



# Papua New Guinea CRVS System Assessment

## Acknowledgement

The comprehensive assessment of Papua New Guinea's (PNG) Civil Registration and Vital Statistics (CRVS) system was commissioned by the PNG CRVS Committee led by Chair Mr Noel Mobiha (Registrar General) and Co-Chair Mrs Manah Dindi (NDoH) with considerable support from Mr Nicholas Piauka and Dr Viola Kwa.

The assessment and development of this report was led and supported by Jeff Montgomery, with funding provided by the Pacific Community (SPC) and Brisbane Accord Group.

Other key contributors included staff from Civil Identity and Registry Office, National Department of Health, Department of Provincial and Local Level Government, Department of National Planning and Monitoring, Constitutional & Law Reform Commission and the Rural Health Project. Partner agencies involved were Bloomberg Data for Health (Melbourne University, Vital Strategies, Global Health Advocacy Incubator and Imagine Law), UNICEF, WHO, UNFPA, Asian Development Bank, DFAT, MFAT and SPC.

## Introduction

Papua New Guinea has a land area of 462,840km<sup>2</sup> and an estimated population in 2018 of 8,558,800 with an estimated population growth rate of +2.2%. [Source: the Pacific Community Pocket Summary 2018]. The population is widely distributed; speak a wide range of languages; and over 80% of the population lives in rural and remote areas.

A Rapid Assessment using the World Health Organisation/University of Queensland methodology was completed in 2014. It concluded that overall the system should be classified as “Dysfunctional”. Since the assessment there has been little change to the overall system, although there have been developments in some sectors, particularly in the implementation of the national identification system (NID) and the electronic recording of health data (eNHIS).

This assessment was commissioned by the PNG National CRVS Committee and funded by the Pacific Community. It was largely completed in July 2019, with a desk review of all available information and reports, followed by interviews with key system participants and finally a workshop held on 22 July 2019 in Port Moresby. As well as PNG government officials, representatives attended the workshop from Bloomberg Data for Health (Melbourne University and Global Health Advocacy Incubator), UNICEF and DFAT. A modified WHO/UQ Comprehensive Assessment methodology was used and the full results are appended to this report.

The assessment documents key features of the current system but does not assess the impact of recent initiatives. During the interviews and the workshop, several areas were identified for possible future interventions. These will be further developed in a workshop planned for 24 September 2019 which aims to endorse high-level ‘as-desired’ processes for birth and death registration and to develop a national action plan for the next 12-18 months.

## **A1 National Legal Framework for Civil Registration and Vital Statistics Systems**

Civil registration in Papua New Guinea is regulated by the 1963 Civil Registrations Act and the 1967 Civil Registrations Regulations. In 2014, the Civil Registration (Amendment) Act 2014 established a national register and the PNG national ID system. The legislation also established the Office of the Registrar-General and provided the Registrar-General with the power to facilitate the establishment of an Office of the Registrar-General in each province, headed by a Provincial Registrar. The Civil Registration (Amendment) Act 2016 repealed the power of the Registrar General to prescribe fees in relation to civil registration.

The current legislation has many problems; neither clearly stating that registration is compulsory nor the roles and responsibilities of the different stakeholders so much of the burden falls on parents or family members to complete the registration process.

The Civil and Identity Registration Bill 2018 will soon go before Parliament. This repeals the 1963 and 2014 Acts and generally strengthens the civil registration systems in line with international best practice. It also puts in place changes which will improve the ability to share information between different parts of the ecosystem although there may need to be consequential changes to legislation that governs other parts of the CRVS ecosystem. The Bill and accompanying Regulations have been prepared by the Constitutional and Law Reform Commission with support from Bloomberg Data for Health (Vital Strategies and Global Health Advocacy Incubator). It is expected that the Bill will pass in late 2019 or early 2020. It is currently proposed that there be a 12 month transition period between passage of the legislation and the new Act coming into effect. Some aspects of the new Act, such as establishing registration offices in all 89 districts, are expected to take until 2050 to be fully implemented.

## **A2 Registration Infrastructure and Resources**

PNG's CRVS system is composed of three main agencies: the Papua New Guinea Civil Identity and Registry Office (PNGCIR) headed by the Registrar-General; the National Statistical Office (NSO) headed by the National Statistician; and the National Department of Health (NDOH) headed by the Secretary of Health. Each agency has its own data collection systems. The PNGCIR is responsible for the registration of vital events pursuant to the Civil Registration Act and for the issuance of identity documents. NDOH is mandated to establish and maintain a National Health Information System (NHIS) and Discharge Health Information System (DHIS) that contain mortality and morbidity data collected from health facilities. The NSO, as the central statistical authority, is empowered, through the 1980 Statistical Services Act, to access the records of, or enter into an agreement with, PNGCIR and NDOH in order to produce vital statistics. However, 2014 CIR Amendment Act allowed for the Registrar General, in consultation with the National Statistician to disseminate vital statistics to government agencies for planning and developing government policies. This makes it unclear who is ultimately accountable for vital statistics.

Civil registration is also overseen by a National CRVS Committee which is mandated to meet quarterly, although has only recently met regularly. It is chaired by the Registrar-General with the NDOH as co-chair. Members also include NSO and the Department of National Planning and Monitoring (DNPM) with the Department of Provincial and Local Level Government Affairs

(DPLGA) and Department of Community Development and Religion also attending. Donor and partner agencies also attend including UNICEF, WHO, UNFPA DFAT and Bloomberg Data for Health.

There is also the e-Health Steering Committee, which provides a platform for recommendations to NDOH. A major aspect of this is the eNHIS system, which could play a key role in improving PNG's CRVS systems through notification of deaths and births. Also there is National Mortality Technical Working Group which oversees collection of mortality and burden of disease information. Currently there appears to be no collaboration between the National CRVS Committee and these NDOH-based committees. This could be valuable in addressing issues relating to data flows between the civil registration and health systems.

Under the Local Level Governments Administration Act 1997, Local Level Governments (LLGs) are tasked to maintain, in each ward, a village book that contains information about the people within the ward. The ward recorders transmit the village ward record books to their LLG. Ideally, the LLG should then transmit the village book to the District Administration, which then transmits the village book to the Provincial Administration and so on until it reaches the NSO and Department of Provincial and Local Level Government Affairs (DPLGA). Little support has been given to this process and it is dysfunctional in a number of areas.

Recently, through the support of Bloomberg Data for Health (Melbourne), in close collaboration with DPLGA, the ward recorder system has been strengthened, in Alotau - Milne Bay and Talasea - West New Britain, by the distribution of 394 ward record books. DPLGA plan a national roll out and have so far covered Wewak District in East Sepik Province, Milne Bay Province, Manus Province and West New Britain Province. Currently DPLGA are transferring raw data for Wewak District from the Ward Record Books into their computer database. After the LLG Elections a monitoring visit will be carried out to ascertain the progress. The CIR is also trialling a new registration approach in Alotau where ward records provide registration information directly to the local CIR office. They hope to extend this to Talasea and Tambul-Nebilyer.

The annual budget for civil registration has been K800,000 per year since at least 2012. This is insufficient to record basic birth and death data for a population of the size and diversity of PNG. There has been a K2,000,000 additional investment into the national identification project, which has included retrospective registration of more than one million adults so far. It is unknown how much is spent by local administrations to support local registration functions, but it likely to be low.

There have been up to 130 mobile registration kits; however, less than 80 of these are currently operational due to damage. These are used to support enrolment for national identification, both in rural areas and within Port Moresby. There is little use of the kits to enrol new-borns or to register deaths even though the kits are capable of performing these functions.

The civil registration system is fragmented with separation between national and provincial/district responsibilities, causing accountability and resource utilisation to be unclear. There is potential for the mobile registration tools used for issuing ID cards to be more widely applied, especially for new event (birth and death) registration. This could easily be achieved within the Port Moresby health facilities and potentially schools, at enrolment time. However, overall there are insufficient resources to ensure good registration coverage.

## **B1 Organisation and functioning of Civil Registration and Vital Statistics Systems**

Most births and deaths escape the civil registration system. Between 2015 and 2019 a total of only 176,524 new-borns and 612 deaths were recorded in the civil registry. This is less than 15% of estimated births and less than 2% of estimated deaths. However, there is significant data collected within in the health system, particularly relating to child immunisation, which could be used more broadly. There are concerns that the civil registry could not cope with increased demand for registration due to resource constraints. As a result there are no current community education programmes encouraging registration.

Previously births and deaths were registered by the Department for Community Development and Religion however these were all disregarded when civil registration functions were transferred to the Department of National Planning and Monitoring in 2014. Some citizens had to re-register before applying for a national ID card.

Links between the Health and Civil Registration systems are very weak, but it is acknowledged that this is a priority through APIs or other data sharing methods. There are currently no data transfer to the Statistics system and other parts of the wider government identity ecosystem. Although the PNG Strategy for Development of Statistics prioritises data sharing this is unlikely to occur until there is greater registration coverage within the Health and/or Civil Registration systems.

A legislative amendment in 2014 established the national register and linked it to the national ID system. This required retrospective birth registration for adults and dual use of the birth registration number for national ID purposes for new-borns. The focus of the ID programme is to have all adults registered by December 2021, for the April 2022 elections. This link between birth registration and the national ID system has resulted in 1.05 million retrospective birth registrations. It is estimated that 80% of these are for adults; however registration of new-borns remains very low. Around half of all adult ID registrations so far have been in the southern province, however mobile kits and the establishment of provincial and district registration offices will increase registration in more remote areas. There is no link between death registration (which is very low) and the ID system.

Within the health system there are backlogs in the processing of death information received from 640 in-patient facilities at district or provincial health offices. There are also backlogs in re-entering data at the NDOH. No death data is passed to the civil registration system or the central health system. There is a misconception that deaths may only be registered if accompanied by medical certification. The Act makes it clear that the absence of a certification does not prevent registration as long as the Registrar has ascertained the fact of death and identity of the deceased. As a consequence, some of the very few deaths that have been notified are not registered, partly due to insufficient medical attendants to certify the death.

Since late 2014, the National Health Information System (NHIS) and the DHIS have piloted using tablets for electronic data collection directly from the facility level (eNHIS). The pilot is currently underway in eight provinces. In the remaining 14 Provinces, data entry is occurring at the Office of the Provincial Health Information Officer from paper records sent in at the end of each month from the facilities. eNHIS is capable of receiving data from all 22 provinces although several of those where the data is being entered manually are 2-3 months behind. There are currently 340 facilities (including Provincial and District Hospitals, Health Centres and Community Health Posts) reporting on the tablets from the field. That is about 40% of those required to do so when the system is fully rolled out nationally. The intention is to move

to data entry at facility level in all Provinces by the end of 2020 and to extend eNHIS to collect patient level data rather than just aggregate data. Bids are currently being evaluated to achieve this.

The eNHIS has capacity to capture and report all the details required to register a birth which occurs in a health facility (estimated at 45% of all births). It also has the capacity to capture the required information to register deaths where the person dies in a health facility. In some Provinces the Verbal Autopsy (VA) software is being used to capture detail about non-facility deaths and eNHIS will soon integrate with VA software so that health workers can capture and report data about non-facility deaths. The eNHIS developments have yet to result in data flowing through to the civil registry but there is a strong desire to do so.

Process maps are attached for the current-state. These were prepared by Bloomberg Data for Health (Vital Strategies). While stakeholders were heavily involved in their preparation they have not yet been endorsed by the National CRVS Committee, however they are considered to be an accurate reflection of the current processes in most areas. In-facility births are most likely to be captured in the health system if the mother stays for more than 24 hours. eNHIS provides a way to enable data flow for the 45% of births which occur in a facility plus any deaths which occur in, or are notified to, a facility (via VA reporting). Community level health volunteers (UNICEF) and ward recorders may also be collecting information. In some cases the volunteers are illiterate and there is no flow of this information from the Department of Community and Religious Affairs into CIR. There is no dataflow from Health or CIR to Statistics.

'As-desired' process maps for birth and death registrations were prepared in 2018 by Bloomberg Data for Health with input from all major stakeholders. These maps will be considered for endorsement as part of the action planning workshop planned for September 2019.

## **B2 Review of forms used for birth and death registration**

The current forms aren't perfect but are adequate for the purposes of registering events. The key issue is that forms aren't being used or they are being given to parents or family members by health facilities and then do not make it to the civil registration office. Ideally the forms should be completed at the time they are issued and then transmitted to the civil registry office.

When registration rates increase and the data is used for regular and meaningful statistical purposes, some additional questions as recommended by the United Nations could be useful. In particular birth weight of the new-born, details of other children born to the mother and date-of-birth of the deceased could be added to the forms.

However, the information collected is used at this time only for the purposes of issuing the Certificate of Birth and when people need to access it, to produce certified copies of the registration for other purposes.

