

Botswana Success Story of Completeness of Civil Registration System? A Case Study

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PRESENTATION OUTLINE

- Introduction
- CRVS Legal and Institutional Framework
- Binding/Determining the Case Study and its Objectives
- Data and Methods
- Data Limitations
- Findings
- Discussions
- Conclusion

CRVS Legal and Institutional Framework

- ❑ Births and Deaths Registration Act, 1968 and amended in the year 2000 and provides for:
 - ✓ Compulsory registration of institutional and non-institutional births (60 Days) and deaths (30) occurring to citizens and non-citizens within Botswana.
 - ✓ Registrar to keep Birth Register, Still Birth Register, Death Register
 - ✓ Determination, certification and recording of cause-of-death for deaths
- ❑ Inquest Act - certification and determination of the cause of unnatural deaths reported and handled by the Police and Police Pathologists.
- ❑ Statistics Act, 2009 - processing and dissemination of vital statistics.
- ❑ Children's Act 1981 and amended in 2009 – registration births as a right and recording of biological parents in birth certificate
- ❑ Change of Name Act, 1968
- ❑ Births and Deaths and Statistics Act comprehensive and complies substantially with UNSD Principles and Recommendations

Institutional Framework

- ❑ Central authority for delivering CR
 - ✓ Department of Civil and National Registration within Ministry of Nationality, Immigration and Citizenship.
- ❑ Births and deaths records are kept centrally under uniform and or standardized archival practice
 - ✓ automated into Births and Deaths Registration System accessed by field offices for registration issuance of certificates
- ❑ 12 district offices, 25 sub-districts and 13 onsite Hospital Based births and deaths registration facilities for immediate registration of vital events.
- ❑ Records Transferred to Statistics Botswana annually for processing, production and dissemination of vital statistics

Binding/Determining the Case Study

❑ **Case Study Focus**

- ✓ Rate of completeness of births and deaths registration.
- ✓ Discusses quality of vital statistics as derived from the civil registration records.
- ✓ Quality of vital statistics is measured according to their *completeness, correctness or accuracy, availability, and timeliness*

❑ ***Objectives of Case Study***

- ✓ To determine completeness levels of births and deaths registration in Botswana;
- ✓ To determine the quality of birth and death registration data including data quality checks conducted in processing civil registration and vital statistics in Botswana;
- ✓ To determine the potential of vital statistics to inform efforts to generate timely and reliable demographic estimates in Botswana.

Data and Methods

- Descriptive Case Study utilizing data from
 - ✓ Statistics Botswana, Vital Statistics Reports for the years 2011-2017 and produced from civil registration records kept by DCNR in the.
 - ✓ Statistics Botswana - Botswana Population Projections 2011-2026 was also provided by Statistics Botswana, Census and Demography Division.
 - ✓ The population projections estimations were produced by Statistics Botswana based on the 2011 Population and Housing Census being the most recent census
 - ✓ Data from the Report on Comprehensive Assessment for Civil Registration, 2014 - Ministry of Nationality, Immigration and Gender is also used.

Data and Methods Cont....

- ❑ Direct aggregate method of estimation has been used utilizing macro data to estimate birth and deaths registration completeness rates.
- ❑ In this case study, birth registration completeness represents 90 per cent or more of the events occurring in the specified year while desired death registration level is 80% .
- ❑ To calculate completeness rate, births and deaths that are registered in the civil registration system within a year are compared with estimated number of live births and deaths within the year as per the following formulae:

$$\text{Completeness rate for births} = \frac{\text{Number of registered births within the year of occurrence}}{\text{Estimated number of live births within the year}} \times 100$$

$$\text{Completeness rate for deaths} = \frac{\text{Number of registered deaths within the year of occurrence}}{\text{Estimated number of deaths within the year}} \times 100$$

Data Limitations

- ❑ The degree to which all events are reported and the degree to which the information provided about each event is accurate dictates the accuracy of vital statistics.
- ✓ an error emanating from delayed registration of events - on average, for births registered in the period 2011-2017, 75 per cent of births were registered within the legally prescribed timeframes while the rest were registered later.
- ✓ For Deaths its 90 % registration within legally prescribed timeframe. This evidence is contained in the annual vital statistics reports for the years.
- ❑ The form in which some of data are presented prevents thorough investigation and analysis.
- ❑ Not all the information provided in the notification forms are part of some of the vital statistics reports except for the 2017 Vital Statistics Report which carries some improvements.
- ❑ Challenges associated with utilizing secondary data may affect accuracy of data in the vital statistics reports. Registration completeness rates has not been computed at a sub-regional rate, but nationally hence difficult to adjust for completeness to

FINDINGS

Objective (1): To determine completeness levels of births and deaths registration in Botswana.

