“COUNTING THE UNCOUNTED”
- ENABLING BIRTH REGISTRATION USING MYCHILD

FEBRUARY 2017
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1. INTRODUCTION

Registration of live births within three months is compulsory in Uganda yet there are five million unregistered children under five [1]. In sub-Saharan Africa, as of 2015 just 41% of children were registered, with a marked discrepancy between urban and rural dwellers [2]. Recent data is difficult to come by, and the lack of reliable up-to-date data has persistent and widespread implications for the development of countries. Apart from being the first legal acknowledgment of a child’s existence, the registration of births is fundamental to the realisation of a number of rights and practical needs, including but not limited to provision of access to health care and immunisation, education, and other social services [3]. While birth registration is not necessarily a prerequisite for receiving basic healthcare, children may nevertheless be denied access to, have to pay more or not be targeted to receive healthcare [4].

Plan International Uganda has been working since 2005 with the Ugandan government – Uganda Registration Services Bureau (URSB), and since January 2016, the National Identification Registration Authority (NIRA) – to support in the strengthening of birth registration systems in Uganda. A assessment done by Plan International Uganda reveals that the information and communications technology (ICT) system for registration continues to have challenges: with the processing, analysis, movement and storage of birth and death records are inadequate and various systems are incompatible with each other [5]. The substantial amounts of data emanating from districts ever since the birth registration campaign launched in 2005 have resulted in the infrastructure for registration being overwhelmed and unable to process long birth certificates efficiently.

In addition to challenges in accessing birth registration services, we must also consider the challenge of every fifth child in the last mile, the child who represents those who cannot normally access life-saving preventive health services and is "off the radar" of the social protection system. We need to know who receives vaccines and other preventive health services, and who is missed from the target population and why. To date, 1 in 5 children are under-vaccinated and unprotected against deadly childhood diseases [6] and 19.4 million children were not reached in 2015 by routine immunisation services globally [7].

Shifo works to reach these children and address many of the root causes of high child mortality from preventable diseases; its partnership with Plan International Uganda is a logical extension of this effort. One of the challenges addressed by the MyChild Card is the registration of children through MCH services. The capture of this vital event information can be further leveraged to support birth registration in Uganda. The aim of the organisations' work together is to present a new model for Birth Notification and Declaration in Uganda, based on almost 20 years of experience in delivering innovative birth registration programmes around the world and experience and knowledge gained in the development of MyChild Card in Uganda.

The MyChild Card, developed by Shifo Foundation, addresses some of the challenges in reaching every child with preventive health services by enabling digital child medical records, empowering parents with knowledge, ensuring effective follow-up of children, and providing reliable and relevant information for effective decision-making. MyChild Card reduces the administration burden of health workers by 72% per child fully immunised [8], and is more cost-effective compared to existing national health information management systems used in low-income countries. MyChild Card has been selected by the Vaccine Alliance (Gavi) as one of the most promising and sustainable solutions to address the problem of reaching every child in under-served areas with life-saving vaccines and other preventive health services [9].

The model presented in this document demonstrates the potential for the MyChild Card system to capture birth information of every child accessing health services and immediately notify the National Identification and Registration Authority (NIRA).
2. OBJECTIVE

The purpose of this document is to present a new model for Birth Notification and Declaration using MyChild Card. The model is developed by considering existing communication channels, responsibilities, tools, resources, and infrastructure of Local Government, the Ministry of Health (MoH), and the National Identification and Registration Authority (NIRA). The model aims to support the functions of Birth Notification and Birth Declaration of every child accessing health services.

3. DEFINITIONS

- Cloud-based service - Software service delivery via internet which enables clients to eliminate in-house installation and maintenance of software and server infrastructure.
- Carbonless copy paper - Type of coated paper designed to transfer information written on the front onto sheets beneath.
- Data control - The process in which data is checked for accuracy after data capturing, uploading, and recognition.
- Verification of Birth Notification - The activity in which personal information is verified by an authorised representative of government to identify a person.
- MyChild Card - A card to record and obtain child's personal and medical information. The card consists of a number of pages including detachable paper sheets to collect a child's personal and medical information for further data administration.
- Birth Notification Voucher - Detachable paper sheet of MyChild Card that allows to capture child's birth information.
- Verification Voucher - Detachable paper sheet meant to be filled in and signed by the Local Council Chairman.
- Scanning Station - A set of hardware and software to support data digitisation of MyChild Card vouchers.
- Smart Paper Technology™ Engine - Internet-based software that supports data capturing, uploading, recognition, automatic verification, recording, processing, storing, archiving, extracting, exporting and reporting.

