Ghana CRVS Digitisation Project

CRVS Digitisation Opportunities

1. Existing Initiatives - Opportunities

Name	Overview	Organisation(s)	Key Features	Opportunity
Community Population Registration Programme (CPRP) Pilot	300 registration sites. 91 districts. 300-700 households per community. 2 volunteers per community.	BDR	• Focus on on-time community registration • Household paper records recorded and updated by volunteer • Form A and B filled out by volunteer, and collected by mobile BDR every 2 weeks	• Provide common civil registration functionality to other vital events (late birth, death, marriage and divorce) • Automate the registration book
mBirth Pilot	133 districts and 94,000 registrations since end-Aug 2016.	UNICEF TiGO BDR	• On time birth registration through online/offline Android app on tablets/mobiles • Web interfaces for national/regional/district staff and other authorized users. Verification, approval and certificate printing • Statistical reporting functionality with Excel exports • Performance management capability by jurisdiction and role • Security/encryption and audit trails • Dashboard flags potential duplicates • Based on Microsoft .NET (hosted on Windows Server)	• Provide common civil registration functionality to other vital events (late birth, death, marriage and divorce)
Mobile Outreach		BDR	• On-time community birth registration through active registration	• Provide common civil registration functionality to other vital events (late birth, death, marriage and divorce) • Automate the registration process

Government of Ghana BDR Project	In development	BDR	• On time birth registration through online/offline Android app on tablets/mobiles • Will focus on birth and death registration • Will target Oracle database	• Provide common civil registration functionality to other vital events (marriage and divorce)
Vital Strategies COD Training		Vital Strategies GHS GSS BDR	• Improve use, data analysis and dissemination of vital statistics • Training physicians on capture and coding of COD	• Provide common notification functionality to potentially replace Medical certificate of COD
National Identification Authority Project	Currently on hold. Aim: Provide all citizens with a National ID Number. NIA will host a national database and provide identity validation services.	NIA	• National ID number for all Ghanaian citizens • Identity validation services	• Validation of person National IDs • Potentially lookup demographics (auto-populate demographic details in electronic capture forms).
Ghana HIE	Strategies are underway in GHS for the development of a Health Information Exchange.	GHS	• DHIMS2 as central registry (aggregate reporting, patient-level (eTracker)) • Facility Registry • Data Dictionary • Interoperability Layer	• Interoperability framework could harmonize with exchange of vital events data.
eTracker	GHS are piloting the use of the tracker module in DHIS2 (branded as eTracker for the Ghanaian context) for the capture of patient-level clinical	GHS	• Patient level clinical data	• Additional sources of birth and death notifications.

	data. They are currently using the DHIS2 Android apps for using tablets.			
DHMIS2 Data Dictionary	GHS is positioning DHIMS2 as serving as a national data dictionary for health services.	GHS	• Definition data elements for consistent use nationally	• CRVS metadata can potentially be harmonized with the DHIMS2 dictionary.
Proprietary EMR Systems	Many healthcare facilities, both public and private, choose to use proprietary EMR systems (e.g. HAMS (current), ExelMed (in development)).	Private	• Facility-level, clinician facing EMR	• Additional sources of birth and death notifications.
eGov shared infrastructure	Shared services and data repositories centrally maintained and exposed to different ministries	NITA		• CRVS services to be hosted and maintained within NITA's eGov infrastructure
eServices	Government portal for providing services for various government agencies, including BDR.	NITA BDR RGD GHS	• One-stop window for government services	• Inadequate staff has been stated as a prohibitive factor for expanding the available BDR eServices to other services, as processing of these requests require manual involvement by staff (for example, the eServices system does not directly

				link to the BDR national SQL server database). Development of CRVS systems and infrastructure may allow many of the tasks to be automated, easing the burden on staff. This would open the potential for enabling more services. • Fraudulent applications are often seen on the current eServices. Developing criteria for automatically flagging potentially fraudulent applications would make it easier for staff to identify and process/cancel these. This functionality could be expanded to cover other points as well (e.g. capture at community level).
Community Health Worker (CHW) Programme	Start Spring 2016. 2 year program.	MoH GHS YEA MELR Samsung 1mCHW	• Recruit, train, and deploy 20,000 CHWs and 500 eHealth technical assistants across Ghana • CHWs fully equipped and deployed with mobile phones to improve communications, data collection,	• Automate and share existing capture of registrations details for birth, death, marriage and divorce in mobile applications

		World Vision International SADA Millennium Promise GSK British Telecom Eni foundation	community-based disease surveillance, and monitoring. • Technical support to the Government of Ghana at the national level on the scale-up of CHWs across the country • Solar chargers and mobile software applications	
T4MCH	Extension of TM4H pilot. 33 health clinics. 3 regions (Northern, Upper West, Volta); Voice in 9 local languages; SMS in English	SADA	• Weekly text or voice messages to expectant mothers and their families about MCH • Medical staff ICT training to conduct Knowledge Sharing Sessions (KSS) on MCH issues • Pilot electronic charting using mobile phones and laptops to improve health staff's access to patient information.	• Expand eContent to include birth registration • Provide common notification functionality for CRVS in electronic charting
Millenium Villages - ChildCount+			• SMS-based platform for facilitating the activities of CHWs. One of their goals is to create a "living" registry of all young children and mothers in a community.	•
MOTECH (Grameen Foundation)	Previous, but no longer active pilot in Ghana.		• The technology provides a mobile and OpenMRS integration platform for community healthcare.	•
BDR and health facilities collaboration			• Health facilities can share aggregated data on births in facilities with local BDR office. The local BDR office can use this to measure performance of registration of the births in health facilities.	• Has the opportunity to strengthen the relationship between local BDR offices and health facilities, which will also be useful during roll out of the digitized CRVS system.

Case management tool		Judiciary Services	• Manages status of cases	• Has the opportunity to notify of divorces when cases are closed

2. Technical Capabilities - Opportunities

Infrastructure	Overview	Opportunity	Advantages
Data Connectivity	• Mobile data penetration: 67.6%[1] • Broadband wireless penetration: 0.4%[1] • Fixed network penetration: 0.92%[1] • Broadband penetration low, however in general fixed-line telecoms infrastructure is reported as strong in central areas, such as Accra, including rollout of fibre.	Centralized computing model for national and facilities: web and database servers hosted nationally and systems accessed online.	• Ease of deployment, maintenance and upgrading • Would not need syncing of data up from regional levels • Focuses IT skill requirements generally to Accra where a wider resource pool would be available
mHealth Feasibility	Indicators for mHealth success based mobile penetration, growth and coverage are very strong[2]. Unique user penetration 45.5% but with actual user access to mobile 85% due to high rates of phone sharing (total subscription rate is 131.9%[1])	Mobile-based initiatives.	• Mobile technologies can cover data connectivity gaps at district/community levels.

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[1] National Communications Authority Quarterly Statistical Bulletin on Communications in Ghana - April - June 2016
[2] GSMA Country Feasibility Report: Ghana 2014