TABLE 1: BIRTH REGISTRATION COMPLETENESS RATES - 2011 - 2017

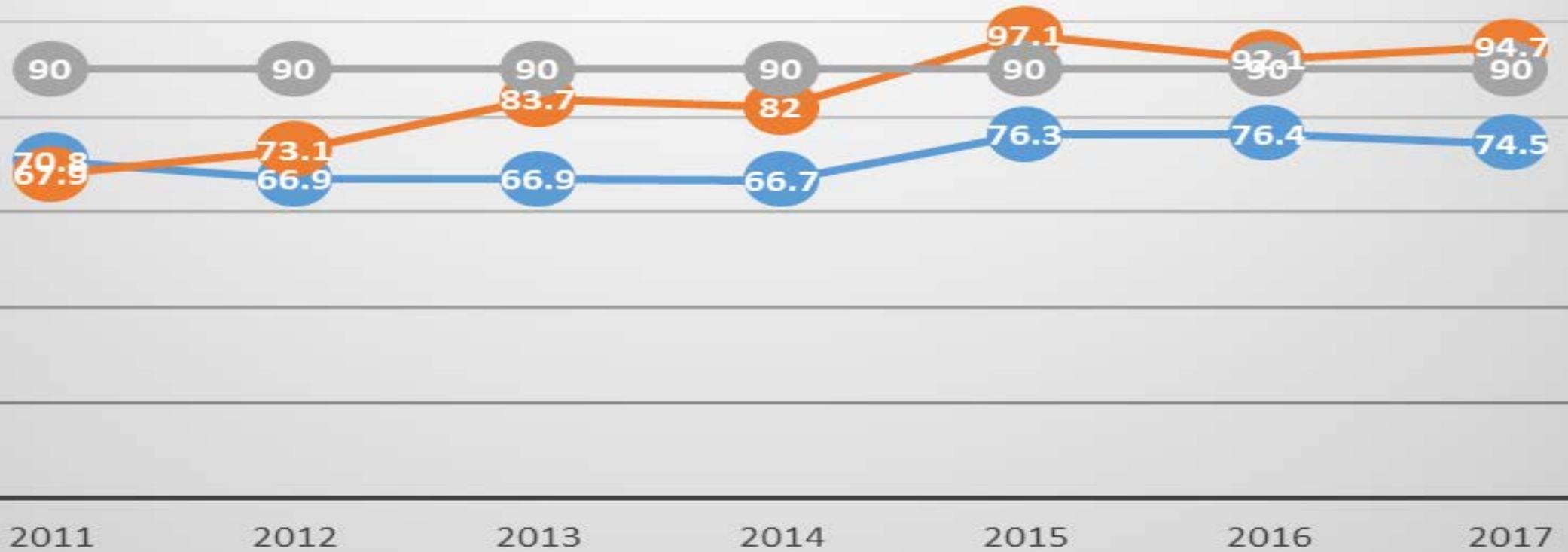
TABLE 1: BIRTH REGISTRATION COMPLETENESS RATES - 2011 - 2017							
	2011	2012	2013	2014	2015	2016	2017
Civil Registration Births Registered Percentage	67.9	73.1	83.7	82	97.1	92.1	94.7
Total Births Occurred and Registered Civil Registration	39 368	40 856	44 794	41 741	46 765	49 984	43 290
Average Scenario Population Annual Births Projections	58,004	55,859	53,495	50,924	48,159	45,215	45,690

Data Sources: Vital Statistics Report 2017; Population Projections 2011-2026. Statistics Botswana

TABLE 2: DEATH REGISTRATION COMPLETENESS RATES - 2011 - 2017

	2011	2012	2013	2014	2015	2016	2017
Civil Registration Deaths Registered Percentage	70.8	66.9	66.9	66.7	76.3	76.4	74.5
Total Deaths Occurred and Registered Civil Registration	13,301	12,270	11,967	12,177	13,030	12,825	12,386
Average Scenario Population Annual Deaths Projections	18,776	18,329	17,893	17,463	17,079	16,780	16,619

Annual Births & Deaths Completeness Rates 2011 - 2017



- Deaths Registered Percentage
- Births Registered Percentage
- Target level of completeness

Findings –Objective 1 Continues.....

