Seasonal Malaria Chemoprevention (SMC) 2022 Campaign

The Gambia

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Prepared for the 2023 SMC Alliance Meeting - Conakry, Guinea



Ministry of Health National Malaria Control Programme

Digitization Approach The Gambia SMC 2022

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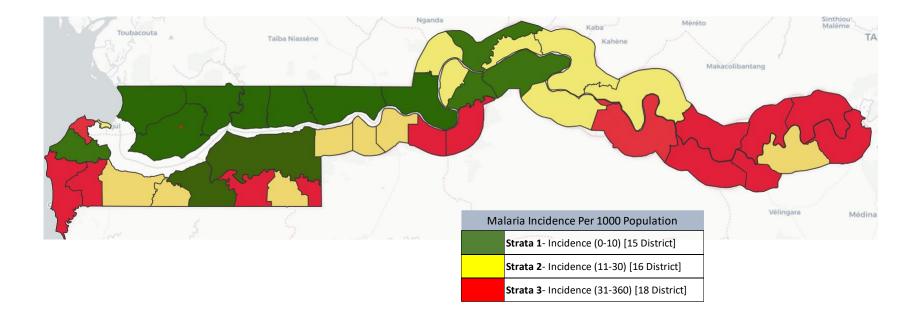
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Country Map Showing SMC Implementing Districts



Previous Digitization Experience



ICT4D in malaria work in The Gambia

- ICT4D was adopted in The Gambia's National Malaria Control Program (NMCP) during the 2014 Mass LLIN Distribution Campaign.
- This came as a result of the experience from the 2011 LLIN Mass Campaign which was paper based.
- Catholic Relief Services (CRS) bought Apple iPads which were customized with the iFormBuilder App.
- 300 Data Collectors and 75 Supervisors were trained on data entry as well as troubleshooting of devices.
- The net campaign was divided into 2 phases
- 97% coverage was achieved during the 2014 net campaign, and the results were ready within a week of the end of the campaign.





ICT4D in malaria work in The Gambia (cont'd)

iFormBuilder

Real-time data

CommCare

SMC & bednets

Jason Florio/C

NMCP & CRS continued to use iFormBuilder for Seasonal Malaria Chemoprevention (SMC) in 2015 in CRR and URR funded by Unitaid (ACCESS SMC Project) to improve timeliness of reporting and accuracy of data.

The platform provided real-time data with visualization tools, allowing for timely decision-making, providing feedback to field teams, and improved resource allocation. iForm Builder was deemed too cumbersome after two years of use.

It was replaced with CommCare, a more userfriendly platform, for the 2017 LLIN and SMC distribution. CommCare continued to be used for SMC as well as bednet distribution at health facilities for populations at risk (pregnant women and children under 1).

Transition from iFormBuilder to CommCare (in 2017)



installed with the CommCare application. chargers) were procured and configured for the ITN campaign, and also used for the SMC campaign.

spread limited resources across several programmes.

regional level.

Problems with Commcare

- → Commcare implementers are required to pay for subscription in order to gain access to the Dimagi managed cloud-based CommcareHQ for data access and management
- → Limited built-in data analytic tools
- → No ready-made data visualization dashboards
- → Limited local capacity



From CommCare to DHIS2 (2021)

DHIS2 is the Ministry's main reporting platform. The NMCP pushed partners to align their reporting.

Provided funding for a pilot using DHIS2 Tracker.

In August 2021, 59 data collectors and 9 team supervisors were trained to pilot the DHIS2 Tracker. <u>The goal</u>: assess the usability of the platform for SMC and possibly scale up its use to replace the CommCare platform.

The training helped participants to:

LAMEUNI

🗇 dhis2

- Understand DHIS2 Tracker
- Configure of the DHIS2 tracker mobile application
- Use the application for data collection and analysis
- Ensure data quality



Achievements of the Pilot in 2021

2

3

4

There was real time SMC data collection using the DHIS2 tracker.

Data quality checks were done daily, i.e. as soon as data collectors synced their data.

The data was analyzed at the end of each day, which helped to identify the areas that were not reached and whether all the children were reached compared to the previous cycle.

Audit trails were available to identify data collectors who made mistakes in data collection to rectify data and for mentoring and coaching.

