



Benin's experience using electronic data capture for onchocerciasis mass drug administration (2021-2022)

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History of electronic data capture (EDC) use during health campaigns in Benin

- Result of actual government decision to digitize many programs and public services.
- Started in 2019 with the digitalization of two malaria program campaigns: mosquito net distribution, seasonal malaria chemoprevention.
- In 2020, the Government instructed the MOH to digitize the onchocerciasis mass drug administration (MDA) campaign.
 - **Use of population data collected during previous malaria campaigns,**
 - **Update database with OV MDA specific variables,**
 - Have one consolidated database for all health campaigns across the country.

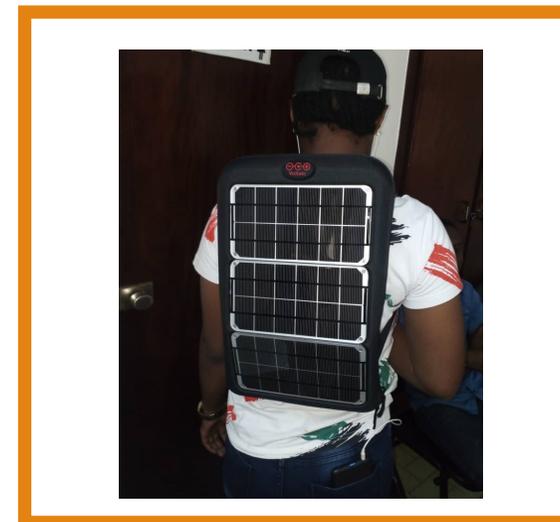
Use of EDC during MDA: preparation phase

- Appropriation of NTD program functioning by CRS team,
- Estimation of equipment & human resources needs for successful pilot implementation,
- Design and insertion of OV MDA data collection forms in the smartphones,
- Finalization of field actors' training schedule and material dispatching process.

Identification badges



100 High-Capacity Solar Chargers + power bank



Smartphones



03 Tripp-lite Charge Stations, charge up to 49 phones simultaneously

Use of EDC during MDA: training and supervision tools

1. Training of central level NTD program and partners' staff on EDC tools.
2. Training of intermediary and periphery level NTD program staff: Simultaneous training of supervisors in all targeted districts,
→ Design of MDA supervision plan, creation of communication means (WhatsApp groups).
3. Training of community drug distributors (CDDs): Nurses assisted by CRS team members and mixed NTD program/partner's teams.

Training modules:

- **MDA data collection forms** previously inserted in smartphones (all levels).
- **Supervision data collection forms** (central and intermediary levels).
- **CAT platform (pilot phase), ArcGis platform (extension phase):** for MDA data management and drug distribution supervision (central and intermediary levels).

EDC use during MDA: household identification, data collection/update and drug distribution



- 1 List of available households appears based on geo-hierarchy information
- 2 Households list refreshes automatically as CDD is moving around
- 3 Search for household using head of household's name (complete or partial)
- 4 Confirm head of household's information
- 5 Confirm, if possible, the information of two household's members



EDC use during MDA: household identification, data collection/update and drug distribution

➤ Update household's members biodata

- Name (if incorrect), Sex, Telephone number, Date of birth (or age if unknown), and Height.

➤ Update household's composition if applicable: add a new member or delete one (moving, marriage or death).

➤ Possibility to add new households if not found (fill new forms).

➤ Synchronize the telephone as much as possible to upload collected information.

