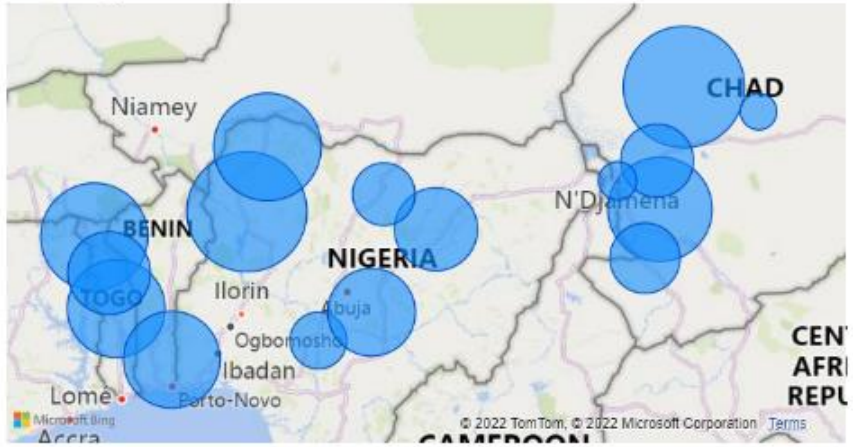
Country	Coverage of ineligible children 60–119 months
Togo	**10.32**
Centrale Region	**15.86**
Blitta	33.80
Mô	17.39
Sotouboua	13.43
Tchamba	2.27
Tchaoudjo	12.40
Kara Region	**9.53**
Savanes Region	**7.15**
Nigeria	**34.36**
Total	**30.69**

Coverage of eligible children taking AQ doses on day 2 and 3



Country	Coverage of eligible children taking AQ doses on day 2 and 3
Gwadabawa	100.00
Kware	100.00
Shagari	97.33
Sokoto North	98.21
Yabo	97.89
Plateau	**97.83**
Nassarawa	**97.37**
Kogi	**98.67**
Kebbi	**98.67**
Kano	**99.11**
Total	**97.83**

Coverage of compounds/households visited by a CD by State/Region/Province



Country	Coverage of compounds/households visited by a CD
Nigeria	**84.33**
Kano	**82.76**
Kumbotso	77.73
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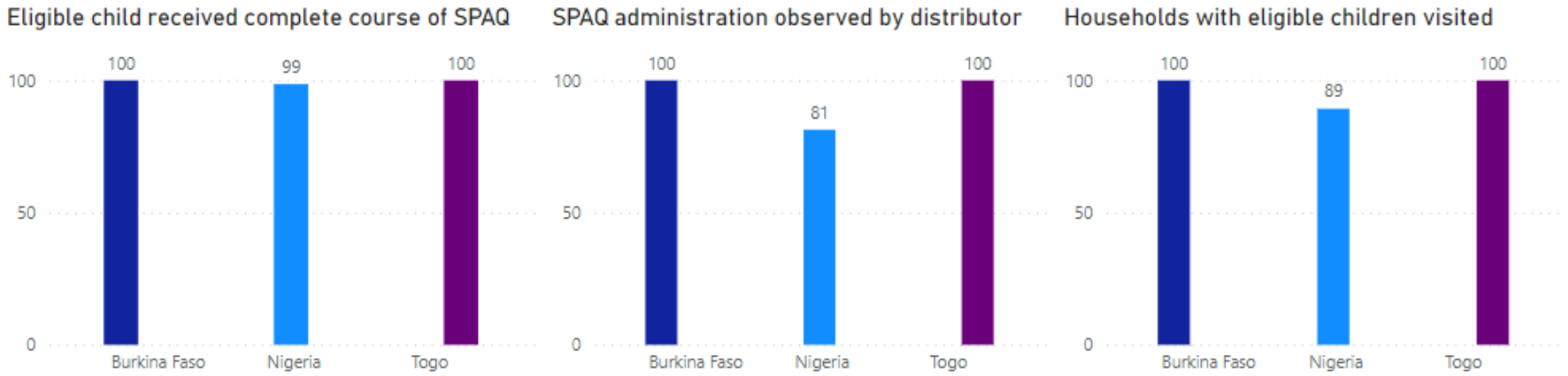
Kogi	**85.00**
Lokoja	85.00
Nassarawa	**86.82**
Karu	86.82
Chad	**85.74**
Hadjer-Lamis	**82.50**
Karal	82.50
N'Djamena (capital)	**85.71**
N'djamena Nord	85.71
Mayo-Kebbi Est	**89.00**
Guelendeng	89.00
Total	**84.93**