The forms are only available in English. Tok Pisin is a national language and many people would be more able to complete the form in this language. However, there are around 800 tok ples (locality/clan based languages) and many people in remote areas speak solely their tok ples. It would be extremely difficult to produce the forms in all languages and is unlikely, at this time, to result in a significant improvement in registration levels.

## **B3 Coverage and completeness of registration**

Coverage and completeness are very low for children and for all deaths. Focus is currently on adult registration for the purpose of issuing ID cards. Many births in isolated villages go unregistered until the child enrolls in school and in remote areas there is high proportion of children who do not regularly attend school. These children may never register unless they need to establish bank accounts or seek employment.

There appears to be little incentive for parents or families to register births or deaths. In Port Moresby it is necessary for a child's birth to be registered before they can enrol in school age 5 but this is not the case in other provinces. The only other reason to register a birth is for issuance of a passport, or for those over the age of 18 to receive the new national ID card. There is no compelling reason for the vast majority of families to register a death.

The main barrier to access to registration is the capacity of the civil registration office to engage with parents and families. There are registration offices in most provinces with kits that can be used to travel to remote areas; however their focus is on adult registration for the purposes of issuing a national ID.

There is potential to significantly improve birth registration levels in Port Moresby by locating a registration point at the main hospital (where 15,000 babies are born) and also being present at major provincial schools at the start of the academic year (not Port Moresby where registration is a pre-requisite for school enrolment) or at large immunisation clinics. In other areas, improvements are most likely to come through partnership with the health system, using eNHIS when it starts collecting patient level data.

More effective monitoring and reporting on completeness is required, preferably with an annual release of progress.

#### **B4 Data storage and transmission**

The Ministry of Community Development have paper-based, historical registers from pre-2014 however these are not accessible to the current civil registration office. There may also be paper records held by local ward recorders which have not been shared.

Local registration offices have only recently been established and there is data transfer between local registration points and the central registry, but few new events are registered. These are currently not available to registration offices. All current records are stored electronically and on paper. Historic records, where they exist, are on paper and are rapidly deteriorating. Sound electronic and physical storage infrastructure is in place, however staff capacity is restricting ability to adequately archive historic as well as current paper records.

There is currently no data transfer between the health, the registration and the statistics systems.

#### **C1- C4 Death certification and quality of death data**

There is low quality and low coverage of cause of death data with only 4000 to 6000 deaths a year (about 12%) captured within the health system. There are processes in place for registering deaths which occur within hospitals but these are not applied in a standard way. Very few non-hospital deaths are recorded. Information does not flow beyond the health system.

Coronial processes for suspicious or unexplained deaths seem to be patchy and rely on a police or family request for an autopsy. In Port Moresby the district court serves as the coroner but is not considered to be working well. Many provinces do not currently have a coroner.

There has been significant investment by Bloomberg Data for Health (Melbourne) into encouraging death certification within the health system; however this has been limited in its effect due to an unwillingness of medical practitioners to attend training. There is also a misconception that deaths may only be registered if accompanied by medical certification.

Deaths occurring outside the health system are unlikely to be certified. Verbal autopsy is currently being trialled in three areas. Blomberg Data for Health (Melbourne) has trained 129 health workers in the verbal autopsy process and it has been agreed to include a VA reporting component in the next stage of eNHIS, to commence in 2020.

Currently any data collected stays within the health system and is not shared with Statistics or Civil Registration. Registration of a death requires the family to present evidence to a registration office and as a result very few deaths are registered.

### **D1 – D3 Mortality coding practice, coder competency and quality of coding**

Any deaths captured within the health system (about 12%) are coded for the medically certified cause-of-death by a small team located within the NDOH. The quality of information provided by medical practitioners is variable. Where coding is possible, it is done to a satisfactory standard although there are backlogs. If more medical practitioners completed cause-of-death reporting or if more underlying causes were recorded, currently there would not be sufficient coders.

PNG is in the early stages of developing its mortality coding practice. Advice or support to periodically review coding would be appreciated.

### **E1 – E3 Data quality, tabulation, access and dissemination**

The Statistical Services Act 1980 established the National Statistics Office as the central statistics authority. It grants the National Statistician the power to access records from other state agencies. The Act does not require publication of, nor does it prescribe a schedule for, periodic reports. There is a lack of specialist capacity in the NSO for data analysis.

The only data available through the national statistics system relating to births, deaths and causes of death is collected through the census. There is some doubt about the quality of the data last collected in 2010. Some data may be available through the Health SPAR report but isn't currently access by the NSO. The next census is planned for 2020.

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**September 2019**

## **Annexes**

- *List of Acronyms (1 page)*
- *Detailed responses to the Comprehensive Assessment questionnaire (16 pages)*
- *Current Process Maps (6 pages)*
- *Provincial information table (1 page)*
- *References (1 page)*



## Annex 1 – List of Acronyms

ADB	Asian Development Bank
API	Application Programming Interface
CIR	Civil Identity and Registry Office
CRVS	Civil Registration and Vital Statistics
DHIS	Discharge Health Information System
DNPM	Department of National Planning and Monitoring
DPLGA	Department of Provincial and Local Level Government
eNHIS	Electronic National Health Information System
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
LLG	Local Level Governments
NDOH	National Department of Health
NHIS	National Health Information System
NID	National Identity Card
NSO	National Statistical Office
PNGCIR	Civil Identity and Registry Office
PRO	Provincial Registry Office
RG	Registrar General of Births, Deaths and Marriage
SPC	Pacific Community, previously know and the Secretariat for the Pacific Community
UQ	University of Queensland
UNICEF	United Nations Children’s Fund
WHO	World Health Organisation

## Annex 2 – Detailed response to the Comprehensive Assessment questionnaire

	Question	Assessment	Possible areas for priority action?
<b>A1</b>	<b>National Legal Framework for Civil Registration and Vital Statistics Systems</b>		
A1.1	Does PNG have a law defining a civil registration system?	Yes. Civil Registration Act 1963. Regulation 1967. Amendment 2014 and 2016 to add National Identity. Currently under review with Bill expected to be introduced to Parliament in 2019.	Act Implementation Plan
A1.2	Does PNG have a law defining a vital statistics system?	Yes. Statistical Services Act 1980	Act Implementation Plan
A1.3	Does the law clearly state that birth and death registration is compulsory?	No. The 1963 Act says that registration is compulsory in areas and prescribed premises defined by the Prime Minister. It is unclear if any compulsory areas have been set.	Act Implementation Plan
A1.4	Is there a penalty for non-registration of births? Deaths?	<p>There is a penalty, but not exactly for non-registration. Section 59 of Civil Registration Act 1963 provides – “a person who is required by or under this Act to give to the Registrar or Registration Officer or, in the case of a medical practitioner, to a Coroner or a member of the Police Force, any information and who refuses or fails to give that information is guilty of an offence.</p> <p>The penalty is imposed on informants who fail to provide prescribed particulars under Section 15, by the informant defined in Schedule 1 of the Civil Registration Act.</p> <p>However, the same provision allows the Registrar General to ask an informant for any of the prescribed particulars (Section 15(4)). This proviso introduces an ambiguity as to whether or not the penalty attaches by the mere failure to provide particulars, or only after the informant fails to respond to the RG’s request for information.</p>	Act Implementation Plan
A1.5	What is the penalty?	A fine not exceeding K200.00	Act Implementation Plan
A1.6	Is the penalty routinely applied?	There is no knowledge of the penalty being applied.	Act Implementation Plan
A1.7	Does the birth registration law give clear and unambiguous definitions to be used for live birth? Foetal death or stillbirth?	Yes	Act Implementation Plan
A1.8	Are these definitions aligned with the international standards in the Glossary?	Yes and goes on to say that only births, which reached the 20th week of pregnancy or a child that weighs not less than 400 grams shall be registered. In contrast, the UN recommends that foetuses with 22 completed weeks of gestation or weigh more than 500 grams at birth should be registered.	Act Implementation Plan
A1.9	Is it stated in law who is responsible for registering births or deaths and who should declare or report births or deaths?	Yes, but there is no specific hierarchy in the current law.	Act Implementation Plan
A1.10	If yes, provide details of all possible informants.	The law lists the following as informants for birth: the parents of the child; any person present during the birth; an occupier of the premises where the child was born; or any person who found the child or is in charge of the child (in case of a foundling). The following are possible informants of death: any relative (including a relative by marriage) of the deceased having immediate knowledge of the death; a person present at the death; an occupier of prescribed premises in which the death, to the knowledge of the occupier, occurred; the medical practitioner who certifies the cause of death; the Coroner who gives notice of the death or a certificate in relation to the death; the person in charge of the burial, and every person finding or taking charge of the body.	Act Implementation Plan
A1.11	Is there a law or regulation requiring hospitals and health facilities to report births and deaths?	Yes	Act Implementation Plan
A1.12	If yes, to what authorities do they report the births and deaths	To the Registrar-General once every month	Act Implementation Plan
A1.13	Does the law or regulation cover private sector? Does the law or regulation also include social security and other non-governmental facilities?	No	
A1.14	Does the law state the time within which births and deaths should be registered?	Yes.	Act Implementation Plan

A1.15	If yes, how long is the reporting period?	For births the parents of the child are required to inform the registrar of the birth, within three months from the date of birth. The other informants may be required by the Registrar-General to provide the particulars of the child's birth. For deaths, relatives (including a relative by marriage) who have immediate knowledge of the death are required to report the death within 14 days of the date of the death. Other informants may be required by the Registrar-General to provide the prescribed particulars.	Act Implementation Plan
A1.16	Is the reporting period suitable and is it respected throughout?	No. The low levels of registration show that the law is not respected.	Act Implementation Plan
A1.17	Does the law make provision for: late registration? Delayed registration?	Partially.	Act Implementation Plan
A1.18	Are there clear procedures for dealing with these cases?	Partially. Between 3 months and one year of age there is no process under the law. From one year of age onwards an application can be made to the District Court.	Act Implementation Plan
A1.19	Is it stated where births or deaths should be registered; for example, according to place of occurrence or place of usual residence?	The law does not prescribe a place for registration of births and deaths. It would appear that a birth or death could be registered in any PCRO regardless of place of occurrence. However the proposed Bill does prescribe this.	Act Implementation Plan
A1.20	Does the law clearly designate the functions, duties and responsibilities of each government department involved?	No	Act Implementation Plan
A1.21	Does the law establish how the civil registration and vital statistics systems are to be funded?	No	Act Implementation Plan
A1.22	Does the law stipulate that registration should be free of charge for all?	Yes	Act Implementation Plan
A1.23	If registration is not free, what is the fee to register: a birth? A death?	Not applicable	Act Implementation Plan
A1.24	Is the population covered by civil registration laws clearly defined? Is it, for example: the entire population living in PNG? Only citizens living in PNG? Some other subsets of the population?	Yes. For births it is any child born in PNG or who commenced residing in the country before becoming two years of age. For deaths it is any death occurring in PNG.	Act Implementation Plan
A1.25	What does the law require in relation to registering births and deaths of citizens living abroad?	The law does not allow the registration of some births occurring abroad but not deaths.	Act Implementation Plan
A1.26	What does the law require in relation to registration of births and deaths of: foreign nationals living in the country? Nomadic or displaced populations? Refugees and asylum seekers?	The law is silent on these matters so it is assumed that registration can occur for these people.	Act Implementation Plan
A1.27	Does the law include confidentiality measures to protect individuals?	No	Act Implementation Plan
A1.28	Is it specified who can obtain copies of a person's birth and death certificates?	Yes, anyone can obtain these unless the Registrar-General is of the opinion that the applicant has not shown sufficient or proper reason.	Act Implementation Plan
A1.29	Does the law state who can certify death and the cause of death?	Yes. The medical practitioner who attended to the deceased immediately before the death or during the illness terminating in the death; or who viewed the body after the death. Where a medical practitioner is absent, a medical attendant who attended the person or who viewed the body after the death may certify the death.  The Coroner if the person was not attended by a medical practitioner at any time within three months before their death.	Act Implementation Plan
A1.30	Does the law specify the official document(s) needed before a burial or cremation can take place	Yes. Under the Cemeteries Act 1955, a Provincial Administrator or authorized officer shall not give consent for burial unless there is a certificate from a medical practitioner showing that the death was due to natural causes or an order for burial signed by a coroner.	Act Implementation Plan
<b>A2 Registration Infrastructure and Resources</b>			
A2.1	What is the annual PNG operating budget for civil registration?	Government provides \$K800k for 11 staff to provide core civil registration functions from the national office. This includes one compliance officer. This level of funding has been static since 2013, maybe earlier.  A further \$K2m is provided for the NID project. Other funds are provided through provincial and district public sector budgets for local staff who carry out CR functions, but there is no visibility of this at a national level. It is proposed to centralise national and provincial staff funding following changes to legislation. District operations will be co-funded between national and local agencies.	