- ✓ The finding is that completeness rates for births has been increasing from 67.9 per cent in 2011 when the vital statistics reports were initially published from a civil registration source to 94.7 per cent in the year 2017.
- ✓ Birth registration completeness rate varies for the years with those for the years 2015 -2017 representing completeness rates over 90 per cent being a target level of birth registration completeness.
- ✓ On the other hand birth registration level of completeness for the years 2011-2014, though increasing are below target birth registration completeness level of 90 per cent
- ❑ One other finding is that completeness rates for deaths has been fluctuating yet increasing from 70.8 per cent in the year 2011 to 74.5 per cent in 2017 and has not yet reached the ideal completeness rate of at least 80 per cent.
- ❑ Another finding is that the increasing rates are facilitated by:
 - ✓ compulsoriness of registration of each event for all the geographical areas within the country
 - ✓ Also enabled by a highly decentralized institutional network, In 2017, 98% of births had occurred in health facilities
 - ✓ A robust outreach programme to remote areas.
 - ✓ In 2017, 98% of births had occurred in health facilities
 - ✓ Vigorous Births and Deaths registration campaign supported by also development partners

FINDINGS Cont.....

Objective (ii):

To determine the quality of birth and death registration data including data quality checks conducted in processing civil registration and vital statistics in Botswana

Findings Obj. 2 Cont.....

Generally, there various quality checks are inbuilt in processing civil registration and vital statistics in Botswana.

- ❑ As a direct method, automatic matching of births and deaths records inbuilt into Births and Deaths Registration System (BDRS) as a quality mechanism
- ✓ uses a unique identification number which in turn updates the live status from 'live' to 'deceased.'
- ✓ Organic linkage extends to the integrated National Identification System (NIS) hence the records matching targets and verify all deaths including infant deaths.
- ❑ Another finding is that, as a quality control measure regarding processing of registration of births and deaths, section 14 of the Births and Deaths Registration Act provides for correction of transcription errors upon supervisor approval and material changes upon court approval.
- ❑ One other finding is that, the quality of cause of death information is improved on by use of ICD 10 in health facilities. In collaboration with the resident WHO office, continuous training of coders in ICD 10 is undertaken.
- ❑ Once received by Statistics Botswana, the data is also checked for completeness, consistency of information and accuracy of entries and civil registration offices are accordingly engaged on the need for any correction of values.
- ❑ The Statistics Act provides for strict confidentiality regarding data and this is associated with stiff penalties for unauthorized disclosure of information or breach of confidentiality.

Findings Obj. 2 Cont....Timeliness

- ❑ In processing and compiling vital statistics, late registrations data is used as an indirect method of quality checks to monitor lag between date of occurrence and date of date of registration as a measure of correctness and accuracy of births and deaths registration.
- ✓ For example, the period between 2011 and 2017, the burden of late registration is decreasing from 29.4 % in 2011 to 24% in 2017.
- ✓ This is indicative of an improvement in the births and deaths registration system. Late registrations have the potential to introduce into the data respondent errors as some of the required details such as dates may not be recalled by the respondents

Findings Obj. 2 Cont....Timeliness

- ❑ Statistics Botswana has set a cut-off point regarding events that occurred in a given year and registered in the subsequent year within the given grace period (30 days for death and 60 days for births respectively) to be included in the tabulation of the vital statistics report for the succeeding year.
- ❑ There has been regular transfer of information civil registration records to Statistics Botswana for processing annual vital statistical reports culminating
- ❑ Regular annual production and publication of annual vital statistical reports for the years 2011 - 2017. Production of the 2018 report is on-going.
- ❑ One Finding is that, prior to building the capacity for compilation, production and dissemination of civil registration based vital statistics, the country relied on alternative sources to generate vital statistics.
- ✓ For example, in 2007, Botswana in collaboration with UNICEF undertaken and as an indirect method included questions on whether the child under 5 years of age has a birth certificate. The birth registration completeness level was estimated at 72 %. T
- ✓ This was in view of minimal capacity to compile and produce vital statistics from civil registration which at the time. However, vital statistics could not be obtained from the birth registration estimation.