SMC 2022 Digitization Process using DHIS2 Tracker





Digitization Flow



Requirements Gathering

Gather requirements from M&E and local partners

Evaluation & Selection of a Digital Data Collection Tool

Evaluate sustainable opensource or custom tools, and choose one that suits our use case Adaptation, design, and development

Design, customize or develop the chosen digital solution Test, Train & Deploy

Tested and validated by the NMCP M&E team and then partners, then train data collectors and deploy to production



Electronic Gadgets for Field Data Collection





Solar bags and Power banks





Smart Phones

Electronic Gadgets Specifications

Smart Phone

- Brand/Model: Samsung Galaxy A21S
- Storage: 64GB
- Memory: 4GB
- Screen Size: 6.5"

Solar bag/Power bank

- **Brand:** Voltaic
- **Capacity:** 12,800 mAh
- Solar Panel: 10 watts at 6 volts
- **Cover**: Padded 10" tablet sleeve
- Total Weight: 998 grams



Current use of DHIS2 Tracker in the Gambia

→ National Health Management Information System

DHIS2 Tracker is currently used as a National Health Data Warehouse

→ COVID-19 Surveillance & Vaccination

DHIS2 Tracker is currently being used as the National COVID-19 Surveillance and Vaccination Information System

→ Education Management Information System

DHIS2 Tracker is also being piloted for use as an Education Management Information System (Ministry of Basic & Secondary Education)



Use of DHIS2 Tracker for the 2022 SMC Campaign

Why DHIS2?



Open Source & Free

DHIS2 is free to use with no extra or hidden costs attached. It free to manage and customize. It also has a strong community of practice.

Easily Customizable

DHIS2 is easily customizable for different use cases, and the Gambia has a strong team of experienced DHIS2 implementers



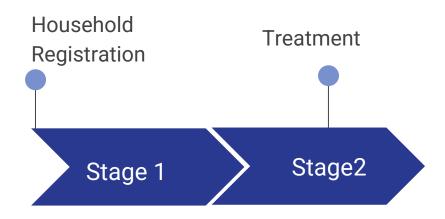
Built-in Data Analytic Tools

DHIS2 has a plethora of built-in data analysis and visualization tools, which simplify the data collection and analysis lifecycle.



Use of DHIS2 Tracker for the 2022 SMC Campaign

Digitization & Data Collection Workflow

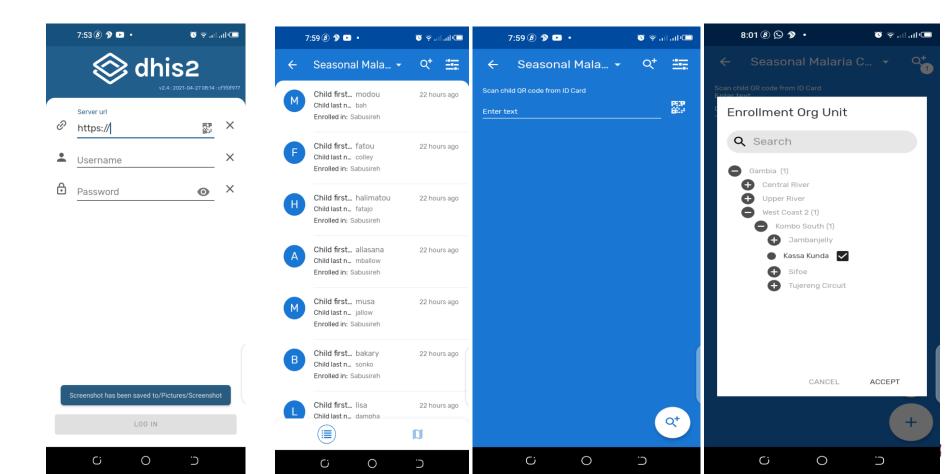




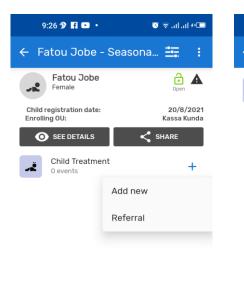
SMC Tracker App Overview



Household Registration Stage



Treatment Stage







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Seasonal Malaria

Child Treatment

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Campaign: Child Registr...