4. SCOPE AND DELIMITATION OF REPORT

The report has the following scope and delimitation:

- Method and process description on data capturing and verification of birth information.
- Defining the key actors and users of the MyChild Card solution.

5. REPORT STRUCTURE

The report consists of the following sections:

- Article 6 - Register of key actors and infrastructure segments of the model
- Article 7 - Representation of business process model using MyChild Card
6. REGISTER OF KEY ACTORS AND INFRASTRUCTURE SEGMENTS OF THE MODEL

<table>
<thead>
<tr>
<th>Key actors</th>
<th>Description</th>
<th>Infrastructure segment</th>
<th>Icons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informant</td>
<td>Parents/Guardians of children and holders of MyChild Card.</td>
<td>Community</td>
<td></td>
</tr>
</tbody>
</table>
| Health worker               | Midwives, vaccinators, health information assistants, nurses, and other medical personnel who are responsible for using MyChild Card to obtain and record child’s birth, personal and medical information. | • Health Centre  
• Outreach | ![Health Symbol] |
| Scanning station operator   | Health information assistant, data officer, biostatistician, an authorised person who is responsible for using the Scanning Station. | • District Health Office  
• Health Sub-District | ![Hospital Symbol] |
| Verification operator       | Authorised person of NIRA who is responsible for using MyChild Birth Notification and Verification Station. | NIRA                             | ![ Finger Print Symbol] |
| Registration officer        | Person designated by NIRA to issue birth certificates.                         | NIRA                             | ![ Finger Print Symbol] |
| LC Chairman                 | Local Council (LC) Chairman                                                   | Local Government                 | ![Government Building Symbol] |

**Table 1. Register of the Key Actors**
7. REPRESENTATION OF BUSINESS PROCESS MODEL USING MYCHILD CARD

This section presents a narrative description of the workflow and graphical diagrams of the business process. To simplify the reading of generic diagram (figure 8), the business process is presented in separate subsections with colour coded workflow arrows.

7.1 NARRATIVE DESCRIPTION OF THE PROCESS

According to the Registration of Persons Act (2015), registration of every birth within Uganda is free of charge and compulsory [10]. Immediately after the date of birth or finding of a child, the parent or guardian of a child has to notify the registration officer, who for the purpose of birth registration, enters the prescribed information into the birth notification register. Notification of birth requires the following data particulars:

- in respect of birth information - the name, sex, date, weight at birth, place and district of birth;
- in respect of the mother’s information - the name, age, marital status, usual residence, nationality, National Identification Number (NIN) or Alien Identification Number (AIN) for citizens and Aliens respectively; level of education, profession or occupation, and previous births;
- in respect of the father’s information - the name, age, marital status, usual residence, nationality, NIN or AIN for citizens and Aliens respectively; level of education and profession or occupation.

By considering the above-noted requirements, MyChild Card shall capture relevant data particulars about birth and notify the designated NIRA registration officer. Based on the new model, data for the birth notification will be captured during health service delivery.
7.1.1 Notification of Birth

At first visit to health centre/outreach site, health worker will issue MyChild Card to every child. Parents/Guardians who come with MoH child health cards or exercise notebooks will receive new MyChild Cards as well. The health worker shall record birth information in the Birth Notification Voucher which shall be detached from the MyChild Card for further data processing at designated scanning station. The Birth Notification Voucher uses carbonless copy paper, hence after detachment of voucher Parent/Guardian will retain the Copy of Birth Notification in the card. In this process stage, birth information is only captured and used for reporting purposes (recognising the need for formal verification by LC Chairman). After capturing birth information, the Parent/Guardian is then sent by the health worker to the LC Chairman in order that the birth information be verified. The diagram (figure 1) below depicts the key steps of data capturing for birth notification.