A2.2	Can this budget be separately identified at state and municipal levels? Can the budgets for national, provincial and municipal levels be separately identified?	No	
A2.3	Are these funds adequate to ensure the proper functioning of the system?	No	CRVS Committee submit joint budget bid to Minister as part of annual funding round
A2.4	Where would additional funding be likely to make the most difference?	<ul style="list-style-type: none"> <li>- Some schools are very large (&gt;2000 pupils). New enrolment days may be opportunity to capture those not already registered.</li> <li>- Pay ward recorders or community health volunteers for registration tasks</li> </ul>	<p>Purchase more mobile Kits to use in hospitals or schools</p> <p>Knowledge Transfer through international attachments</p> <p>Training of notifiers, such as ward recorders or health facility staff</p> <p>Printers, Hardware in local offices</p> <p>Data transfer from NDOH to CIR</p> <p>Pay ward recorders for CR tasks or provide transport (bicycles) to help them with their work</p>
A2.5	How many local civil registrars does PNG currently have?	There are 16 of 22 provinces with registrars co-funded with provincial government. Only one of these (East Sepik) is currently on the national payroll. Oro (Northern Province) was also on payroll by recently terminated. There are also currently 5 (of 89) district registrars including Pomio, Yangoru, Wabag, Namatanai.	
A2.6	Are they paid by: central government? Local government? Fee-for-service? Other source?	Central government funds national office (\$K800k). Local government funds most provincial staff. The Civil Registration Amendment Act 2016 prohibits the charging of fees for any matters covered by the Act. There is no permanent source of funding specified in the law. The new Act sets out a new funding approach for both national and co-funded provincial.	
A2.7	Are there local variations in the way, and amounts, that registrars are paid? Explain these variations.	Yes. Some are paid centrally and others locally. Some are public servants while others are casual staff. Ward recorders are paid by provincial government, in some cases only \$K70 per month. They also may have different titles, eg in Manus they are Ward Development Officers. In some areas the recorders are paid, and in some they are voluntary. Not all are literate.	
A2.8	Are the number and distribution of local civil registration offices or registration points sufficient to cover the whole country?	No	
A2.9	Are there subsidiary reporting or registration units, such as hospitals or village officials, with registration duties?	Yes. The PNGCIR is able to establish offices at a provincial level. Currently there are 16 provincial offices which focus on retrospective birth registration for the purposes of issuing national ID cards but also carry out other registration functions. There is an intention to open offices in all 22 provinces. Data is transmitted electronically by uplink to the national office with forms scanned. Paper records are sometimes also sent for archiving. Local offices are able to print certificates. Local or village 'ward books' registry books are maintained in some areas which contain birth and death information. Areas where this system is currently partially functioning include Wewak District in East Sepik Province, Milne Bay Province, Manus Province and West New Britain Province. Information from the books is not currently sent to the civil registry.	Incentives for ward recorders to submit data to health centres or CIR for birth and other vital events
A2.10	Is there access to registration 24 hours a day, 7 days a week?	No	

A2.11	Are mobile registration facilities operational in remote or underserved areas?	Yes. Mobile registration is provided for the purposes of issuing national ID in areas not served by provincial offices. The focus is mainly on adult registration, however occasional children are also registered and it is technically possible to also register deaths. There are currently 130 mobile kits, however only 70-80 of these are working at any time due to faults or damage. The kits weigh 23kg and include DSLR camera, a biometric scanner, a laptop, battery unit, a portable PDF scanner including a backup portable generator.	Lighter mobile kits  Mobile registration in health facilities or at school enrolment
A2.12	If yes, how many? Is the number of mobile registration services sufficient?	There are currently 130 mobile kits, however only 70-80 of these are working at any time. Not currently sufficient.	
A2.13	Is there a separate budget for registration outreach?	No, included in \$K20.8m budget	
A2.14	Is there a national plan for achieving complete coverage of PNG with registration offices or registration points?	There is a draft plan which will be reviewed and validated following completion of this assessment. No funds have been sourced to implement the plan.	Focus on death registration in POM and then move to other areas once stable
A2.15	Over what period does this plan extend?	2019/2020	
A2.16	For each type of civil registration point, describe the technical equipment available in all of most offices; for example, telephones, photocopiers, scanners, computers and internet.	<p>NID and Moale Haus – full IT suite needed for ID purposes including biometric tools. Full UPS backup with 4 days of electricity supply. Internet coverage of 95% certainty.</p> <p>Provincial CIR Offices – full suite of equipment with generators. Each office has 5 desktops, plus a scanner, printer, finger print scanner and camera. Morobe office has issues with power supply but a generator has been purchased. Generators have also been purchased for 9 other sites.</p> <p>Ward recorders use paper books. DPLGA is currently transferring records from Wewak District in East Sepik Province into their computer system. This may be shared with PNGCIR at a later date. There are Verbal Autopsy tablets in 3 districts – Talasea, Tambul-Nebilyer, and Alotau.</p> <p>CIR is trialing a new process in Alotau using ward recorders to report registrations to the local CIR office. This involves:</p> <ol style="list-style-type: none"> <li>Testing to verify the process, procedures for notification and registration of births and deaths</li> <li>Developing SOP and Business Process Maps for CRVS vital events notifications, registrations, verification, storage, analysis and dissemination.</li> <li>Aligning CRVS regulations, SOP's and process maps with CIR Bill 2019 in preparation for implementation once enacted by parliament.</li> </ol>	<p>e-registers on tablets in districts with the wardbook converted to electronic form enabling transmission to health and CIR systems</p> <p>Complete Alotau CIR process trial by:</p> <ol style="list-style-type: none"> <li>Ward Recorders to be paid added incentive for the purpose of this trial (<i>Draft MOU between PNGCIR and DPLLGA in progress</i>);</li> <li>Training for Health workers in the 5 Trial Wards of Alotau</li> <li>Establishment of the SOP for Birth/Death Notification relevant to current circumstances;</li> <li>Ward Recorders work with CIR Provincial TL to register backlog births below 18 in the 5 respective wards;</li> <li>CRVS Process Trial rolled out to Talasea and Tambul-Nebilyer</li> </ol>
A2.17	How are civil registrars selected?	The Registrar-General is appointed by the Head of State. Provincial registrars and central registry staff are appointed by the Registrar-General	
A2.18	What qualifications do civil registrars need?	No specific qualifications are needed.	
A2.19	Is there a budget for training civil registrars and staff involved in registration?	No, included in \$K20.8m budget	

A2.20	Is there a budget for preparing and disseminating written training materials, such as handbooks on civil registration?	No, included in \$K20.8m budget	
A2.21	What is the current budget for the vital statistics unit? (If more than one office is involved, estimate a figure that covers all the vital statistics being compiled, including cause of death data.)	There is no specific budget for vital statistics. The Papua New Guinea Strategy for the Development of Statistics Policy includes an action plan to "improve administrative data sources" including the delivery of a Population Information System (PIMS) in collaboration with the CIR from 2017. The cost projection is 19 million kina (\$US6.3 million) over 10 years.	
<b>B1 Organisation and functioning of Civil Registration and Vital Statistics Systems</b>			
B1.1	What are the organizational and administrative arrangements of the civil registration and vital statistics system?	PNG's CRVS system is composed of three main agencies—the National Civil Identity and Registry Office (CIR), headed by the Registrar-General, the National Statistical Office (NSO), headed by the National Statistician, and the National Department of Health (NDoH), headed by the Secretary of Health. Each agency has its own data collection systems. The CIR is responsible for the registration of vital events pursuant to the Civil Registration Act, and for the issuance of identity documents. NDoH is mandated to establish and maintain a National Health Information System (NHIS) and Discharge Health Information System (DHIS) that contain mortality and morbidity data collected from health facilities. The NSO, as the central statistical authority, is empowered through the 1980 Statistical Services Act to access the records of, or enter into an agreement with, NCRO and NDoH in order to produce vital statistics. Civil registration is also overseen by a National CRVS Committee which meets regularly.	
B1.2	What have been the main changes in the functioning of the systems over the last 10 years?	<p>Civil Registration functions were transferred from the Department of Community Development and Religion to the Department of National Planning and Monitoring, following the 2016 Amendment. The transfer of functions was achieved through a ministry order, and had the effect of invalidating prior registration. Information is limited but DFDR reportedly has systems in place up to the district level, but these were all abandoned following the move to DNPM.</p> <p>A legislative amendment in 2014 established the national register and linked it to the national ID system. This required retrospective birth registration for adults and dual use of birth registration number for national ID purposes for newborns. There is no link between the ID system and death registration. In 2012 Huawei was contracted to deliver a ID system. This went live in 2015. As part of the enrolment process, adults have their birth registered. This process has an annual budget of \$K20m and aims to have all adults registered by December 2021, for the April 2022 elections.</p> <p>Since late 2014, the National Health Information System (NHIS) and the DHIS have piloted using tablets for electronic data collection directly from the facility level (eNHIS). The pilot is currently implemented eight Provinces: Morobe, Western, National Capital District, Bougainville, West New Britain, Milne Bay, Western Highlands and Enga. In the remaining 14 Provinces, data entry is occurring at the Office of the Provincial Health Information Officer from paper records sent in at the end of each month from the facilities. eNHIS is now capable of receiving data from all 22 Provinces although several of those where the data is being entered centrally are 2-3 months behind whereas those where the data is being entered at facility level are reporting daily or at least within 6-8 days of month end. There are currently 340 facilities (including Provincial and District Hospitals, Health Centres and Community Health Posts) reporting on the tablets from the field. That is about 40% of those required to do so when the system is fully rolled out nationally.</p> <p>The intention is to move to data entry at facility level in all Provinces by the end of 2020. Bids are currently being evaluated to achieve this.</p>	

B1.3	How have these changes affected functioning of the system or systems?	<p>The link between birth registration and the national ID system has resulted in 1.05 million retrospective birth registrations of which 80% are estimated to be adults; however registration of new-borns remains very low. Around half of all adult ID registrations so far have been in the southern province, however mobile kits and establishment of provincial and district offices will increase registration in more remote areas.</p> <p>The eNHIS has capacity to capture and report all the details required to register a birth which occurs in a health facility (estimated at 45% of all births) when it starts collecting patient level data. It is also capturing the required information to register deaths where the person dies in a health facility. In some Provinces the Verbal Autopsy software is being used to capture detail about non facility deaths and eNHIS will soon integrate with VA software so that health workers can capture and report data about non facility deaths.</p> <p>The eNHIS developments have yet to result in data flowing through to the civil registry but there is a strong desire to do so.</p>	Develop an interface between eNHIS and the civil registration system
B1.4	What areas need improvement?	<p>Registration of new-borns, particularly outside of Port Moresby, is low.</p> <p>Links between the health and civil registry systems and with the statistics system need to be developed.</p>	<p>MOUs between NDOH, CIR and NSO</p> <p>Public awareness campaigns about value of registration</p>
B1.5	What are the current communication mechanisms between the civil registration authority and others involved in the collection and production of vital statistics?	There are currently no links between the civil registration authority and production of vital statistics.	
B1.6	Are there any areas where the responsibilities for specific functions overlap or are unclear?	<p>Yes. Ward recorders might collect birth and death data which is also collected within the health system. The health system collects data on births and deaths, while the statistics system uses surveys and census to collect the same data.</p> <p>The NSO, as the central statistical authority, is empowered, through the 1980 Statistical Services Act., however Section 6 of 2014 CIR Amendment Act amended Section 5 of the Civil Registration Act 1963, by adding the following provision: "The Registrar General may, in consultation with the National Statistician, collect, process, keep and disseminate other vital statistical information to relevant government agencies for purposes of planning and developing government policies. Because of this provision, it appears that both the National Statistician and Registrar General have the power to disseminate vital statistics. Because of this provision, it is unclear who is ultimately accountable for vital statistics.</p>	
B1.7	Are national, provincial and local responsibilities clearly defined?	Not currently. The proposed legislation addresses this issue.	
B1.8	Are there any areas where bottlenecks regularly occur?	<p>Yes. Within the health system there are backlogs in the processing of death information received from 640 inpatient facilities at district or provincial health offices. There are also backlogs when this data is re-entered at the NDOH.</p>	
B1.9	Review in detail the PNG practices for birth and death registration. Which types of births and deaths are likely to escape the civil registration system?	Most births and deaths escape the civil registration system. See process maps attached for current state, as prepared by Bloomberg Data for Health. In-facility births are most likely to be captured in the health system if the mother stays for more than 24 hours. Most mothers are given a clinic book which includes a bio page.	<p>Endorse 'desired state' process maps and circulate top key stakeholders</p> <p>Focus initially on in-facility registration.</p> <p>Or capture copy of clinic book for CIR purposes</p>
B1.10	Are these types of births and deaths also missed by the vital statistics system?	Yes	
B1.11	Are there some vital events that cannot be registered through the normal system?	Yes. Events that do not occur in a facility are unlikely to be registered.	
B1.12	Are the same data on births and deaths collected across and at every level of the system (including provincial, national and local levels)?	No. At a local or provincial level different data is collected from that specified in the national legislation. At some levels only aggregated data is shared.	