Country	Coverage of heard of SMC	Coverage of knowledge of age of protection	Coverage of Knowledge of eligibility	Coverage of knowledge of AQ importance	Coverage of knowledge of purpose of SMC	Coverage of town announcer
Moussoro	97.46	99.49	96.95	100.00	97.97	0.00
Salal	93.00	93.00	94.00	91.00	100.00	100.00
Batha	**100.00**	**99.15**	**97.46**	**100.00**	**100.00**	
Chari-Baguirmi	**87.26**	**86.29**	**89.03**	**95.52**	**94.70**	**95.70**
Hadjer-Lamis	**96.95**	**97.60**	**96.65**	**98.84**	**98.41**	**100.00**
Mayo-Kebbi Est	**97.09**	**97.01**	**97.93**	**98.09**	**99.25**	**99.79**
N'Djamena (capital)	**69.51**	**81.88**	**89.88**	**91.14**	**90.77**	**92.60**
Nigeria	**84.05**	**82.83**	**91.75**	**92.59**	**93.75**	**86.19**
Bauchi	**71.88**	**69.22**	**90.24**	**80.75**	**90.23**	**86.11**
Kano	**87.85**	**91.31**	**97.36**	**98.39**	**97.67**	**89.40**
Bagwai	78.77	77.83	92.92	98.58	97.17	85.31
Bebeji	99.13	98.70	99.13	98.70	99.57	100.00
Bunkure	97.27	82.27	98.64	100.00	97.73	99.01
Dala	98.57	99.05	100.00	100.00	99.52	100.00
Gabasawa	99.56	98.68	98.68	100.00	97.81	100.00
Kumbotso	53.76	91.33	94.80	93.06	94.22	52.05
Kebbi	**87.16**	**95.95**	**97.20**	**98.75**	**97.39**	**77.26**
Kogi	**86.12**	**76.62**	**86.77**	**90.09**	**89.87**	**69.38**
Total	**83.01**	**84.01**	**90.23**	**92.66**	**94.29**	**90.85**

Timeliness for fast response



Cycle	Eligible child received 3-day complete course of SPAQ	SPAQ administration observed by distributor (Day 1)	Households with eligible children visited
Kogi			
Adavi	100	100	100
Lokoja	100	100	83
Omala	100	100	75
Yagba West	100	100	100
Ajaokuta	91	91	91
Yagba East	100	89	100
Kogi	100	78	70
Nassarawa			
Akwanga	100	100	100
Awe	100	100	100
Doma	100	100	100
Obi	100	100	100
Wamba	100	100	100
Karu	100	90	60
Nasarawa	100	88	43
Keffi	100	86	86
Kokona	100	86	86
Keana	100	80	20

Timeliness for fast response

Coverage

Year 2021

Objective: Maximise the number of eligible children reached and receiving the correct dose of SPAQ in targeted areas

Coverage of ineligible children 60–119 months

Country	Coverage of ineligible children 60–119 months
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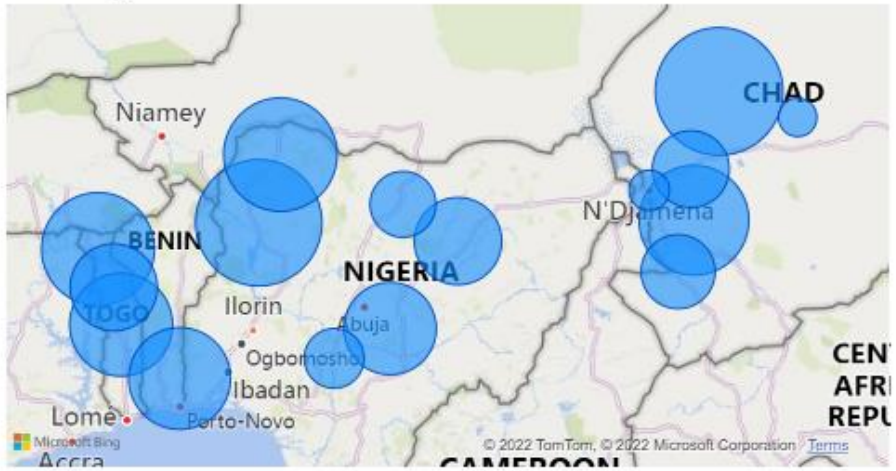
Tchamba	2.27
Tchaoudjo	12.40
Kara Region	**9.53**
Savanes Region	**7.15**
Nigeria	**34.36**
Total	**30.69**