**Figure 1. Notification of Birth**

Key steps:

- Step 1 - Health worker fills in the Birth Notification Voucher
- Step 2 - Health worker detaches Birth Notification Voucher
- Step 3 - Health worker collects Birth Notification Vouchers
- Step 4 - Health worker gives MyChild Card to Parent/Guardian
- Step 5 - Parent/Guardian receives MyChild Card from Health worker
### 7.1.2 Verification of Birth Notification by LC Chairman

The Parent/Guardian is responsible for taking MyChild Card to the LC Chairman to verify the birth information. LC Chairman reviews the information recorded in the Copy of Birth Notification. If the information is correctly recorded, the LC Chairman fills in the Verification Voucher, signs and stamps to validate. The Verification Voucher is distinct from the Birth Notification Voucher in that it is used to capture formal verification of the birth notification. After verification LC Chairman records the birth information in the Household Register Book and returns MyChild Card to the Parent/Guardian. On the next visit to the health facility/outreach site, the Parent/Guardian brings MyChild Card with complete proof of verification. The Verification Voucher will serve as formal declaration of birth to NIRA. Diagram (figure 2) below depicts the key steps of verification process.

#### Key steps:
- **Step 1** - Parent/Guardian brings MyChild card to LC Chairman for verification
- **Step 2** - LC Chairman reviews the Copy of Birth Notification
- **Step 3** - LC Chairman verifies the birth information
- **Step 4** - LC Chairman registers the birth information in the Household Register Book
- **Step 5** - LC Chairman returns MyChild card to Parent/Guardian
- **Step 6** - Parent/Guardian receives MyChild card after verification

#### Figure 2. Verification of Birth Notification

![Diagram of Verification of Birth Notification process]

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*Diagram (figure 2) below depicts the key steps of verification process.*
7.1.3 Declaration of Birth

In order to complete the vaccination schedule in Uganda, a child has to visit a health facility/outreach site a minimum of 5 times. According to general vaccination practice, a health worker collects child health cards from Parents/Guardians and stacks them on the vaccination desk. Moving from top to bottom, the health worker pulls individual child health cards and calls Parent/Guardian by name to provide relevant health services. Due to the gradual implementation of MyChild Card, initially some Parents/Guardians may have MoH child health cards, exercise books, and MyChild Cards. Parents/Guardians who come with MoH child health cards or exercise notebooks will receive new MyChild Cards. In other words, the old child health cards will be replaced by MyChild Card. If the birth information was recorded incorrectly or should be changed in the MyChild Card (e.g., change of name, address, phone, etc.), health workers shall use an Extra Birth Notification Voucher to update the information. An Extra Birth Notification Voucher is a blank form that can capture all necessary information particulars of the Informant. Once the Extra Birth Notification voucher is filled in and scanned, the old data in the server will be updated by new information.

As presented in section 7.1.2 "Verification of Birth Notification by LC Chairman", to fulfill the requirements of birth declaration, the health worker will review the Verification Voucher to confirm that the LC Chairman verified the information in the MyChild card. If the information is verified, the health worker detaches the Verification Voucher from MyChild Card for processing. In this stage, health worker will capture verification information at health facility/outreach level. If the birth information is not verified, the health worker will request the Parent/Guardian to go back to the LC Chairman to verify.

The diagram (figure 3) below depicts the key steps of birth declaration process.

**Figure 3. Declaration of Birth**

Key steps:

- **Step 1** - Parent/Guardian brings MyChild card to Health centre/Outreach
- **Step 2** - Health worker reviews the Verification Voucher. If the Verification Voucher is not filled in by the LC Chairman, the health worker asks the Parent/Guardian to go to the LC Chairman to verify the information and to return with it completed on their next visit
- **Step 3** - Health worker detaches the Verification Voucher if it is filled in by the LC Chairman
- **Step 4** - Health worker collects Verification Vouchers
- **Step 5** - Health worker returns MyChild card to the Parent/Guardian
- **Step 6** - Parent/Guardian receives MyChild Card from health worker
7.1.4 Delivery and scanning of birth notification and verification vouchers

According to the existing reporting schedule of MoH, every health centre is responsible for delivering reports to the Health Sub-District (HSD) or District Health Office (DHO) on a monthly basis. Using existing reporting schedule and logistics channels, health workers will deliver collected Birth Notification and Verification Vouchers to the designated scanning station, where the person responsible will scan and archive all received vouchers. After scanning, data will be uploaded to the server and will be available to access via MyChild birth notification and verification station at NIRA district office. For more information, please see the diagram (figure 4) below.