B1.13	Is there an entity responsible for national vital statistics standards and coordination?	Yes, the National Statistics Office	
B1.14	Is cause of death included on the death registration form?	Cause of Death is included in the Particulars of Death Form (Form 2), Register of Deaths (Form 6), and Certificate of Death Entry (Form 10) under the Civil Registration Regulation 1967. Prevailing (though incorrect) view is that COD is required for registration.	
B1.15	If not, is information about the cause of death collected at the same time as the death is registered but using a different form? Also discuss what happens with coronial cases and deaths from suspected non-natural causes.	When a Medical Certificate of Death is completed, the cause of death might be included. The cause of death information remains in the health system and is not transferred to the death registration form. By law, coronial deaths are supposed to be referred to a coroner, but because most provinces do not have appointed coroners, this system is dysfunctional. Coronial decisions do not appear to be included in death registration processes within CIR.	
B1.16	Who decides what details to collect on births and on causes of death?	This is specified in the Civil Registration Regulations of 1967.	
B1.17	How is medical information on births and deaths exchanged among the different government agencies involved?	It is not exchanged among different government agencies.	
B1.18	Is this process currently working well or does it need improvement?	It needs improvement	
B1.19	Is there a national population register?	No	
B1.20	If so, how does information flow between the national population register and the civil registration system, and which government agency is responsible for maintaining the national population register?	Not applicable	
B1.21	Is each individual assigned a PIN at birth registration or at the time of receiving identity papers, and is this PIN used throughout the government's administrative databases?	Yes, a number is allocated but it is not currently used throughout the government's administrative databases.	
B1.22	If a PIN is not given, how are records from various data systems linked, and how is the population register updated? Are computers used for any or all of: data compilation? Data transmission? Data validation? Data storage?	Not applicable	
B1.23	Are computers used at any stage of the birth and death registration process?	Yes	
B1.24	Are computers used for any or all of: data compilation? Data transmission? Data validation? Data storage?	Yes	
B1.25	Are there any plans for further computerization in the near future?	Yes	
B1.26	If so, what are the priorities?	See earlier notes about eNHIS.	
B1.27	What procedures for checking the completeness and consistency of information collected at points of registration are currently being carried out at the points of registration?	There are no procedures	
B1.28	What procedures for checking completeness and consistency of information are carried out at central and other levels?	There are no procedures	
B1.29	Are monthly or quarterly registration data routinely checked to ensure that they are comparable with previous years?	No	
B1.30	At the central level, are the expected numbers of births and deaths that should occur each year routinely estimated for each registration area, and compared to the actual numbers of registered events?	No	
<b>B2</b>	<b>Review of forms used for birth and death registration</b>		
B2.1	Which of the UN- recommended items are collected on birth and death registration forms? Use Box 3.2 and tick off all items collected.	The UN recommended information recorded in the register of birth: <ul style="list-style-type: none"> <li>• Date of birth</li> <li>• Date of registration</li> <li>• Place and locality of birth</li> <li>• Place of registration</li> <li>• Type of birth (sole, twin etc)</li> </ul>	



		<ul style="list-style-type: none"> <li>• Sex</li> <li>• Date of birth/Age of parents</li> <li>• Place of usual residence of parents</li> </ul> <p>The UN recommended information NOT recorded in the register of births:</p> <ul style="list-style-type: none"> <li>• Birth weight</li> <li>• Marital status of parents, date and duration</li> <li>• Educational attainment of parents</li> <li>• Children born alive to mother</li> <li>• Children born to mother who are still living</li> <li>• Foetal deaths to mother</li> <li>• Date of last previous live birth</li> </ul> <p>The UN recommended information recorded in the register of deaths:</p> <ul style="list-style-type: none"> <li>• Date of death</li> <li>• Date of registration</li> <li>• Place of death</li> <li>• Cause of death</li> <li>• Details of person certifying death</li> <li>• Sex</li> <li>• Age</li> <li>• Conjugal status</li> <li>• Last place of residence</li> </ul> <p>The UN recommended information NOT recorded in the register of deaths:</p> <ul style="list-style-type: none"> <li>• Date of birth of deceased</li> <li>• Place of registration</li> <li>• Type of certification</li> </ul>	
B2.2	Which of the UN-recommended items that is not collected on the birth and death registration forms would be useful?	<ul style="list-style-type: none"> <li>• Birth weight (for indication of health)</li> <li>• Date of birth of deceased (to allow for checking against birth records)</li> <li>• Type of death certification (for verbal autopsy)</li> </ul>	
B2.3	What additional items are collected on the birth and death registration forms? List and discuss these items.	<p>Birth</p> <ul style="list-style-type: none"> <li>• Occupation of parents – value unclear</li> <li>• Nationality or country of origin of parents – value for citizenship determination</li> <li>• Village, clan and religion – useful for disaggregation of data for statistical purposes</li> <li>• Natural birth, adopted or fostered - useful</li> <li>• Child's name - essential</li> <li>• Disability of child – not always evident at birth but a valuable health indicator for early intervention planning</li> </ul> <p>Death</p> <ul style="list-style-type: none"> <li>• Name of deceased – essential</li> <li>• Birth place of deceased – value unclear</li> <li>• Occupation of deceased – value unclear</li> <li>• Date of marriages – value unclear</li> <li>• Number of issue living and deceased – may have value for estate management</li> <li>• Maiden name of spouse deceased – may have value for estate management</li> </ul>	
B2.4	Are any medical details collected (either on the birth registration form or a separate form) regarding the health of the child or the birth process?	Unknown. NDOH asked to provide	
B2.5	Review all the forms used for registering and certifying births and deaths and answer the following questions for each set of forms: Is all the information collected used? How long does it take, on average, to fill out each set of forms? Is the layout of the forms user-friendly? Explain why or why not. Is the form available in each of the main national languages? Which items come from the "declarant" and which are transcribed from other documents; for example, is the cause of death transcribed from the death certification form?	The forms reviewed appear to be fit for purpose and user-friendly. There are a few items that might be unnecessary but these are an unlikely reason for non-completion.	Consider translating forms into pidgin
<b>B3 Coverage and completeness of registration</b>			
B3.1	What proportion of the population has access to civil registration in the area where they live?	There are CIR offices where people can register in Port Moresby and 16 mainly provincial capitals. This covers an estimated 15% of the population.	
B3.2	Has access over time: improved? If so, why? Remained stable? If so, why? Decreased? If so, why?	Yes, offices have been opened in 16 locations and there have also been mobile registration campaigns linked to the rollout of national ID cards	

B3.3	If access has improved, what has led to the improvements?	See B3.2	
B3.4	How complete are the birth registration data (i.e., what is the percent of completeness level)? Please indicate what method you used to estimate completeness.	It has been estimated that less than 5% of new-borns are registered. However, retrospective registration is currently occurring as part of the rollout of national ID cards. So far more than 1 million registrations have been done through this campaign which is approximately 11% of the population (estimated at 8,558,800, Secretariat of the Pacific Community Pocket Summary 2018)	
B3.5	How complete are the death registration data (i.e. what is the percent completeness level)?	Less than 1% is commonly quoted. From 2015 to 2019 only 612 deaths were recorded in the CIR database. There is a misconception by many that deaths may only be registered if accompanied by medical certification. The Act makes it clear that the absence of a certification does not prevent registration as long as the Registrar has ascertained the fact of death and identity of the deceased. As a consequence, some of the very few deaths that have been notified are not registered, partly due to insufficient medical attendants to certify the death.	
B3.6	Has completeness over the last decade been: improving? If so, why? Stable? If so, why? Decreasing? If so, why?	Stable or decreasing given population growth	
B3.7	What subpopulations are most likely to be undercounted in vital registration? (Note: undercounting may be different for births and deaths).	Those living outside of Port Moresby and who do not require or have access to national ID cards	
B3.8	If only part of the country is covered (e.g. urban areas), have alternative ways of obtaining vital statistics for non-covered populations been considered or implemented? Eg a "sample registration system" (SRS) or a demographic surveillance system (DSS).	Yes. The National Statistics Office periodically estimated population statistics	
B3.9	What has been done in the last 10 years to increase: birth registration? Death registration?	<p>The main initiative has been retrospective birth registrations of adults for the purposed of issuing ID cards. Other initiatives include:</p> <ul style="list-style-type: none"> <li>• A new Civil and Identity Bill to modernise civil registration. This will make registration compulsory, with the health system being the lead notifier to the registration system.</li> <li>• The Rural Primary Health Services Delivery Project (RPHSDP) may increase the level of registration from rural and remote areas especially if linkages with Verbal Autopsy rollout (see below).</li> <li>• Bloomberg Data for Health initiative trained 445 doctors and Health Extension Officers in Medical Certificate Cause of Death reporting in 2017-18.</li> <li>• The Bloomberg Data for Health Initiative, through the University of Melbourne, is currently trialling notification strategies and the use of Verbal Autopsy in 3 areas: Alotau District, Milne Bay Province; Talasea District, West New Britain; and Tambul-Nebilyer District, Western Highlands. A total of 129 health workers have been trained in verbal autopsy processes. The Bloomberg Data for Health Initiative, through the University of Melbourne, are planning to extend the Verbal Autopsy trial to three further districts, which are currently being selected. They are working closely with RPHSDP to organise for birth and death notifications and verbal autopsy interviews to be entered and managed through the electronic National Health Information System (eNHIS). So far almost 1500 verbal autopsies have been completed.</li> <li>• Recently, through the support of Bloomberg Data for Health in close collaboration with DPLGA, the ward recorder system has been strengthened in two districts (Alotau, Milne Bay and Talasea, West New Britain) through the distribution of 394 ward record books. DPLGA plan to roll out nationally and have done so in Wewak District in East Sepik Province, Milne Bay Province, Manus Province and West New Britain Province. Currently DPLGA are transferring raw data for Wewak District from the Ward Record Books into their computer database. After the LLG Elections a monitoring visit will be carried out to ascertain the progress.</li> </ul>	
B3.10	Is late registration tracked and monitored over time and at the subnational level?	No	

B3.11	Is late registration more common in some area than others?	No	
B3.12	What proportion of registered births take place in health facilities?	Very few births are registered. There are 21 provincial hospitals in PNG, more than 780 health facilities and over 2000 clinics. Almost all of the births registered are likely to have occurred in health facilities. Records are most likely to be complete where the mother has staying in the facility for more than 24 hours.	
B3.13	What proportion of registered deaths take place in health facilities?	Very few deaths are registered. Almost all of the deaths registered are likely to have occurred in health facilities.	
B3.14	What proportion of hospitals or other health facilities have registration officers on the premises?	None. Port Moresby Hospital previously had registration staff on site however this has stopped around 2010. This hospital delivers 14-15,000 each year. It is also reported in 2014 that Mendi hospital in SHP had a civil registry clerk and an office space for civil registration and that there was a registry point for birth registration at Buka Hospital, Bougainville.	Set-up mobile registration at hospital
B3.15	Do midwives or other health personnel attending home births also report these births? If so, to whom?	No	
B3.16	Are reported births from such sources routinely compared with registered births?	No	
B3.17	What proportion of births take place in non-governmental health facilities?	Very low	
B3.18	What proportion of deaths take place in non-governmental health facilities?	Very low	
B3.19	Does registration involve any financial costs to the family or informant: for births? For deaths?	No, registration is free	
B3.20	What social services or benefits are linked to birth registration?	None. Children born today will be able to access a national ID card and associated benefits once they turn 18.	
B3.21	What social services, insurance benefits or inheritance transfers are linked to death registration?	None	
B3.22	If the country uses identity cards, how does that system affect vital events registration?	There is a common identifying number across the birth registration and identity card systems. There is no link with death registration.	
B3.23	What are the main obstacles to improving civil registration? For example: lack of registrars or places to register; lack of access to health facilities; lack of knowledge about the need to register births and deaths; social stigma of illegitimate children; cultural barriers; financial barriers; illiteracy; shortage of physicians and midwives; other obstacles (please specify).	Possible incentives for registration include schools and banks wanting ID cards, mining companies need genealogy for land ownership	
B3.24	When did PNG last have a campaign to increase public awareness of the need to register vital events?	The focus now is on NID. Balancing funds available and capacity to deliver means that there is no current campaigns. If a mobile kit is visiting an area there will be information sent to the local village leaders to raise awareness. Facebook is also used.	
B3.25	Were the results evaluated?	Not applicable	
B3.26	Is there a committee that regularly monitors and evaluates civil registration completeness?	Yes. The CRVS committee will monitor and evaluate completeness, however so far their focus has been on initial improvement initiatives.	Look to add Education, the Electoral Commission, Immigration, Justice and Department of Communication to committee
<b>B4 Data storage and transmission</b>			
B4.1	Do local registration offices record and store the collected information on births and deaths by: Registry books? Electronic files? Other (please specify)?	Local registration offices have only recently been established. However ward recorders and the Ministry of Community Development may have paper based, historical registers. These are currently not available to registration offices. All current records are stored electronically and on paper. Historic records, where they exist, are on paper. In 2012 Huawei was contracted to deliver an ID system. This went live in 2015. As part of the enrolment process, adults have their birth registered.	