Findings Obj. 2 Cont..Presenting VS Report

- Vital statistics reports are produced annually encompassing births, deaths
- The data used by Statistics Botswana to generate vital statistics tables and graphs are based on civil registration records and key variables used in vital statistics reports include:
 - ✓ Sex, age, geographical area classified between urban and rural area as per the authority's choice of tabulations.
 - ✓ On the basis of the variables, a total of twelve (12) tables are generated on Births such as live births by district of birth and place of usual residence; live births by center of registration and time of births; live births by mother's age group and marital status etc.

Findings Obj. 2 Cont.. *Availability and Accessibility*

- Clients are able to access services births and deaths registration services as enabled by a network of offices across the country
- Services complemented by periodic outreach visits to remote and difficult to reach areas hence decentralizing services closer to communities.
- Registration services are offered at no cost to the clients except fees related to late registrations and replacement of registration certificates which are also acquired on the spot over the counter.
- Vital statistics reports are published and printed on hard copies for distribution, with some sold at the Government Printing shops at a nominal fee intended to recoup the cost of compiling printed materials.
- VS reports are posted online on the website address www.statsbots.org.bw for Statistics Botswana for access from anywhere free of charge by members of the public including academia and administrators,
- Queries and engagements on the data directed to the Media liaison office of the Statistics Botswana.