**Figure 4. Delivery and scanning of vouchers**

Key steps:

- Step 1 - Health worker compiles (Monthly) all Birth Notification and Verification Vouchers and prepares for delivery
- Step 2 - Health worker delivers the batch of vouchers to the scanning station
- Step 3 - Scanning station operator receives batch of vouchers
- Step 4 - Scanning station operator scans all vouchers and uploads file images to the server
- Step 5 - Scanning station operator archives all scanned Birth Notification and Verification Vouchers and keeps at health facility
7.1.5 Data control of birth notification and declaration

In order to receive data of Birth Notifications and Birth Declaration from Informant (Parent/Guardian), the NIRA district office will be equipped with MyChild Birth Notification and Verification station. The station will support the Verification Operator to perform activities on control of data accuracy and verification. The smart software of the station will automatically notify the Verification Operator on incorrectly recognised and/or captured data. Data control is a process in which data is checked for accuracy after data capturing and processing. Furthermore, the system will notify the Verification Operator on received verification vouchers. Hence, registration of a birth will have two statuses including "Notification of birth" and "Declaration of birth" (table 2). After completion of data control of Birth Notification and Birth Declaration, registration officer will allocate NIN/AIN to a child identified as a citizen of Uganda or Alien Identification Number to a child identified as an alien. Further, system will request the server to send SMS on successful registration of birth to Informant.

<table>
<thead>
<tr>
<th>Status 1. Notification of birth</th>
<th>Status 2. Declaration of birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Birth Notification Voucher filled in and detached by health worker</td>
<td>1. Verification Voucher filled in by LC Chairman</td>
</tr>
<tr>
<td>2. Birth Notification Voucher delivered to the scanning station</td>
<td>2. Verification Voucher detached by health worker</td>
</tr>
<tr>
<td>3. Birth Notification Voucher scanned at the scanning station</td>
<td>3. Verification Voucher delivered to the scanning station</td>
</tr>
<tr>
<td>4. Birth Notification controlled for data accuracy by NIRA</td>
<td>4. Verification Voucher controlled for data accuracy and security by NIRA</td>
</tr>
<tr>
<td>5. Birth Notification is registered</td>
<td>5. Declaration of birth is registered</td>
</tr>
<tr>
<td>6. SMS sent to Informant on successful Birth Notification</td>
<td>6. SMS sent to Informant on successful Birth Registration</td>
</tr>
</tbody>
</table>

**Table 2. Birth registration statuses**

**Figure 5. Data control of birth notification and declaration**
Key steps:

- Step 1 - Data of Birth Notification and Birth Declaration is uploaded to the server and available for review
- Step 2 - Verification operator/Registration officer reviews the data of Birth Notification
- Step 3 - System sends SMS to Informant on successful Birth Notification
- Step 4 - Verification operator/Registration officer reviews the data of Verification Vouchers
- Step 5 - Verification operator/Registration officer allocates NIN/AIN to a child
- Step 6 - System sends SMS to Informant on successful Birth Registration

7.1.6 Mobilisation of Parents/Guardians to acquire birth certificates

MyChild System will allow the generation of a follow up list of target Informants who passed data control of birth notification and verification. The list will be generated based on home address of Informants. This list of Informants will be printed by registration officer at NIRA and handed over to relevant LC Chairman using existing communication channels of Local Government for mobilisation. LC Chairman will be responsible for mobilization of Parents/Guardians to acquire birth certificates. Mobilization information shall include time, date, address of the registration office/mobile-outreach sites for issuance of birth certificates.

![Diagram](image_url)

**Figure 6. Mobilisation of Parents/Guardians to acquire birth certificates**

Key steps:

- Step 1 - Verification operator/Registration officer prints out the list of target Informants to issue Birth Certificates
- Step 2 - LC Chairman collects relevant list of Informants for mobilisation
- Step 3 - LC Chairman delivers message on mobilisation to target Informants
7.1.7 Issuance of birth certificates

Birth certificates will be issued by the NIRA registration officer at district, sub-county, and/or mobile-outreach sites using National ID System (Get ID). During the issuance of birth certificate, the Parent/Guardian shall use MyChild Card as a substitute to the NIRA form (2) for "Notice of Birth of a Child". Using the search in the national register, the registration officer can search Informant's records using National Identification Number/Alien Identification Number, MyChild Card ID, SMS birth registration number, phone number, or any other relevant information. Upon receipt of the application in the prescribed form and upon payment of the prescribed fee, the registration officer shall issue a birth certificate accordingly.