B4.2	Are birth and death records filed by: Date of registration? Name? A numbering system or other numerical index? Other (please specify)?	Registration forms are filed by year of registration in bundles of 250 registrations and archived by Port Moresby CIR. Currently registers are only filed electronically but there are plans to print these and archive in bound format. There are some old registers in the archives dating back to 1892. These are in very poor condition.	Capacity building in technical archiving skills. Maybe link with PARBICA Secretariat based in NZ.
B4.3	What method of record backup is used and how frequently is this done?	New registrations are scanned and filed electronically with full back-up. There are plans (unfunded) to scan older records	Electronically capture old paper registrations
B4.4	How are birth and death records archived?	Dedicated, but small archiving team in Port Moresby. High quality, secure premises. Large backlog of work.	
B4.5	Have records ever been lost or destroyed?	Yes	
B4.6	How can the loss or destruction of records be avoided in the future?	By having a strengthened, sustainable civil registration office with digital records that are regularly backed up.	
B4.7	Can individual birth or death records easily be retrieved if needed?	Yes, but there are very few records	
B4.8	Have there been instances of fraudulent or multiple registrations?	No	
B4.9	What precautions are built into the system to avoid fraudulent or multiple registrations?	There are currently no checks that adult birth registrations are not duplicates, however given the low rates of registration in the past the risk is very low. There are checks for duplicates for new borns but effectiveness of this is limited due to lack of links from health system and low registration levels. NID system has biometric checks to avoid duplication.	
B4.10	Using the flowcharts of data transmission prepared for birth and death records, explain where and how data are being consolidated before transmission.	Data is not currently transmitted	
B4.11	Reflecting on the data-flowchart prepared, is there a fixed schedule for transferring data in a timely manner?	Data is not currently transmitted	
B4.12	Is this schedule strictly adhered to?	Data is not currently transmitted	
B4.13	Is this schedule routinely monitored by those receiving the data?	Data is not currently transmitted	
B4.14	Is there procedure in place to deal with late and non-reporting from local civil registration offices?	No	
B4.15	If there are procedures in place, what are they?	Not applicable	
B4.16	Is the information on the birth and death registration forms kept confidential?	Yes	
B4.17	How is confidentiality maintained?	The Registrar-General must be of the opinion that the applicant has shown sufficient or proper reason to access records.	
B4.18	Who can access the data and for what purposes?	This is not specified in the law. Operationally, the person named on the certificate or their parents (also named on the certificate) are able to get a copy. Also if there has been a Court Order. Others are with approval from the RG or DRG and may include legal representatives of assistants to VIPs.	
B4.19	What checks are made on individual birth and death records to ensure that they are accurate and complete when transferred?	Records are not currently transferred	
B4.20	Are local registration offices routinely contacted for clarification about the statistics by the regional or central level?	No	
B4.21	If so, how frequently is clarification sought?	Not applicable	
B4.22	Is there two-way communication and data transfer between central and peripheral offices?	Data is not currently transmitted	
B4.23	Do regional registration authorities routinely receive reports on how the characteristics of their populations compare with the national average?	No	
<b>C1 ICD10 compliance practices for death certification</b>			
C1.1	How many registered deaths (as a percentage) have a medically certified cause of death?	Almost none as very few deaths are registered and data does not flow from the health system into the civil registration system. Approximately 4-6000 deaths a year have a MCCD (about 12% of deaths) as these are reported at Port Moresby or provincial health facilities and transmitted to NDOH for coding.	

C1.2	In the cause-of-death data, is it possible to separate medically certified deaths and those certified by a layperson?	There is not currently any deaths certified by laypeople, except in the three verbal autopsy trial areas.	
C1.3	Are these data compiled separately in the cause of death statistics for the country?	No	
C1.4	Are ICD-compliant practices used for death certification in the country?	No, however data are ICD morbidity coded but not ICD mortality coded. In 2014, the rapid assessment recorded certification to be 33% ICD compliant.	
C1.5	Is the standard international form of medical certificate of cause of death (Box 3.4) used for: all deaths? Only deaths occurring in hospitals not for those taken place outside hospitals? Only deaths occurring in some specific hospitals, such as university or regional hospitals? Other deaths (please specify)?	Partially. A modified version of the international form and ICD coding is used.	
C1.6	If the country does not use the standard International form of medical certificate of cause of death, how could it be introduced (specify steps)? What potential actions (e.g. sensitization of medical establishment) would be required?	Significant work on this has been done by Bloomberg Melbourne through training of medical practitioners in cause-of-death reporting, trialling notification strategies and the use of Verbal Autopsy.	
C1.7	Do doctors know how to correctly complete the death certificate, including the causal sequence and the underlying cause? Yes, generally. Yes, always. No, they do not.	Yes, some do. Significant work on this has been done by Bloomberg Melbourne through training of medical practitioners in cause of death reporting.	
C1.8	Is there a booklet, brochure or other guideline for doctors explaining how to certify the cause of death and complete the international form properly?	Yes. A guideline has been prepared by Bloomberg Data for Health (Melbourne University). There is also a full set of training materials available through the CRVS gateway on the University of Melbourne website. Bloomberg Melbourne has trained almost 400 health workers based in major hospitals and most final year medical students in certifying case of death.	
C1.9	If such material is not available, what would be involved in preparing it and how could it be distributed?	Not applicable	
C1.10	What proportion of death certificates list only one cause of death? (See Box 3.4 about the need to state not only the disease directly leading to death, but also the underlying conditions without which the person would not have died)	Most clinicians only record the immediate cause of death on the MCCD	
C1.11	What proportion of death certificates report the mode of death instead of the underlying cause of death?	Most MCCD report the mode of death rather than the underlying cause.	
C1.12	What proportion of death certificates do not indicate the interval between onset of disease and death?	In a recent study by NDOH and Bloomberg Melbourne more than 80% of certificates did not indicate the interval between onset of disease and death. Following clinician training this dropped to below 50% however not all clinicians have been trained so rates are likely to remain close to 80%	
<b>C2 Hospital Death Certification</b>			
C2.1	In hospitals, who completes the death certificate: the attending doctor? Another doctor who did not treat the deceased person before death occurred? A nurse? A medical records officer? Other (please specify)?	In government hospitals medical practitioner who attended to the deceased or viewed the body after the death or a medical attendant who attended to the deceased or viewed the body after the death.	
C2.2	How are cases of DOA certified?	The Coroner should certify DOA however this doesn't often occur as the family need to request an autopsy unless one is requested by the Police where there is a criminal investigation.	
C2.3	How common are DOA deaths in hospitals? Do they constitute: less than 10% of deaths? 10–20% of deaths? More than 20% of deaths?	10-20%	
C2.4	Are the vital events that take place in hospitals registered at civil registration points in hospitals? By the hospital sending forms to the civil registration office? By the individual family registering after the birth or death has occurred?	If the death is registered (very unlikely) then the individual family will do it.	
<b>C3 Deaths occurring outside hospital</b>			
C3.1	Is it mandatory to issue a death certificate with the cause of death indicated for people who die at home?	No	

C3.2	If so, are there any quality problems with these certificates and are they ever reviewed?	Not applicable	
C3.3	Is the same cause-of-death form used for deaths in and outside hospital?	Yes but it is rarely used	
C3.4	If a different form is used for deaths outside hospital, what information is recorded about the cause of death?	Not applicable	
C3.5	Who prepares the death certificate and certifies the cause of death for people dying outside of hospital: a general practitioner? A coroner or similar? A health official? A civil registrar? Other (please specify)?	A general practitioner or a Coroner	
C3.6	If a doctor is needed, is that person required to examine the deceased person before they have died?	No	
C3.7	How are deaths certified in cases where the certifying physician is not the person who treated the patient?	A physician who has viewed the body after death may certify.	
C3.8	Are hospital medical records usually accessible to general practitioners when one of their patients dies at home?	No	
C3.9	Is verbal autopsy routinely used to obtain the cause of death for any non-medically certified deaths in the county?	Verbal Autopsy is currently being trialled in 3 areas: Alotau District, Milne Bay Province; Talasea District, West New Britain; and Tambul-Nebilyer District, Western Highlands. A total of 129 health workers have been trained in verbal autopsy processes.	
C3.10	If verbal autopsy procedures are routinely used, do they conform to the WHO standards (31)?	SmartVA is used. This is a modified version of the WHO verbal autopsy tool.	
C3.11	Has the WHO standard procedure been modified in any way to make it more applicable to the country? (If so, please specify	Yes. It has been modified as part of SmartVA but this is not modification for any particular country.	
<b>C4 Practises affecting the quality of cause of death data</b>			
C4.1	To whom, other than the family, is the cause-of-death information for individuals provided (including upon request)?	No one, the data remains in the health system	
C4.2	What information is provided to the family on the death certificate: all the information on the cause-of-death form? An extract for laypersons about the cause of death? Other (please specify)?	If a death certificate is provide (which is rare) it will contain cause of death information that has been collected if it has been provided to the civil registry (unlikely)	
C4.3	Is it likely that many cases a sensitive or stigmatizing cause of death (e.g. suicide or HIV/AIDS) would be assigned to a more socially acceptable cause of death?	No	
C4.4	Does the death certificate state whether a woman was pregnant, or had recently been pregnant?	No	
C4.5	Are maternal deaths reviewed separately from other deaths?	No, however these are included in the NHIS data and deaths are reviewed in detail when they occur in maternity units, with the primary focus being on the immediate cause of death.	
C4.6	Are perinatal deaths monitored using a special form, as recommended by the WHO?	There is a medical certificate of perinatal death however its use varies depending on the facility and on the training received by staff.	
C4.7	What training and practice do doctors receive in certifying the cause of death: none? One lecture in medical school or at the hospital? An ICD-compliant training course on certification? On-the-job training? Other (please specify)?	There had not been any training in MCCOD or ICD given in the PNG medical school until recently. This has recently been provided through Bloomberg Melbourne to almost 400 health workers based in major hospitals and most final year medical students.	
C4.8	Would most doctors be aware of the important public health uses of the information they provide on the death certificate?	No	
C4.9	Has the country evaluated the quality of medical certification?	Yes	
C4.10	If yes: When was the evaluation done? How was it done? What did it conclude? What follow-up was undertaken to improve certification practices?	In December 2017, 613 certificates from the previous were reviewed by NDOH. Although training was offered to all Port Moresby Hospital doctors only 50% attended and it is not expected that the quality has changed significantly.	