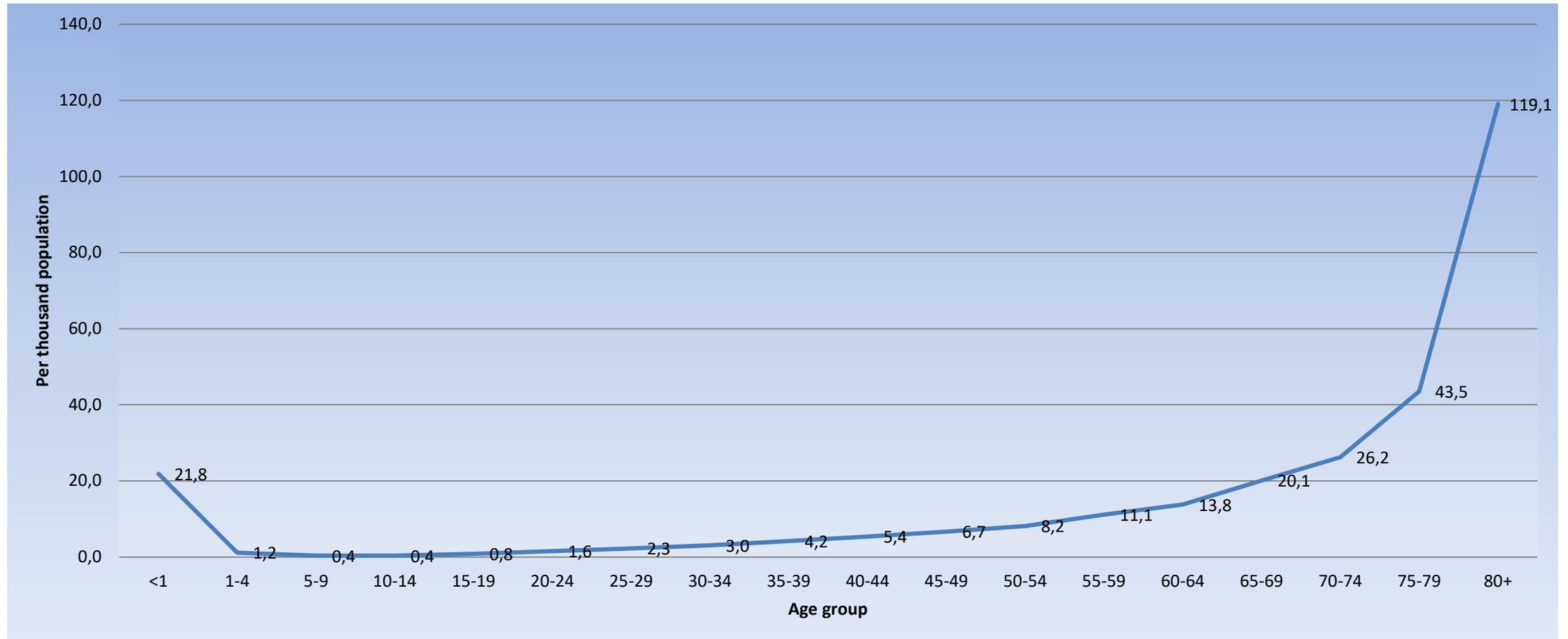
FINDINGS

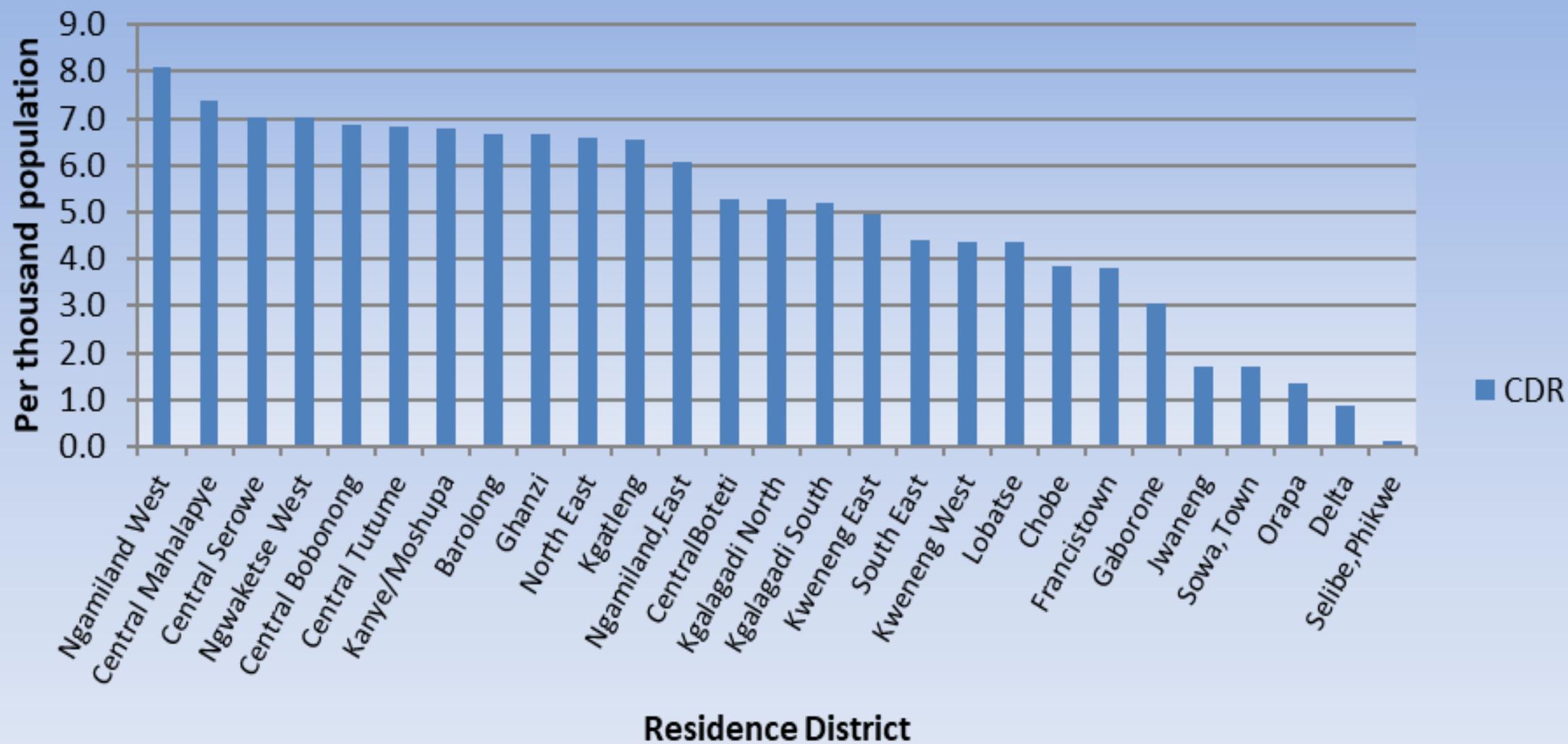
Objective (3):

To determine the potential of vital statistics to inform efforts to generate timely and reliable demographic estimates in Botswana.