FIGURE 7. ISSUANCE OF BIRTH CERTIFICATES

7.2 GENERIC DIAGRAM OF BUSINESS PROCESS

The diagram below (figure 8) depicts interrelation of all process stages presented in the diagrams:

- Figure 1 - Notification of Birth
- Figure 2 - Verification of Birth Notification
- Figure 3 - Declaration of Birth
- Figure 4 - Delivery and scanning of vouchers
- Figure 5 - Data control of birth notification and declaration
- Figure 6 - Mobilisation of Parents/Guardians to acquire birth certificates
- Figure 7 - Issuance of birth certificates
The detailed description of the process is presented in the Annex 1 - Detailed process workflow.
8. DATA WORKFLOW OF MYCHILD SYSTEM ON BIRTH NOTIFICATION AND VERIFICATION

The diagram (figure 10) depicted in this section presents the generic data workflow of MyChild Card from Parents/Guardians to NIRA national registration database. The data communication between scanning and verification stations is supported by the secure cloud-based service of Smart Paper Technology™ Engine.

Generic steps of birth notification and declaration:

1. On the first visit to health facility or outreach site, every child receives MyChild Card
2. Health worker records birth and medical information of child on detachable MyChild Card vouchers for further reporting
3. On a monthly basis health worker brings Birth Notification and Verification Vouchers to Health Sub-District/District Health office for data digitization
4. Scanning station operator scans Birth Notification and Verification Vouchers for further data processing and analysis
5. Verification operator/Registration officer controls captured data for accuracy, security, and verification.
6. Starting from step 4 to 5 all received data and activities of system users will be recorded in the National registration database.

![Diagram of data workflow](image)

**Figure 10. Generic Data Workflow of MyChild System**
USE CASES AND DESCRIPTION OF ACTIVITIES

This section presents the use case diagrams and the description of activities. The use cases depict high level view of user’s interaction with the MyChild Card/System and other actors.

9.1 BIRTH NOTIFICATION

Use case A.

**Figure 11. Use case A - Birth notification**

<table>
<thead>
<tr>
<th>Actors</th>
<th>N</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health worker</td>
<td>A 1.1</td>
<td><strong>Issue MyChild Card</strong>&lt;br&gt;Issue MyChild Card for all children assessing health services.</td>
</tr>
<tr>
<td></td>
<td>A 1.2</td>
<td><strong>Fill in birth notification voucher</strong>&lt;br&gt;Health worker fills in the Birth Notification Voucher.</td>
</tr>
<tr>
<td></td>
<td>A 1.3</td>
<td><strong>Detach birth notification voucher</strong>&lt;br&gt;After recording all relevant birth information of a child, the health worker detaches the Birth Notification Voucher from MyChild Card.</td>
</tr>
<tr>
<td></td>
<td>A 1.4</td>
<td><strong>Inform Informant on birth notification and verification procedures</strong>&lt;br&gt;After detachment of the Birth Notification Voucher health worker provides information on birth notification and verification procedure.</td>
</tr>
<tr>
<td></td>
<td>A 1.5</td>
<td><strong>Return MyChild Card to Informant</strong>&lt;br&gt;After detachment of the Birth Notification Voucher health worker provides information on birth notification and verification procedure.</td>
</tr>
<tr>
<td></td>
<td>A 1.6</td>
<td><strong>Complete Birth Notification Vouchers and store in safe place</strong>&lt;br&gt;After detachment of the Birth Notification Voucher health worker provides information on birth notification and verification procedure.</td>
</tr>
</tbody>
</table>
Return MyChild Card to Informant

After completion of health services, data collection, and counselling, the health worker returns MyChild Card to Parent/Guardian.

Compile birth notification vouchers and store in safe place

After completion of health service session collected Birth Notification Vouchers shall be compiled and stored at health facility.

Informant

Receive MyChild Card at first visit

On first visit to health facility/outreach site or child born in maternity ward Parent/Guardian will receive MyChild Card.