C4.11	Are hospital medical records generally: complete? Reliable? Easily accessible to the certifier?	This depends on the facility and the medical staff. If the record is accessed at the time of death or soon after then the record is likely to be accessible. However access at a later time depends on the technical area of clinical specialisation and their policy on releasing data. Generally data is not easily accessible beyond the medical records team.	
C4.12	Are other health records, such as from health clinics, general practitioners or family doctors: complete? Reliable? Easily accessible to the certifier?	No	
C4.13	Who certifies whether the cause of death is unnatural (i.e. accident, suicide or homicide)?	The Coroner however very few autopsies are completed as these are only conducted if as the result of a crime or if the family request one.	
C4.14	If there is a special system for certifying these deaths, please describe how this works and how well it works.	The coronial system however this is not functioning effectively outside of major towns or where an autopsy is not requested by the police or the family. Coronial processes for suspicious or unexplained deaths seem to be patchy and rely on a police or family request for an autopsy. In Port Moresby the district court serves as the coroner but is not considered to be working well. Many provinces do not currently have a coroner.	
C4.15	Are certifying doctors aware of how to report deaths from injuries and external causes according to the ICD rules?	No. Unless they have been trained with the University of Melbourne MCCOD course	
<b>D1 Mortality coding practices</b>			
D1.1	Is the ICD used for cause of death statistics?	Yes	
D1.2	If so, which revision and edition is currently being used?	A modified version of ICD10	
D1.3	Is a national language version of the ICD used?	No	
D1.4	Who is the responsible for coordinating the implementation of ICD?	NDOH. There are two coders.	
D1.5	Who is responsible for training ICD coders?	NDOH using Bloomberg Melbourne courses and materials	
D1.6	Are the codes selected for cause of death reporting chosen from the complete ICD list or is coding done from a summary tabulation list of the ICD?	A modified list	
D1.7	If a summary list is used, which list is it?	Morbidity = PNG simplified list. Mortality = WHO list	
D1.8	Are coding and ICD selection rules for underlying causes of death data applied?	Yes	
D1.9	Is mortality coding centralized or decentralized?	Centralised with two coders based at NDoH	
D1.10	If coding is decentralized, what quality measures and procedures are in place to ensure national consistency in the application of ICD coding rules?	Not applicable	
D1.11	Is cause of death coding done from a copy of the original death certificate or from a transcribed list provided by the civil registration office or from some other summary document?	Coding is done from the hospital issued fact of death certificate	
D1.12	Is all the information on the death certificate coded or only the presumed underlying cause of death?	Any information provided will be coded, however this is usually only immediate cause death	
D1.13	Is there an established mechanism to query the certifier (doctor) in cases where the coder cannot understand or interpret the reported causes of death on the certificate?	No	
D1.14	If so, please describe these procedures and discuss their efficacy.	Not applicable	
<b>D2 Mortality coder qualification and training</b>			
D2.1	What categories of staff (e.g., physicians, statisticians or health professionals) are doing mortality coding in the country?	There are two coders based at NDoH	
D2.2	What level of education do mortality coders typically have?	There are two coders who have significant experience. They have both completed the Bloomberg Melbourne 3 month course	
D2.3	Are specific training courses provided for mortality coders or is the training on-the-job?	Bloomberg Melbourne 3 month course	

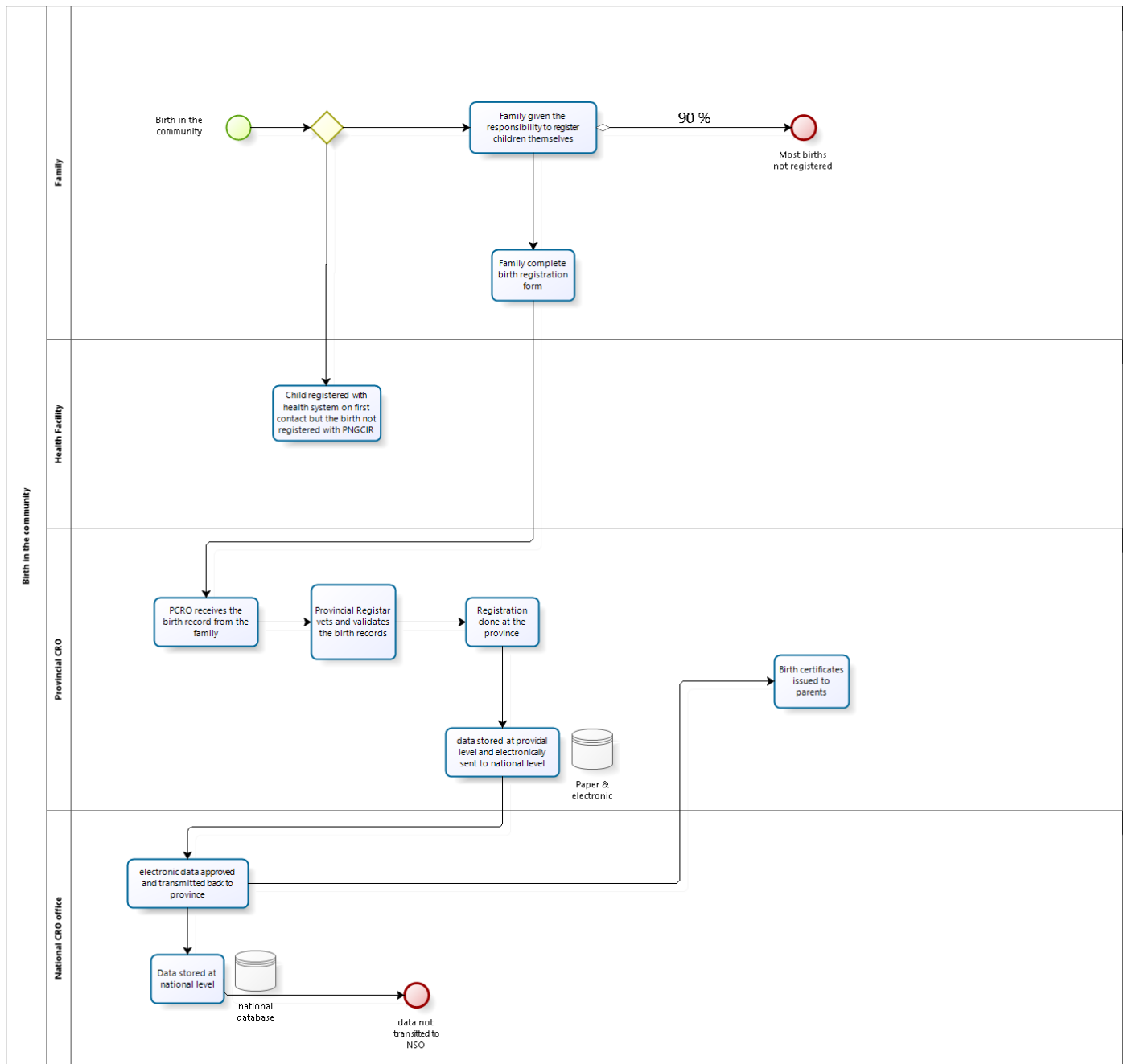
D2.4	If coders are specifically trained to code: Are there sufficient local ICD trainers to meet the need? Who is responsible for delivering the training? What is the length of training and is there a standard curriculum? How often is coder training conducted?	More coders are needed to manage the current workload, and this will need to increase further if more facilities report deaths or more causes of death are added by those already submitting reports. Bloomberg Melbourne would be used to do training.	
D2.5	Is there a high turnover among coders?	No	
D2.6	Are coders recognized within staffing structures as a separate cadre and are coding qualifications recognized separately to other administrative officers?	No. This needs to be reviewed and specific positions created	
D2.7	Are there local senior trainers who have been trained at WHO-FIC supported training courses?	Bloomberg Melbourne is used	
D2.8	Do coders have opportunities for ongoing education?	Not currently however training in ICD11 is being planned through SPC and PHIN	
<b>D3 Quality of mortality coding</b>			
D3.1	Do all coders have a complete set of ICD volumes available to them when they code?	No. PNG uses a modified set of codes.	
D3.2	Do all coders have a set of the ACME decisions tables?	Yes ACME decision tables are used to interpret casual relationships more easily and allocate correct UCOD. The Medical Mortality Data System (MMDS) Automated Classification of Medical Entities (ACME) Decision Tables are used.	
D3.3	Do coders regularly check the ICD web site for update to codes and coding practices?	No. PNG uses a modified set of codes.	
D3.4	What processes are in place to assess the quality of cause of death coding and how frequently is this assessed?	Bloomberg Melbourne reviewed in 2019 and found no areas of significant concern	
D3.5	Has the quality of mortality coding ever been evaluated?	Bloomberg Melbourne reviewed in 2019 and found no areas of significant concern	
D3.6	If so, was the level of accuracy deemed satisfactory? What systemic issues were identified?	Bloomberg Melbourne reviewed in 2019 and found no areas of significant concern	
D3.7	What mechanisms are in place to provide feedback to coders on the quality of coding and to correct the problems and issues identified through evaluation and practice?	PNG is in the early stages of developing its mortality coding practice. It has a very small team.	An annual audit-through an external party, of the quality of coding and certification to identify specific errors and training needs. This could be done yearly if quality issues exist. Also, the team leader could check any final data tables before publication or sharing with NSO to fix any errors and identify training needs.
<b>E1 Data quality and plausibility checks</b>			
E1.1	Are fertility indicators (e.g., crude birth or fertility rate, age – specific fertility rate and total fertility rate) routinely calculated from the civil registration and vital statistics data?	No	
E1.2	If so, which indicators are calculated?	Not applicable	
E1.3	Are mortality indicators (e.g. crude death or mortality rate, age-specific mortality rate, infant mortality rate, neonatal mortality rate and maternal mortality rate) routinely calculated from the civil registration and vital statistics data?	No	
E1.4	If so, which indicators are calculated?	Not applicable	
E1.5	What data sources are used as the denominators to calculate these rates?	Not applicable	
E1.6	Describe the plausibility and consistency checks that are carried out on the data and indicators before they are released for use	Not applicable	



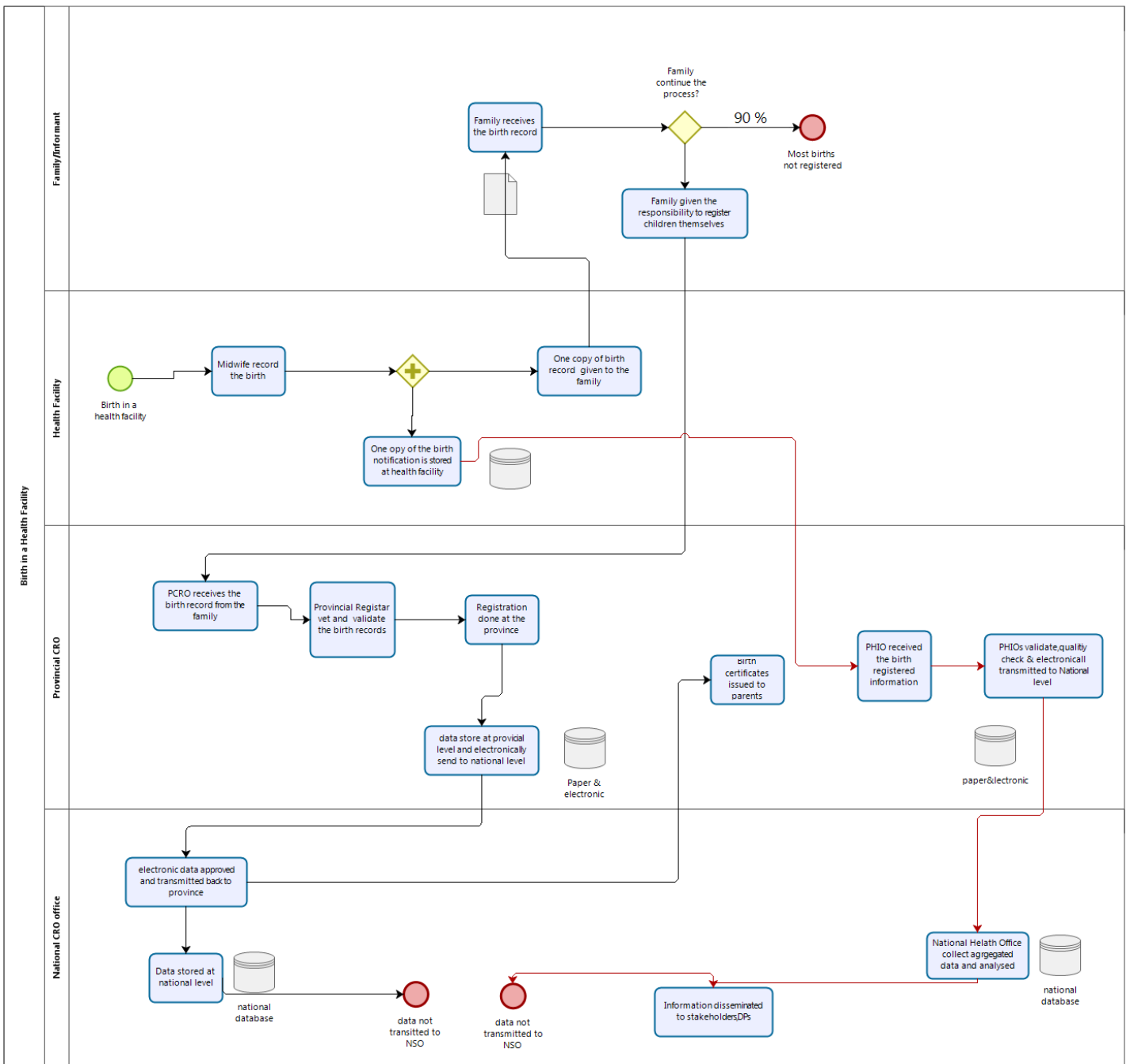
E1.7	Are the civil registration and vital statistics data used to investigate variations in fertility and mortality within? If so, describe how this is being done.	Not applicable	
E1.8	Are the fertility rate derived from civil registration and vital statistics compared with rates derived from other sources?	Not applicable	
E1.9	Are mortality rates derived from civil registration and vital statistics compared with rates derived from other sources?	Not applicable	
E1.10	Did the last census include a question on birth or deaths for example: Number of children ever born alive or still alive? Date of birth of last child born alive? Whether the last birth was registered? Whether the last death was registered?	Yes. Questions 22-26 ask how many babies were born, how many are living in the house, how many children have died, and how many died in last 12 months. Deaths are tabulated by sex and in 5 year aged blocks.	
E1.11	If so, have the data been analysed and compared with the vital statistics data?	No	
E1.12	Are other sources used to complete and verify birth and death data?	No	
E1.13	If so, describe these.	DHIS mortality database holds details of tens of thousands of deaths in the decade leading to 2011. This could provide information about age, sex and province. (Source: Bloomberg)	
E1.14	What is the proportion of all deaths allocated to ill-defined categories? (See Annex 1 of Volume 2 of ICD-10 and Section 4.1.10 of ICD-10, Rule A on Senility and other ill-defined conditions.)	Not applicable	
E1.15	Has the proportion of deaths allocated to the ill-defined categories changed over time?	Not applicable	
E1.16	What is the proportion of unknown causes of death among all deaths?	Not applicable	
E1.17	Is the consistency of the national cause-of-death pattern checked over time, including disaggregation comparisons?	No	
E1.18	Does the overall cause-of-death distribution seems plausible, e.g. does it fit the expected disease and injury patterns given current national levels of life expectancy ?	Not applicable	
E1.19	Is the age pattern of causes of death obtained from civil registration for major disease groups and injuries consistent with expected patterns?	Not applicable	
E1.20	Further checks on the quality of cause-of-death data can be made using the three measures below. In properly functioning systems with good death certification, the percentage of all cardiovascular, cancer or injury deaths assigned to these codes should not exceed about 10–15%. What is the proportion of cardiovascular disease deaths assigned to heart failure and other ill-defined heart-disease categories (ICD-10 codes I472, I490, I46, I50, I514, I515, I516, I519, I709)? What is the proportion of cancers with an ill-defined primary site (ICD-10 codes C76, C80, C97)? What is the proportion of injury deaths that are of undetermined intent (ICD-10 codes Y10-Y34, Y872)?	Not applicable	
<b>E2 Data tabulation</b>			
E2.1	Are birth and deaths compiled according to date of occurrence or to date of registration?	Not applicable – but they could be as this information is collected for those registrations that are completed	
E2.2	Are births and deaths compiled according to place of occurrence as well as place of usual residence?	Not applicable – but they could be as this information is collected for those registrations that are completed	
E2.3	At what level of disaggregation are the birth data tabulated? Report separately for: Sex; Sex, and age of mother; Sex, age of mother and sub-region.	Birth and cause-of-death data is published annually within the Sector Performance Annual Report (SPAR). The data for this SPAR Report is generated from NHIS & DHIS monthly reporting that is sent into PMRB each month. Birth statistics are disaggregated by age of mother, sex of child, geographic area of birth and geographic place of data collection. Deaths statistics are disaggregated by age, sex, geographic area of death and geographic place of data collection.	