- The Vital Statistics Report 2015 has underscored the reliability of the births record and noted as follows: *“It is worth noting the closing gap between Crude Birth Rate (CBR) obtained using registered births and that obtained using projected births. In 2011, the CBR was 28.6 per a thousand population using the census figures and the comparable figure using the registered births was 19.4 a difference of 9.2, this gap has been reduced to 1.4 in 2015 indicating that birth registration at birth has increased and that the country may rely on the births from the registration office for calculation of key fertility indicators. The CBR obtained from registered births was 21.4 compared to 22.0 obtained from projected births in 2015”*.
- Another finding is that vital statistics reports do not cover leading Causes of Deaths in the tabulations yet those are required for monitoring population growth as well as health programming initiatives.

Chart 3: Age Specific Death Rates 2017





Findings Conti..Objective 3

- The VS report covers key vital statistics aspects such as age specific death rates; crude births rates; crude deaths rates by district of usual living, registered current deaths by place of death, marital status and level of education. Refer to the following:
- **Chart 3:** Age Specific Death Rates which indicates Infant Mortality Rate of 21.8 deaths per a thousand live births which drops to 1.2 at age group 1-4 and is constantly low till age group 20-24. The age specific death rate starts to increase steadily to older ages;
- **Chart 4:** Crude Death Rates by District of usual living-2017 indicating that for the year 2017, a Crude Death Rate (CDR) of 5.5 deaths per a thousand population was recorded. The highest crude death rate was recorded by Ngamiland West that for the year 2017 while Selibe-Phikwe recorded the lowest rate.

DISCUSSION

- ❑ Improved registration completeness level from 67.9 per cent in 2011 to to 94.7 per cent in the year 2017. attributed to
 - ✓ Thought leadership, high level executive and political commitment steered the strategic changes, fostering local ownership of the CRVS agenda.
 - ✓ Sustained support by Development partners –UNECA, UNFPA, UNICEF, WHO, AfDB
 - ✓ Continuing Stakeholder Cooperation –MoH, Statistics Botswana, Home Affairs
 - ✓ Universal Births and deaths Registration Campaign targeting both demand and supply sides

DISCUSSION

- ❑ robust quality checks have been inbuilt in processing of both civil registration and vital statistics processes hence improving on data quality and integrity.
- ❑ Automation of births and deaths registration functions to BDRS
- ❑ The organic link of births record to deaths record implemented within the BDRS is critical to matching and verifying data accuracy such as live status of individuals for both infant deaths and adults' mortality
- ❑ untapped potential record linkages between BDRS, IPMS in health facilities and Statistics Botswana systems to enable matching of census data with births and deaths records for automatic data exchange; validate registration completeness levels of births and deaths and improve on data integrity

CONCLUSION

- ❑ To some extent, Botswana can be considered as having good practice in registration of B and D completes and producing CR based VS
- ❑ An assessment by UNECA in 2019 has indicated limited percentage of African countries being able to produce civil registration based vital statistics
- ❑ Major improvements required in including mortality and Cause of Death Statistics in VS
- ❑ Improvement in Management of data and systems linkages is key to achieving exponential data quality and accuracy in producing CR based VS

DISCUSSION

- ❑ Integrations may lead to further improvements in timely attaining valuable statistical information for processing and compiling of vital statistics monthly or quarterly briefs
- ❑ An immediate improvement regards development and implementation of a memorandum of agreement to govern data exchanges of civil registration records between Statistics Botswana and the Ministry of Nationality, Gender and Immigration in order to further secure data confidentiality and privacy.
- ❑ Build Capacity on mortality and Cause of Deaths to enable inclusion in VS Report tabulations mortality and Cause of death tables and graphs
- ❑ Require comprehensive audit to cover areas such as efficiency of registration offices in undertaking registrations as well as statistics office; overall data management and data sharing protocols; quality checks and validation of registration completeness rates of both births and deaths.

DISCUSSION

THANK YOU