Receive information on birth notification and verification procedure

Parent/Guardian receives relevant information on birth notification and verification.

Receive MyChild Card and go home

After receiving all relevant health services and information, Parent/Guardian receives MyChild Card and leaves health facility.

Table 3. Description of activities of use case A - Birth notification

9.2 Verification of Birth Notification by LC Chairman

Use case B.

Figure 12. Use case B - Verification of birth notification by LC Chairman
<table>
<thead>
<tr>
<th>Actors</th>
<th>N</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informant</td>
<td>B 1.1</td>
<td><em>Give MyChild Card to Chairman for verification</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parent/Guardian is responsible for delivering MyChild Card to the LC Chairman for verification of birth notification.</td>
</tr>
<tr>
<td></td>
<td>B 1.2</td>
<td><em>Request to verify information recorded in MyChild Card</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parent/Guardian asks the LC Chairman to verify captured information in MyChild Card.</td>
</tr>
<tr>
<td></td>
<td>B 1.3</td>
<td><em>Receive MyChild Card after verification</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>After verification of birth notification MyChild Card is returned to the Parent/Guardian.</td>
</tr>
<tr>
<td>LC Chairman</td>
<td>B 2.1</td>
<td><em>Receive MyChild Card to verify birth notification</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC Chairman receives MyChild Card for verification of birth notification.</td>
</tr>
<tr>
<td></td>
<td>B 2.2</td>
<td><em>Verify information recorded in MyChild Card</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The LC Chairman reviews all information captured in the copy of birth notification. If all records are correct chairman puts signature and stamp on verification voucher. In the next visit to health facility, verification voucher shall be detached from MyChild Card.</td>
</tr>
<tr>
<td></td>
<td>B 2.3</td>
<td><em>Record birth information in household register book</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>After successful verification of birth notification information shall be recorded in household register.</td>
</tr>
<tr>
<td></td>
<td>B 2.4</td>
<td><em>Return MyChild Card to Informant</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>After completion of verification procedure MyChild Card shall be returned to Parent/Guardian.</td>
</tr>
</tbody>
</table>

**Table 4. Description of activities of use case B - Verification of birth notification by LC Chairman**
9.3 DECLARATION OF BIRTH

**Use case C.**

**Activities**

<table>
<thead>
<tr>
<th>Actors</th>
<th>N</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health worker</td>
<td>C 1.1</td>
<td><em>Check verification status of birth notification</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>During the follow up visit of a Parent/Guardian to health facility, the health worker reviews if copy of birth notification is verified in MyChild Card.</td>
</tr>
<tr>
<td></td>
<td>C 1.2</td>
<td><em>NOT VERIFIED - Notify Informant on verification procedure</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health worker notifies Informant to verify copy of birth notification. Notification of verification can be done on every visit of Parent/Guardian</td>
</tr>
<tr>
<td></td>
<td>C 1.3</td>
<td><em>VERIFIED - Detach the Verification Voucher</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verification voucher is detached.</td>
</tr>
<tr>
<td></td>
<td>C 1.4</td>
<td><em>Return MyChild Card to Informant</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>After provision of relevant services, the health worker returns MyChild Card to Parent/Guardian.</td>
</tr>
<tr>
<td></td>
<td>C 1.5</td>
<td><em>Compile Verification Vouchers and store in safe place</em></td>
</tr>
</tbody>
</table>

**Figure 13. Use case C - Declaration of Birth**
All detached verification voucher are compiled and stored in safe place.

Informant

C 2.1

Receive notification on verification procedure
Informant receives relevant information on verification procedures of birth notification.

C 2.2

Receive MyChild card and go home
After receiving all relevant health services and information, Parent/Guardian receives MyChild Card and goes home.