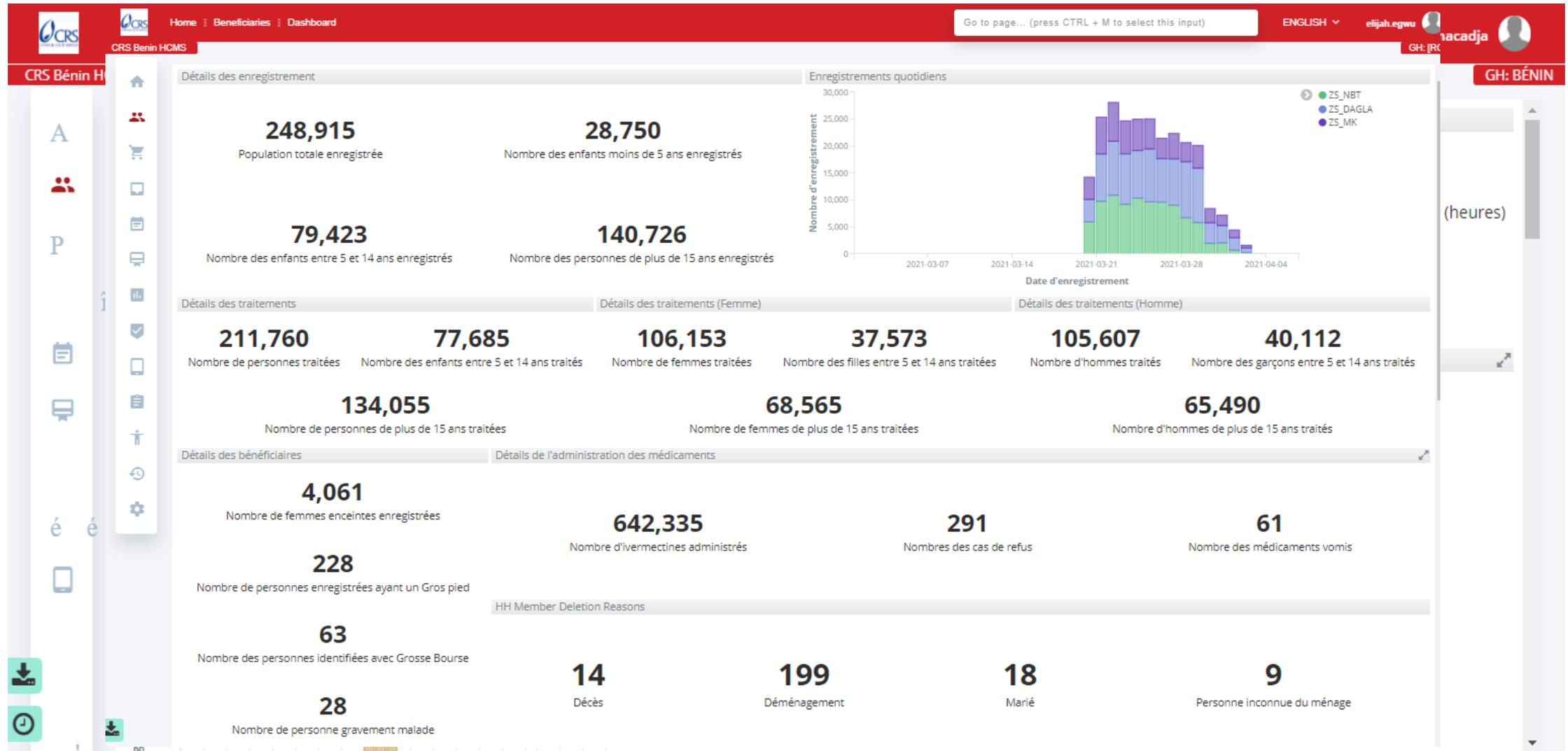
➤ Drug stock management forms are embedded within RedRose.