E2.4	At what level of disaggregation are the deaths and cause-of-death data tabulated? Report separately for deaths and cause of death for: Sex; Sex and age;	Not applicable	
E2.5	Are standard WHO age groups used to tabulate mortality and cause-of-death data?	Not applicable	
E2.6	What is the smallest subnational level used for tabulating vital statistics? Is this appropriate given the potential uses for disaggregated data?	Not applicable	
E2.7	Are any of the four standard mortality tabulation lists suggested by the ICD used for data presentation purposes?	Not applicable	
E2.8	If not, which condensed list is used? How was this list derived?	Not applicable	
E2.9	Are data compiled into 10 leading causes (separately for men and women and children)?	Not applicable	
E2.10	From which list are the 10 leading causes selected?	Not applicable	
E2.11	Are ill-defined causes included in the ranking as a category?	Not applicable	
E2.12	What proportion of deaths is accounted for by the 10 leading causes of death?	Not applicable	
<b>E3 Data access and dissemination</b>			
E3.1	Who are the main users of the vital statistics: within government? Outside the government?	Not applicable	
E3.2	Is there an engagement strategy to regularly discuss data needs with the main data users? If so, describe this.	No	
E3.3	Is it possible to provide an example of how vital statistics have been used to guide policy and practice?	No	
E3.4	What is the time from the end of the reporting period (e.g. end of calendar year in which births and deaths occurred) to the dissemination of: birth and death statistics? Cause-of-death statistics?	Not applicable	
E3.5	Are analytical reports about birth, deaths and causes of deaths derived from vital registration produced? If so, include examples.	No	
E3.6	Is there a data-release schedule?	The Statistical Services Act 1980 does not prescribe a schedule for periodic reports.	
E3.7	Are vital statistics made available to users as: print? Electronic files? Web sites? Pdfs? Interactive tables?	No	
E3.8	Are the vital statistics available free of charge or at a cost? Please explain.	At a cost for the whole document. Specific reports are not generally produced due to lack of specialist capacity in tabulation or data analysis.	
E3.9	What agency publishes the official vital statistics?	The Statistical Services Act 1980 established the National Statistics Office as the central statistics authority and grants the National Statistician the power to access records from other state agencies. The Act does not require publication nor does it prescribe a schedule for periodic reports.	
E3.10	How regularly are the data published or released?	Irregularly	
E3.11	Are all definitions and concepts used in vital statistics publications clearly explained?	Unknown	
E3.12	What analyses are being routinely carried out on the data (e.g. fertility patterns, mortality differentials, disease mapping, etc.)?	Not applicable	
E3.13	Along with the statistical tables, are analyses of the data published regularly?	Not applicable	
E3.14	How are these data being used at various levels?	Not applicable	
E3.15	Is there any attempt to build analytical capacity among staff who collect and compile vital statistics to perform basic analyses of the data to help them better understand the value and purpose of the data which they collect? If not, how could this be achieved?	There is a lack of specialists able to analyse data and complete cross-tabulations. Most of the NSO's focus is on collection and dissemination of data rather than analysis and insight.	

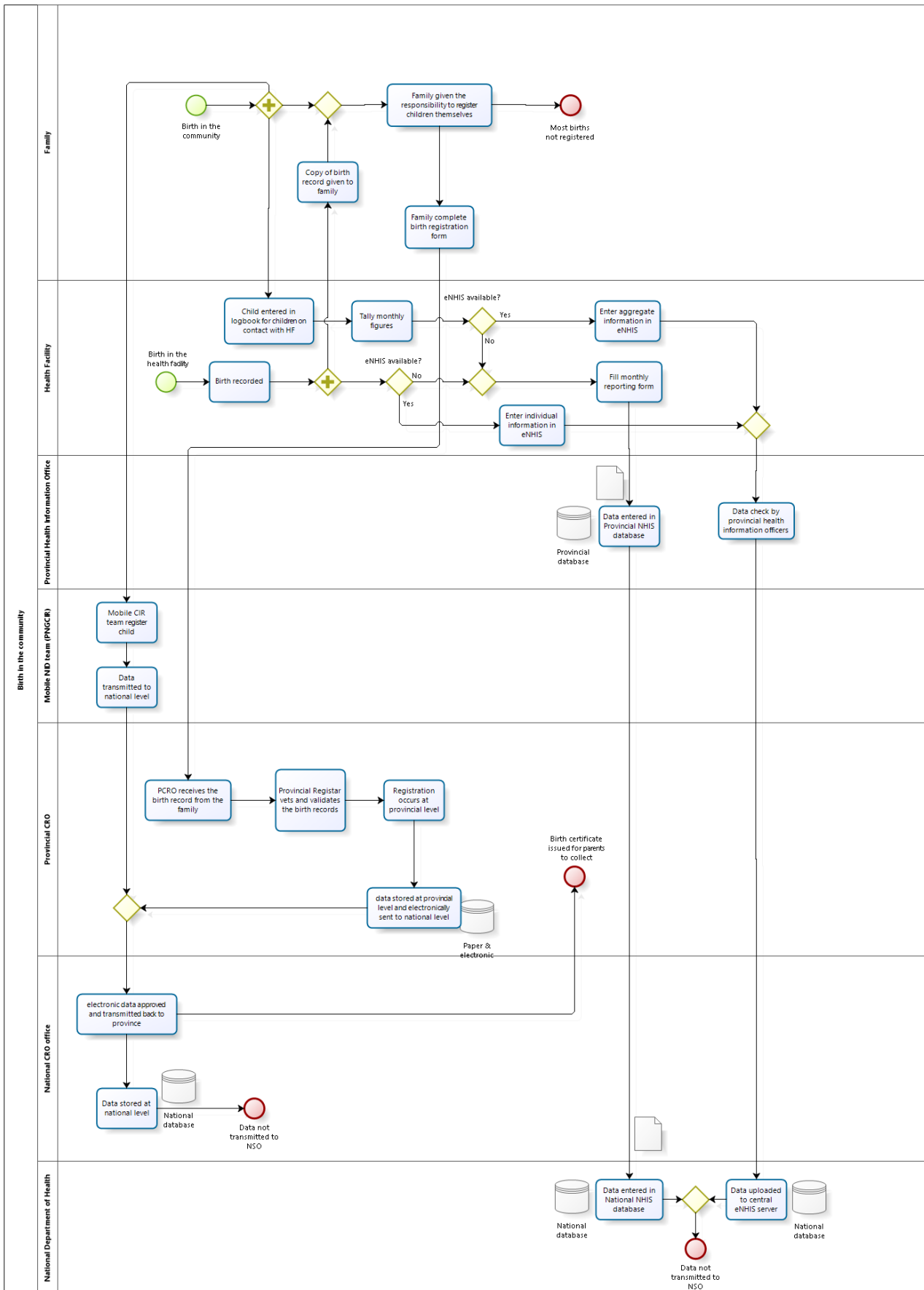
### Annex 3 – Current Process Map – Birth in Community (Source: Bloomberg Data for Health)



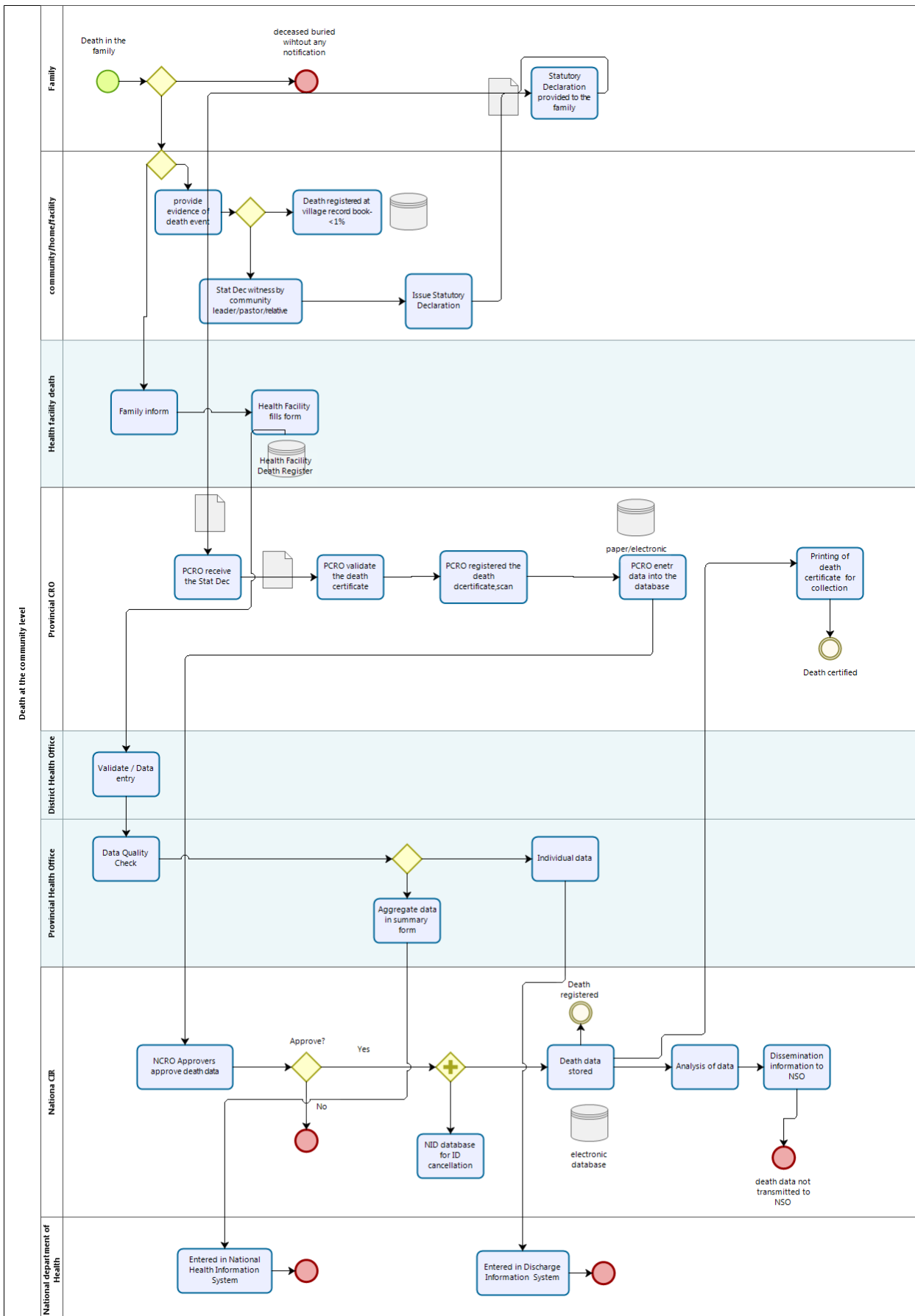
# Current Process Map – Birth in Health Facility (Source: Bloomberg Data for Health)