**Table 5. Description of Activities of Use Case C - Declaration of Birth**

**9.4 Delivery and Scanning of Birth Notification and Verification Vouchers**

**Use case D.**

**Figure 14. Use case D - Delivery of Vouchers**
<table>
<thead>
<tr>
<th>Actors</th>
<th>N</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health worker</td>
<td>D 1.1</td>
<td><strong>Compile all received Birth Notification and Verification Vouchers</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Responsible for delivery compiles and prepares batch of vouchers for delivery.</td>
</tr>
<tr>
<td></td>
<td>D 1.2</td>
<td><strong>Deliver monthly compiled vouchers to scanning station</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health worker brings MyChild Card vouchers to designated scanning station.</td>
</tr>
<tr>
<td></td>
<td>D 1.3</td>
<td><strong>Sign on voucher delivery form for accountability</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Once vouchers are delivered to the scanning station responsible for delivery shall sign in voucher delivery log book.</td>
</tr>
<tr>
<td>Scanning station operator</td>
<td>D 2.1</td>
<td><strong>Receive Birth Notification and Verification Vouchers</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>After receiving of vouchers responsible for scanning station shall sign in MyChild vouchery delivery log book.</td>
</tr>
<tr>
<td></td>
<td>D 2.2</td>
<td><strong>Scan Birth Notification and Verification Vouchers</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Received vouchers shall be scanned using MyChild scanning station.</td>
</tr>
<tr>
<td></td>
<td>D 2.3</td>
<td><strong>Archive scanned vouchers</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scanned vouchers are placed in Archive box.</td>
</tr>
</tbody>
</table>

Table 6. Description of activities of use case D - delivery of vouchers
9.5 DATA CONTROL OF BIRTH NOTIFICATION AND DECLARATION

Use case E.

**Activities**

- E 1.1 Control on accuracy of captured data in Birth Notification Vouchers
- E 1.2 Rectify incorrectly captured data in Birth Notification Vouchers
- E 1.3 Control on verification of Birth Notification
- E 1.4 After successful data control & verification, allocate NIN/AIN to a child
- E 2.1 Receive SMS on successful Birth Notification
- E 2.2 Receive SMS on successful Birth Registration

**Figure 15. Use case E - Data control of data notification and declaration**

<table>
<thead>
<tr>
<th>Actors</th>
<th>N</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verification operator/Registration Officer</td>
<td>E 1.1</td>
<td>Control on accuracy of captured data in Birth Notification Vouchers</td>
</tr>
<tr>
<td></td>
<td>E 1.2</td>
<td>Rectify incorrectly captured data in Birth Notification Vouchers</td>
</tr>
<tr>
<td></td>
<td>E 1.3</td>
<td>Control on verification of Birth Notification</td>
</tr>
<tr>
<td></td>
<td>E 1.4</td>
<td>After successful data control and verification allocate NIN/AIN to a child</td>
</tr>
</tbody>
</table>

- **Control on accuracy of captured data in Birth Notification Vouchers**
  This activity considers data control on accuracy after data capturing, uploading, and recognition.

- **Rectify incorrectly captured data in Birth Notification Vouchers**
  This activity considers rectifying incorrectly captured data of birth notifications in the register.

- **Control on verification of Birth Notification**
  This activity considers checking information of birth and Informant captured in birth notification. Registration officer controls captured data for accuracy, security, and verification.

- **After successful data control and verification allocate NIN/AIN to a child**
  After completion of data control of birth notification and verification, registration officer will allocate a National Identification Number to a
| Informant | E 2.1 | **Receive SMS on successful Birth Notification**  
Informant receives text message that birth notification is successfully delivered to NIRA. |
|-----------|-------|--------------------------------------------------|
| Informant | E 2.2 | **Receive SMS on successful Birth Registration**  
Informant receives text message with information that his/her child is registered with particular NIN/AIN. |
| MyChild Birth notification and verification system | E 3.1 | **Notify system user of unrecognised and/or incorrectly captured data**  
The smart software of the station will automatically notify verification operator on incorrectly recognised and/or captured data. |
| MyChild Birth notification and verification system | E 3.2 | **Update data in birth notification register**  
After completion of data control system will change the status of birth notification as checked for data accuracy. |
| MyChild Birth notification and verification system | E 3.3 | **Notify system user of received verified birth notifications**  
System will notify verification operator on received verified birth notifications. The system will create list of birth notifications for further approval. |
| MyChild Birth notification and verification system | E 3.4 | **Update data in birth notification register**  
System will request the server to send SMS on successful registration of birth to Informant. |
| MyChild Birth notification and verification system | E 3.5 | **Send SMS on successful birth notification**  
System sends SMS text to informant. |
| MyChild Birth notification and verification system | E 3.6 | **Send SMS on successful registration of birth**  
System sends SMS text to informant |