Coverage of eligible children taking AQ doses on day 2 and 3

Country	Coverage of eligible children taking AQ doses on day 2 and 3
Chad	**96.03**
Nigeria	**98.56**
Sokoto	**98.91**
Gada	100.00
Gwadabawa	100.00
Kware	100.00
Shagari	97.33
Sokoto North	98.21
Yabo	97.89
Plateau	**97.83**
Nassarawa	**97.37**
Total	**97.83**

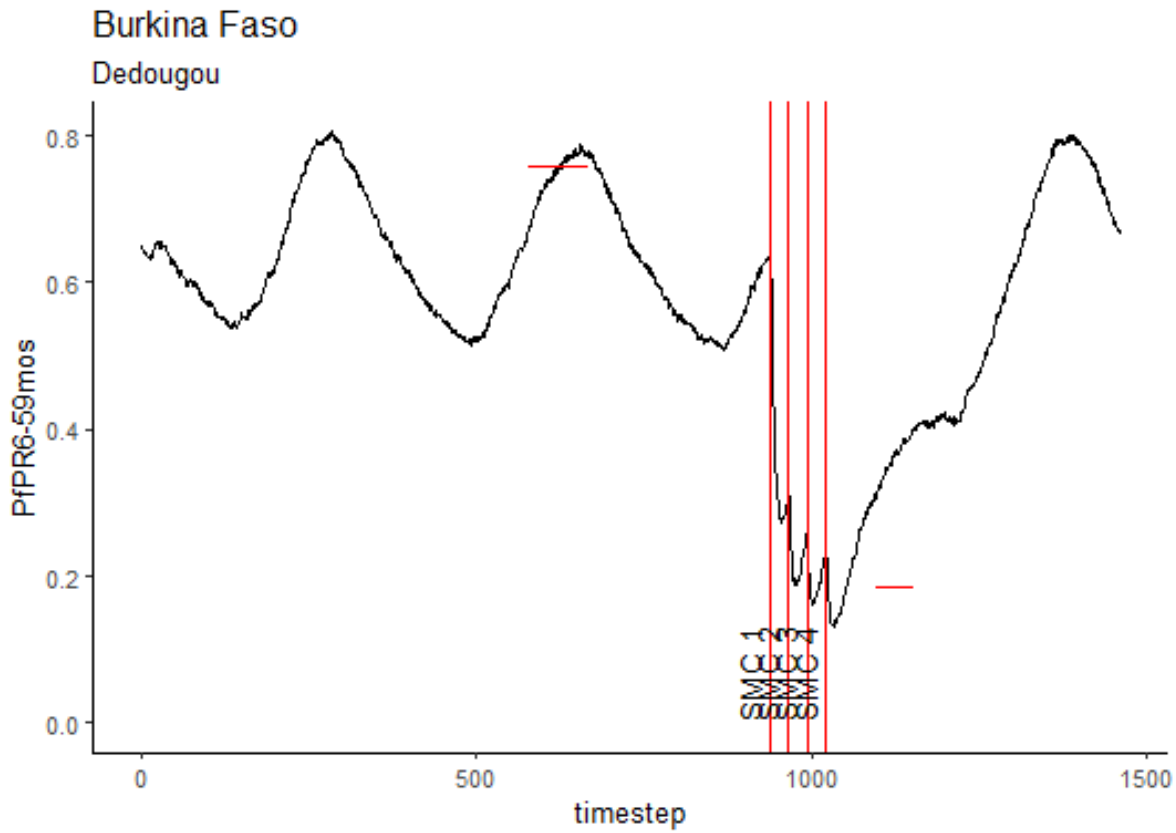
Coverage of compounds/households visited by a CD by State/Region/Province