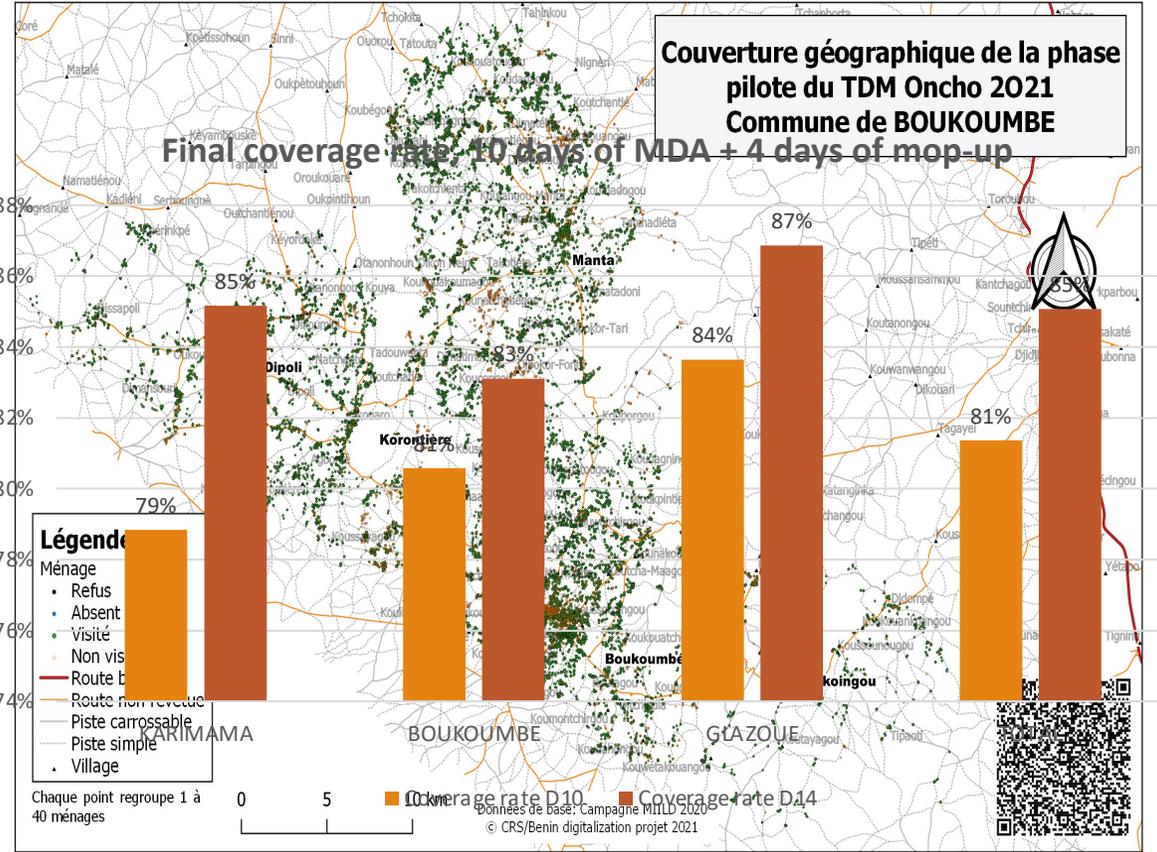
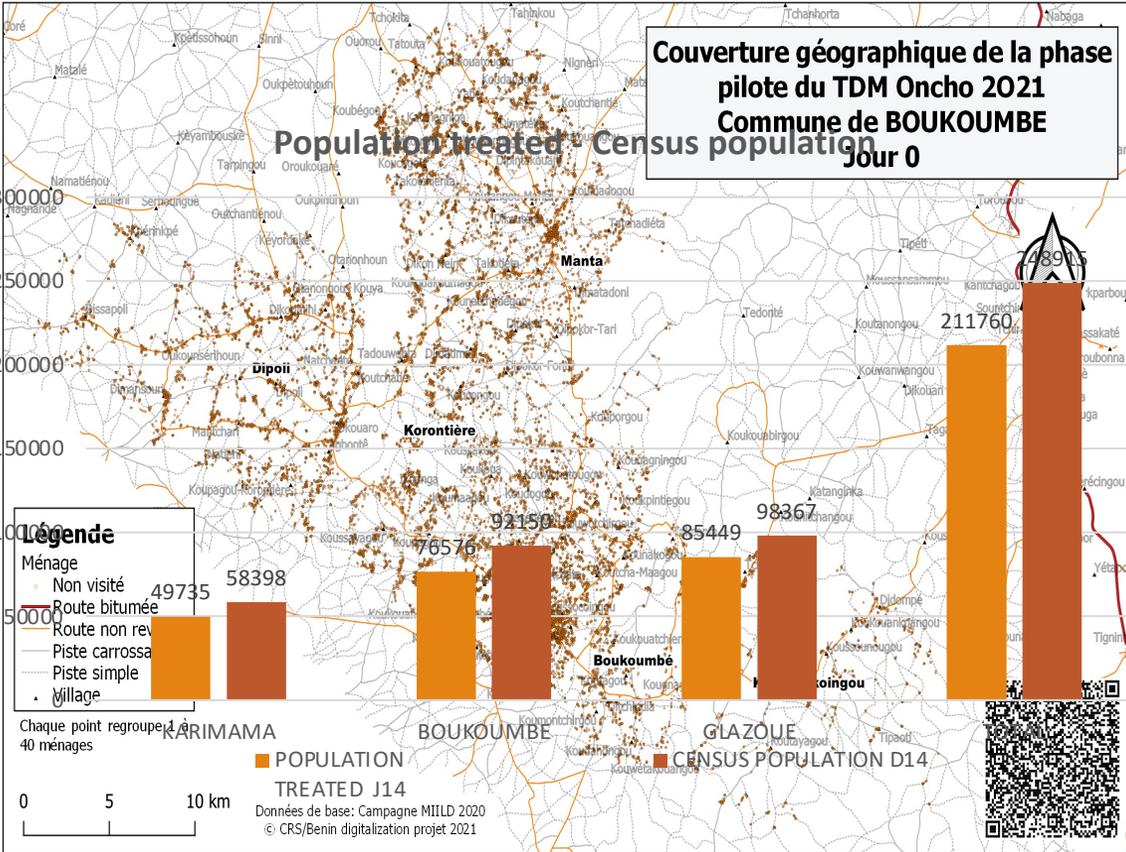
The screenshot shows a mobile application interface for medication administration. At the top, there is a red header with a back arrow, a logo, and a settings icon. Below the header are two buttons: 'PRÉCÉDENT' (Previous) in blue and 'SUIVANT' (Next) in green. The main content area is titled 'Administration de Médicament' and contains several sections:

- Détails du Membre de Ménage**: A section with a light blue background showing 'Name1 Name2 Surname', 'Homme, Chef', and 'Âge: 33 Taille: 174'.
- Dose**: A yellow section with the text 'Veillez Administrer **4 doses** à cette personne!'.
- Le Médicament a été Vomi?**: A section with a light blue background and two radio buttons, 'Oui' (selected) and 'Non'.
- Le Médicament a été Refusé?**: A section with a light blue background and two radio buttons, 'Oui' (selected) and 'Non'.

At the bottom, there is a black footer with a yellow and black striped border. It contains the text 'benin | 192.168.0.195 | c50c2c77246f7783 v3.28.2 (Build:3028020) oneplatform.redrosecps.com' and 'Plateforme de démo'.

EDC use during MDA: training and supervision tools





MDA campaign results: pilot phase, CAT platform results



ONCHO 2021
PNLMT BENIN

Date
Sélectionner

Département
Sélectionner

Zone sanitaire
Sélectionner

Commune
Sélectionner

Arrondissement
Sélectionner

Village
Sélectionner

Agent
Sélectionner

Nouveaux ménages

137748

Ménages

654842

Ménages mis à jour

512015

Personnes traités

2656783

A revisiter

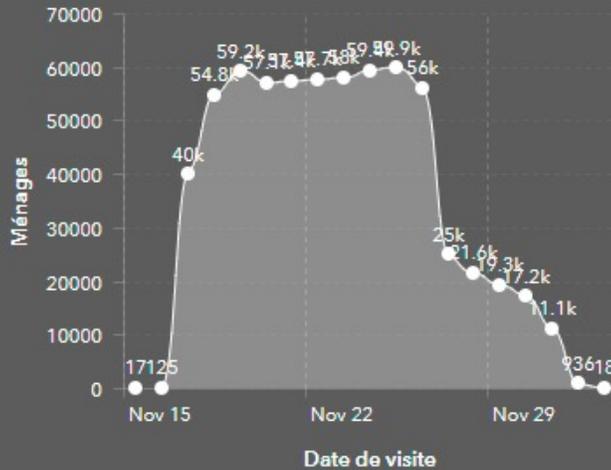
4321

Refus

758

Comprimé

8191291



Couverture géographique

Densité

Taux de couverture

Indicateurs

Powered by Esri

MDA campaign results: extension phase, ArcGis results

Benefits of EDC use during MDA: data collection, transmission and quality/safety

Data collection related benefits:

- Smartphones are light, last many years,
- Easier to identify a household using the GPS function (no one is missed).

Data transmission related benefits:

- Data collected instantaneously available on the platform and accessible from any place,
- MDA reports available a week after the MDA

Quality and safety related benefits:

- Quality control checks embedded (those who are not targeted cannot be treated),
- Avoid data loss especially with staff turnover rate,
- Noticeable impact on program coverage rate,
- Supervisors alerted whenever uploaded information does not make sense.

Benefits of EDC use during MDA: drug administration process and supervision

Drug administration processes followed, and drug stock management improved

- Impossible to proceed without entering critical individual's information, to change number of drugs that must be given or guess it,
- **Directly-observed treatment is strictly followed**, and revisits performed for absents,
- Drug stock management automatic, no additional computing required.

Supervision (more efficient than SCT)

- Allows **virtual supervision of CDDs' work** and assessment of supervisors' work effectiveness,
- Extensive area supervised compared to SCT tool,
- Uploaded data analyzed daily, and results help nurses in real-time (including decision to conduct mop-up or not).

Challenges related to EDC use during MDA

Cost-related challenges

- Smartphones and other equipment, equipment insurance,
- Additional personnel required to ensure training and supervision, additional training days required,
- Higher amount of remuneration requested by recorders.

Data collection-related and other challenges

- Require CDDs with a higher literacy level and internet access to upload data.
- Each CDD must be endorsed (equipment cost is high).

Supervision-related challenges

- Good knowledge of smartphone use, ability to analyze graphs sent daily and use them to assist teams,
- Require additional attention/time from the supervisors.



Thank you for your attention!