**Table 7. Description of activities of use case E- data control**

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9.6 MOBILISATION OF INFORMANTS TO ACQUIRE BIRTH CERTIFICATES
**Use case F.**

![Use case diagram](image-url)

**Figure 16. USE CASE F - MOBILISATION OF INFORMANTS TO ACQUIRE BIRTH CERTIFICATES**

<table>
<thead>
<tr>
<th>Actors</th>
<th>N</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verification operator/Registration officer</td>
<td>F 1.1</td>
<td><strong>Print the list of target Parents/Guardians for mobilisation</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MyChild System will allow the generation of a list of target Parents/Guardians who passed data control and verification of birth notification. The list will be generated based on the home address of Parents/Guardians. Responsible person at NIRA district office will print list of target Parents/Guardians for mobilisation.</td>
</tr>
<tr>
<td>Local Council Chairman</td>
<td>F 2.1</td>
<td><strong>Collect the list of target Informants for mobilisation</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Authorised representative of local government will receive follow up list for mobilisation.</td>
</tr>
</tbody>
</table>

**Figure 16. USE CASE F - MOBILISATION OF INFORMANTS TO ACQUIRE BIRTH CERTIFICATES**
<table>
<thead>
<tr>
<th>Actors</th>
<th>N</th>
<th>Activities</th>
</tr>
</thead>
</table>
|        | F 2.2 | **Deliver message to Informants on mobilisation**  
LC Chairman will be responsible for delivering relevant information to target Parents/Guardians using local communication channels. |
| Informant | F 3.1 | **Receive information on mobilisation**  
Parent/Guardian receives information on mobilisation via existing communication channel of Local Government. Mobilization information shall include time, date, address of registration office/mobile-outreach sites for issuance of birth certificates. |

**TABLE 8. DESCRIPTION OF ACTIVITIES OF USE CASE F - MOBILISATION OF INFORMANTS**
10. VALUE OF MYCHILD CARD IN BIRTH REGISTRATION

BENEFITS FOR FAMILIES

- Integrates birth registration process with child health processes, reducing required effort to complete both critical activities
- MyChild Card provides information on guidance and importance of birth registration
- Parents/Guardians shall receive SMS messages on successful Birth Notification
- Parents/Guardians shall receive SMS messages on successful Birth Registration
- All birth notification information is held within the MyChild Card so can be stored and found easily
- Parents/Guardians can retrieve information of the MyChild Card if the card is lost

BENEFITS FOR NIRA

- Vaccination service demand shall be used to capture birth information at health facility and outreach sites
- Data capturing and recording of Informant does not require equipment, electricity, and internet at health facility level
- Users of MyChild card do not need knowledge in technology
- Logistics of Birth Notification and Verification Vouchers is integrated into existing health system infrastructure
- Reduce administrative burdens of community level registration
- Birth information is available for reporting and statistical purposes without full registration being complete; it is also possible to monitor the number of notifications vs. verified declarations that result in final registration.
- MyChild System enables control on data accuracy, integrity, verification, and security
- MyChild System tracks migration of citizens nationally based on access to health service delivery points
- MyChild Card enables linking a child to the National Identification Number or Alien Identification Number of Parents/Guardians
- Elimination of double registration of children
- MyChild Card supports verification function of birth registration
- MyChild System provides demographic and other vital civil registration statistics
- Using the follow up function health workers can detect death of a child
- Low cost of continuous operations and improvement of Smart Paper Technology™ Engine system. Only 0.05 EURO per fully registered child
BENEFITS FOR MINISTRY OF HEALTH

- MyChild Card generates digital child registers
- Child's information can be retrieved from digital child register if child health card is lost
- Elimination of double vaccination if child health card lost
- MyChild Card can be used in all health facilities and outreach sites
- MyChild System provides demographic, health, and other vital civil registration statistics
- Children are followed up to receive preventive health services
- Using the follow up function health workers can detect death of a child

BENEFITS FOR LOCAL GOVERNMENT

- Available demographic and other vital civil registration statistics for all levels of government
- Integrated verification process with National Identification and Registration Authority
- MyChild system generates list of newborn children based on home address
- Provision of birth notifications for systematic update of household register books
11. REFERENCES


ANNEX A. Detailed process workflow – Birth registration using MyChild Card