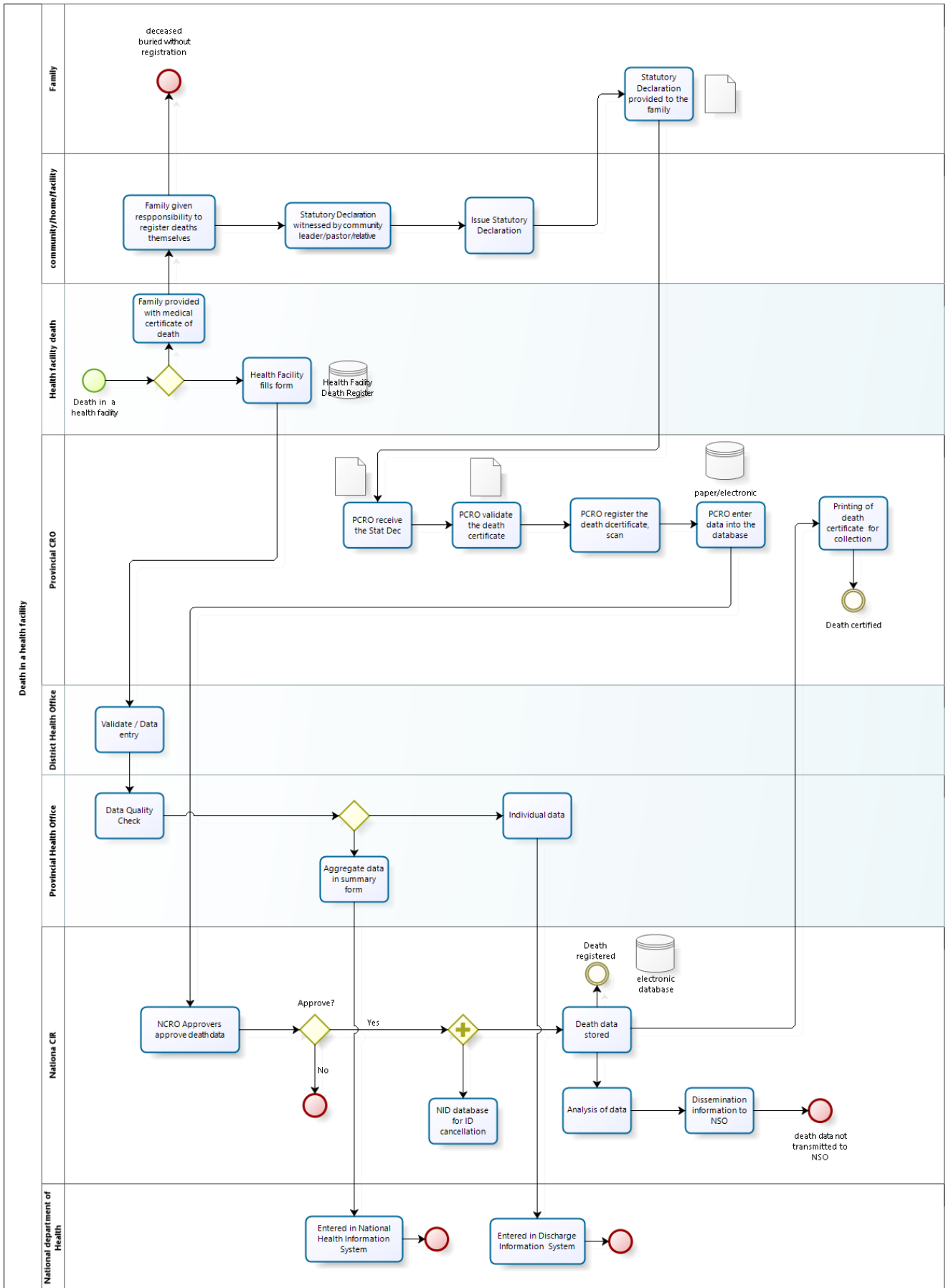
# Current Process Map – Birth in Community and Health Facility (Source: Bloomberg Data for Health)



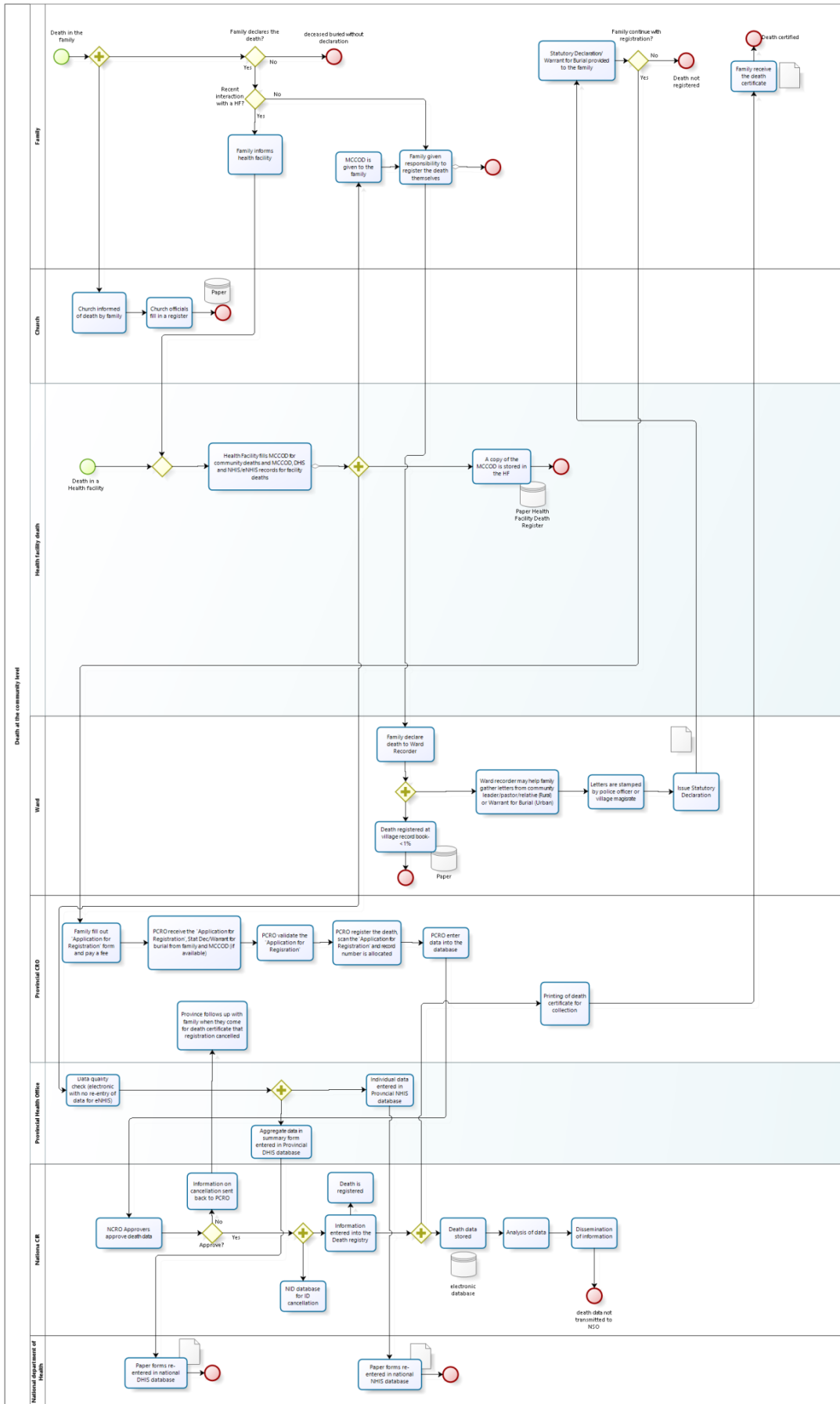
# Current Process Map – Death in Community (Source: Bloomberg Data for Health)



# Current Process Map – Death in Health Facility (Source: Bloomberg Data for Health)



# Current Process Map – Death in Community and Health Facility (Source: Bloomberg Data for Health)





## Annex 4 – Provincial information table

<a href="#">Region</a>	Province	Area (km <sup>2</sup> )	Population (2011 census)	Density (pop/km <sup>2</sup> )	Capital	Population in Capital (various years 2000- 2013)	Notes
<a href="#">Highlands</a>	Chimbu (Simbu)	6,112	376,473	42.42	<a href="#">Kundiawa</a>	11,553	
<a href="#">Highlands</a>	Eastern Highlands	11,157	579,825	38.35	<a href="#">Goroka</a>	19,523	
<a href="#">Highlands</a>	Enga	11,704	432,045	22.6	<a href="#">Wabag</a>	4,072	eNHIS pilot
<a href="#">Highlands</a>	Hela	10,498	249,449	17.71	<a href="#">Tari</a>	15,413	No CIR Officer
<a href="#">Highlands</a>	Jiwaka	4,798	343,987	38.68	<a href="#">Banz</a>	no data	
<a href="#">Highlands</a>	Southern Highlands	15,089	510,245	23.86	<a href="#">Mendi</a>	56,055	No CIR Office
<a href="#">Highlands</a>	Western Highlands	4,299	362,850	59.12	<a href="#">Mount Hagen</a>	46,256	Verbal Autopsy pilot in Tambul-Nebilyer. eNHIS pilot
<a href="#">Islands</a>	Autonomous Region of Bougainville	9,384	249,358	15.18	<a href="#">Buka</a>	no data	eNIIS pilot. No CIR Office
<a href="#">Islands</a>	East New Britain	15,274	328,369	14.2	<a href="#">Kokopo</a>	20,262	
<a href="#">Islands</a>	Manus	2,000	50,231	20.76	<a href="#">Lorengau</a>	6,313	Ward books contain birth information
<a href="#">Islands</a>	New Ireland	9,557	194,067	12.31	<a href="#">Kavieng</a>	19,849	
<a href="#">Islands</a>	West New Britain	20,387	264,264	8.8	<a href="#">Kimbe</a>	27,191	Ward books contain birth information. Verbal autopsy pilot in Talasea. eNHIS pilot.
<a href="#">Momase</a>	East Sepik	43,426	450,530	7.98	<a href="#">Wewak</a>	25,143	Ward books contain birth information. Registrar on national payroll
<a href="#">Momase</a>	Madang	28,886	493,906	12.49	<a href="#">Madang</a>	29,339	
<a href="#">Momase</a>	Morobe	33,705	674,810	15.56	<a href="#">Lae</a>	100,677	
<a href="#">Momase</a>	Sandaun (West Sepik)	35,820	248,411	5.12	<a href="#">Vanimo</a>	11,863	
<a href="#">Southern</a>	Central	29,998	269,756	6.21	<a href="#">Port Moresby (Konedobu)</a>	269,756	
<a href="#">Southern</a>	Gulf	34,472	158,194	3.04	<a href="#">Kerema</a>	6,551	
<a href="#">Southern</a>	Milne Bay	14,345	276,512	14.93	<a href="#">Alotau</a>	15,939	Ward books contain birth information. Verbal Autopsy pilot. eNHIS pilot. CIR Ward book data pilot
<a href="#">Southern</a>	National Capital District	240	364,125	1051.95	<a href="#">Port Moresby (Waigani)</a>	364,145	Registrar on national payroll
<a href="#">Southern</a>	Oro (Northern)	22,735	186,309	5.82	<a href="#">Popondetta</a>	49,244	Previously on national payroll. Now no CR Office
<a href="#">Southern</a>	Western (Fly)	98,189	201,351	1.53	<a href="#">Daru</a>	15,142	No CIR Office
			7,265,067			1,114,286	
					Percentage living in capital cities		15%

Statistics source - Wikipedia

## Annex 5 – References

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