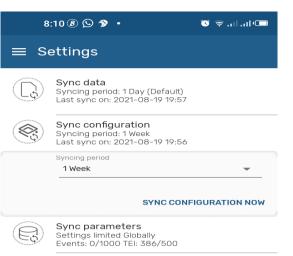
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Child Treatment	66%) :	← Child Treatment 20/8/2021 Kassa Kunda	
Child Treatment	4/6	Choose Cycle Number Choose option	
Choose Cycle Number Choose option		Cycle 1	×
Cycle 1	• ×	Choose day Choose option	
hoose day hoose option		Day 1	×
Day 1	• ×	Did child consume first treatment dose?	
Did child consume first treatment dose?		🔘 yes 🔘 no	×
🖲 yes 🔵 no	×	Was child treated?	
/as child treated?		O yes 💿 no	×
) yes 🔘 no	×	SMC-CT Why not treated?	
SMC-CT Why not treated?		Choose option	
Choose option		Did child previously have an adverse drug Re	
)id child previously have an adverse drug	Reactions?	What would you like to do for th	nis event?
🔾 yes 🔵 no		O Finish and complete	
		O Finish	
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Drugs Reconciliation

8:09 🖲 🕥 🦻 🔸	ையியின் 🗟 🖉
← Seasonal Malar 18/8/2021 Upper Fullado	ia Campaign: D pu West Cycle 1, Day 3
Drug reconciliation: SP - (Blister)	AQ 3-11 Drug reconcil
< >	Values
SP - AQ 3-11 (Blister) Quantity brought forward (Initial quantity)	
SP – AQ 3-11 (Blister) Quantity received	40
SP – AQ 3–11 (Blister) Quantity distributed	30
SP - AQ 3-11 (Blister) Quantity wasted	o
SP - AQ 3-11 (Blister) Quantity Iost	0
SP - AQ 3-11 (Blister) Quantity remained	10
SP - AQ 3-11 (Blister) Comment	
Ê	
Ci Ci	C C



Synchronize Data to the Server



Reserved values

100 Reserved values downloaded per TEI attribute

Open sync error log

This log contains all errors caused by syncing your data and metadata.

Delete local data

All Capture App data stored in your device will be deleted. Data which is not synced to the server will be lost.



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Reset app data & configuration

Your configuration and App data stored in the device will be deleted. You will be asked to log in again and data which is not synced to the server will be lost.

SMS Settings Check and edit parameters related to the sms gateway





Data Analysis & Visualization with DHIS2 Tracker



Analytics

NATIONAL SMC TREATMENT DATA ☆ Edit Share Add filter 🕶

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NATIONAL SMC TREATMENT PER DISTRICT

															2022																										
	SMC-CTChoose Cycle Number				Cycle	e 1								Cycle	e 2				Cycle 3											Cycle 4											
SMC-CT Was child treated?	Organisation unit / SMC-CT Choose day	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8		Day 1	Day 2	Day 3	Day 4	Day 5	5 Day 6	Day 7	Day 8					
	Gambia / Central River	2109	3402	3172	2857	2765	2458	1682	395	18 840	2549	3138	2429	2689	2538	1787	849	326	16 305	1802	2314	2374	2207	1828	1477	925	410	13 337	1475	1929	1919	2007	1439	1668	810	351	11 598				
Yes	Gambia / Lower River	1239	1357	1560	1393	657				6 206	1328	1478	1531	1095	232				5 664	1190	1310	1535	906	249				5 190	1012	1392	1230	1112	150	1		1	4 898				
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	Gambia / Western 2	5653	6913	6282	6036	3340	1	1		28 226	4110	5903	5221	4606	2108				21 948	3816	5058	5084	3871	1668	1	1		19 499	3493	4291	4100	3098	683				15 665				
		12 780	18 482	17 247	16 256	12 224	7 762	5 754	2 948	93 453	11 270	16 396	14 878	13 926	9 794	5 253	3 429	1 254	76 200	11 22	3 13 817	14 440	12 218	7 7 4 9	4 271	2 646	942	67 311	10 420	12 362	11 393	10 324	5 496	6 3 868	2 171	497	56 531				
	Gambia / Central River	96	136	80	71	34	29	17	6	469	75	51	39	34	48	30	12	2	291	42	30	26	15	52	15	12	3	195	13	15	11	10	11	7	5	9	81				
Na	Gambia / Lower River	19	16	15	23	8				81	21	18	25	9	3				76	10	12	14	18	2				56	7	7	7	7					28				
No	Gambia / Upper River	116	193	163	133	101	86	58	30	880	58	95	86	69	57	37	13	4	419	57	44	35	55	18	9	8	3	229	23	27	31	10	6	9	2		108				
	Gambia / Western 2	309	300	210	209	123				1 151	131	159	160	110	35				595	97	125	76	57	21				376	44	34	48	22	6				154				
		540	645	468	436	266	115	75	36	2 581	285	323	310	222	143	67	25	6	1 381	20	5 211	151	145	93	24	20	6	856	87	83	97	49	23	3 16	7	9	371				
	Total	13 320	19 127	17 715	16 692	12 490	7 877	5 829	2 984	96 034	11 555	16719	15 188	14 148	9 937	5 320	3 454	1 260	77 581	11 43	4 14 028	14 591	12 363	7 842	4 295	2 666	948	68 167	10 507	12 445	11 490	10 373	5 519	9 3 884	2 178	506	56 902				