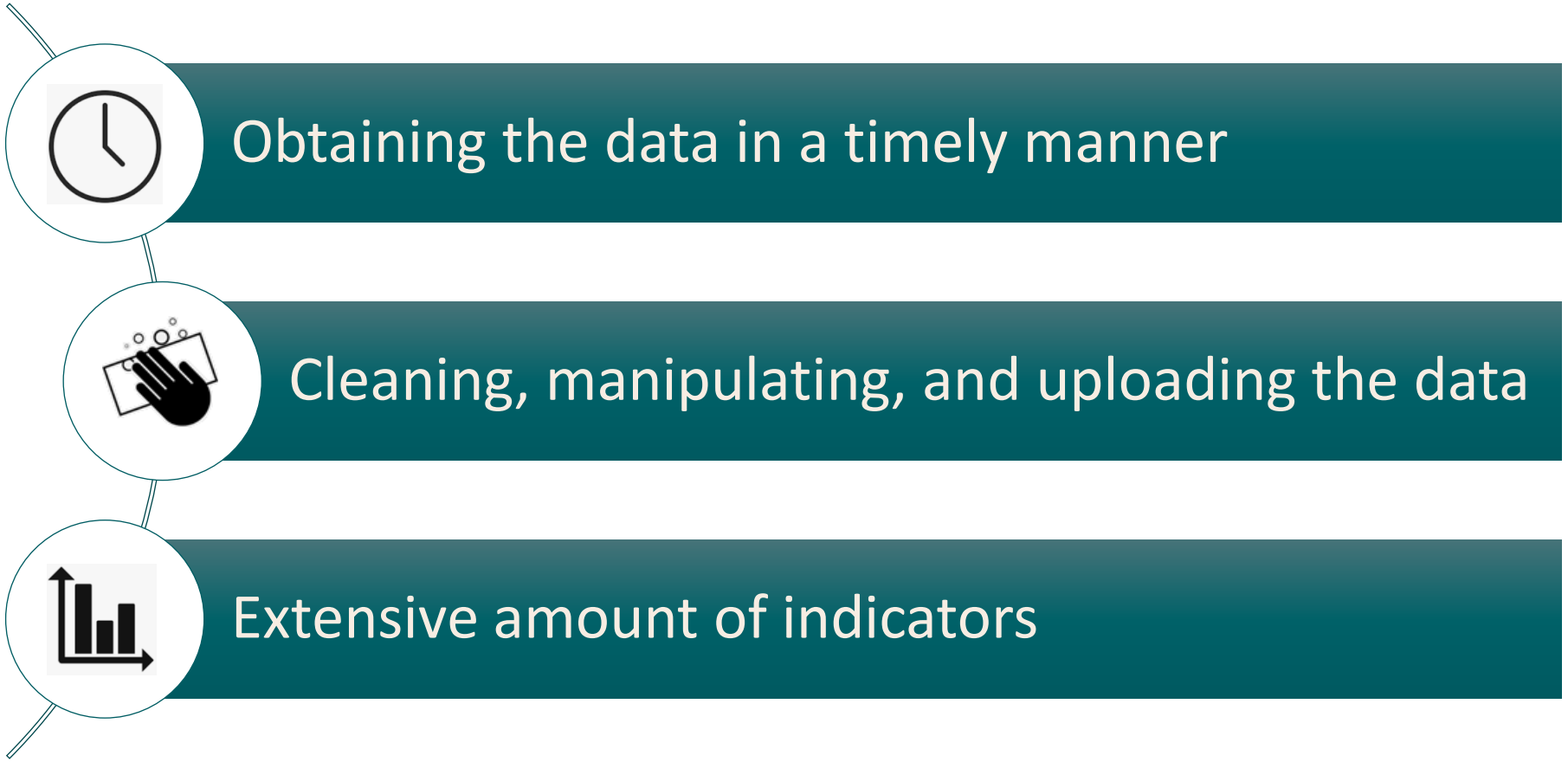
Country	Coverage of compounds/households visited by a CD
Nigeria	**96.36**
Kogi	**93.48**
Kano	**94.03**
Bauchi	**95.93**
Nassarawa	**96.37**
Karu	86.82
Kokona	96.82
Akwanga	98.18
Wamba	98.64
Lafia	98.64
Obi	99.12
Plateau	**97.21**
Sokoto	**98.23**
Kebbi	**99.38**
Total	**96.26**

Bringing it all together to look at impact

- Indicators from M&E Framework
- Prevalence data from household surveys
- Case data from HMIS
- Rainfall data
- Other interventions
- Modelling



Challenges in operationalizing the framework



Next Steps

- Distill framework into priority indicators
- Better define linkages across inputs to impact
- Finalize dashboard set up
- Compare across years
- Link to impact analyses

Questions?