NATIONAL SMC COVERAGE PER DISTRICT CYCLE 4

				CYCLE 4					
				2022					
	3-11 Projct Coverage Cycle4	12-59 Projct Coverage Cycle4 🍦	3-59 Projct Coverage Cycle4	60-120 Projct Coverage Cycle4 🍦	3-11 Actual Coverage Cycle4 🔅	12-59 Actual Coverage Cycle4 🍦	3-59 Actual Coverage Cycle4 🍦	60-120 Actual Coverage Cycle4 🍦	Treated Coverage Cycle 4 $\mbox{$\stackrel{\diamond}{=}$}$
Gambia / Central River / Janjan Bureh	100	99.7	99.7	100	84	59	62		99.7
Gambia / Central River / Lower Saloum	100	99.3	99.4		76	61	63		99.4
Gambia / Central River / Sami	100	99.7	99.8	99.8	59	53	54	27.3	99.8
Gambia / Central River / Upper Fulladou West	98.6	99	98.9	99.2	53	49	49	27.1	99
Gambia / Lower River / Jarra Central	100	99.5	99.6		71	72	72		99.6
Gambia / Lower River / Jarra East	100	99.8	99.9		82	59	62		99.9
Gambia / Lower River / Jarra West	97.9	99.4	99.1		50	39	41		99.1
Gambia / Lower River / Kiang Central	99.4	99.1	99.2	100	86	62	65		99.2
Gambia / Upper River / Basse (Fulladu East)	100	99.6	99.7	99.6	31	32	32	13.4	99.6
Gambia / Upper River / Jimara	98.9	99.2	99.1	99.2	49	42	43	19.3	99.2
Gambia / Upper River / Kantora	99.8	99.8	99.8	99.6	44	42	42	17.8	99.7
Gambia / Upper River / Sandu	99.4	99.9	99.8		84	63	66		99.8
Gambia / Upper River / Tumana	99.1	99.5	99.4	99.6	50	42	43	19.5	99.5



NATIONAL SMC TREATMENT DATA 🛱 Edit Share Add filter 🕶 🚥 More

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Technical Support



How we Provide Technical Support to End users

→ Physical Interaction

A team of 9 IT Support Personnel are deployed in the field to assist teams with any technical issues they may encounter

→ Remote Support

Technical support is also provided remotely via WhatsApp groups and phone calls. Server related technical support is also conducted remotely.

→ Tier 3 Support (Data Managers)

We also work closely with our regional data managers who usually provide tier 3 support



IT Support Personnel Providing Technical Support to a Data Collector in the Field (SMC 2022)





Key lessons learnt / innovation in 2022: Focus Digitalization

Provided real time data

Provided integration of data into DHIS2 used by MOH/HMIS

Made monitoring of data in the field easier

IT Related Challenges



Challenges deep-dive

Challenge 1

Challenge 2

Internet Connectivity Issues

There are certain remote areas with no mobile data coverage

Limitations of DHIS2

Although DHIS2 is a dynamic and robust solution, it has its own limitations that hindered the data collection and management such as performance and functionality related issues

Server Capacity & Backup

Challenge 3

The production server capacity was insufficient given the amount of data it ended up hosting, which caused a few downtimes. There was no dedicated server for backup as well.



Proposed Solutions



Proposed Solutions

→ Have a contingency plan for mobile data

Leverage Qcell MiFi routers or satellite broadband internet in remote areas

→ Develop Custom Solutions

Develop custom solutions on top of DHIS2 to mitigate performance and functionality related issues/limitations that may be encountered during subsequent campaigns

→ Provision of High Capacity Server

Upgrade the capacity of the current SMC server for improved performance



Thank you! Merci

Questions?