Template for Developing a Vital Statistics Report

#  DRAFT

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# Preface

A preface is usually a short introduction to the report, why and for whom it is prepared, and who contributed. It may be signed by a high ranking officer, such as the Minister or Permanent Secretary of the Ministry under which the main contributing institution is placed, the Director General of the main contributing institution, and/or the head of the department writing the report, depending on the traditions of the institutions in the country.

# Acknowledgements

All parties who have contributed to the VSR should be mentioned here. This includes those who have contributed financially as well as those who have provided input and suggestions.

# Executive summary

Here, a short summary of main findings should be presented.

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# Abbreviations and acronyms

Here, the acronyms and abbreviations used in the VSR should be inserted.

|  |  |
| --- | --- |
| ABR | Abbreviation |
|  |  |
|  |  |
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|  |  |
|  |  |
|  |  |

# Chapter 1. Introduction and Background

This chapter should provide information about the objectives of writing the VSR, including the needs of the public, the Government and international organizations for data on births and deaths. A description of the background and rationale for the report should also be included.

There should be an explanation of the scope of the report, including the vital events covered and the year(s) for which the statistics are released. The content of each chapter of the report should also be described under this heading. If the same set-up is used as in this template, the major contents of the chapters would be as described.

Chapter 2 should describe the CR system, including history, legal background, administrative structure, local and regional systems, data flows, relationship between the CRVS authorities and agencies, incentives and disincentives for civil registration, and plans for further improvement of CRVS. The length of this chapter would depend on previous descriptions of the system and the capacity of the office.

Chapter 3 should present the quality and completeness of the CR data, in the form of tables and preferably, also graphs and maps. Both the absolute numbers of registered events should be shown, and if possible, also the completeness rates. Data for several years are useful for showing the time trends, at national and regional levels to see where the needs for improvement are the greatest.

Chapter 4 should be devoted to basic tables and analysis of registered live births and the most essential fertility indicators. Graphs and maps may also be presented.

Chapter 5 should cover tables and analysis of registered deaths as well as the most essential mortality indicators.

CoD statistics are presented in chapter 6, but the guidance provided for this section is not as detailed as for births and deaths. While more detailed and key information could have been included in this report, access to CoD data is often strongly linked to health or other institutions with other sets of regulations. Depending on the setting in the specific country, it might be more appropriate to publish a separate report for CoD statistics, which is done in some countries, such as South Africa.

A chapter on marriages and divorces should be included in the VSR if such data are recorded and available. Key information to include can be found in chapter 7.

Chapter 8 should show key summary tables and graphs from the CRVS system, based on the United Nations (2014) *Principles and Recommendations*, if possible combined with estimates of the population size for various groups.

* At the end of the VSR, there should be: An appendix on the definitions used, which also specifies the formulas used for computation of the different indicators presented.
* An appendix which includes copies of notification and registration forms for the vital events presented in the VSR.
* A list of references, including reports, selected available vital statistics reports, and other reference material.

# Chapter 2. Civil Registration System of the Country

Before presenting the data, the CRVS system should be presented to the audience as background information. This could be brief or long, depending on the availability of this information in earlier reports or elsewhere, the situation in the country, and the capacity of the office publishing the VSR.

The description should highlight the most important historical, legal, organizational, administrative and practical issues. To help in this description we have formulated a number of questions that would be useful to answer - or at least to address.

Many of the suggestions in this chapter are based on the United Nations *Principles and Recommendations for a Vital Statistics System*, the United Nations handbooks on civil registration and vital statistics systems[[1]](#footnote-1), ESCAP guidelines for setting and monitoring the goals and targets of the Regional Action Framework on CRVS in Asia and the Pacific, as well as VSRs from Botswana, Kenya and South Africa in the ECA region and India in the ESCAP region. A list of reference materials is also provided at the end of this document. Countries may find it useful to consult these publications. It may also be useful to refer to the tools and guidelines developed by ECA[[2]](#footnote-2), ESCAP[[3]](#footnote-3), WHO[[4]](#footnote-4), Center for Disease Control and Prevention[[5]](#footnote-5) and others, to review and assess CRVS systems, reports, reviews and assessments that have been undertaken in the country. Especially the ESCAP and WHO publications include a number of relevant questions and issues that would guide the development of a well-functioning CRVS system.

## History

It is useful for the audience of the VSR to learn about the history of civil registration as well as the production of vital statistics in the country. Key questions that should be addressed are:

* When was civil registration introduced and by whom?
* What where the reasons for introducing civil registration?
* Was civil registration initially including everybody or did it only include some regions or population groups?
* Have there been important changes in CR over time on issues such as legislation, organization and completeness?
* Does the country produce VSRs? How frequently are they published and what is the reference period covered by each report?

## Legal and administrative issues

Countries have different legal traditions, with some having very detailed legislation while others have a tradition of writing rather general laws but developing detailed regulations and directives. A reference to acts, laws, regulations and directives related to CRVS would be necessary, preferably with links to central documents available online. It would also be useful to note if the law specifies in detail on the items of information be collected at the time of registration. Such documents should be annexed to the report.

Key issues which should be addressed are listed below in italics:

* *Are there special laws or acts for registration of vital events?*

It would be useful to identify the laws and when they were introduced, and what the most important paragraphs are.

* *Does the legislation specify which vital events should be registered?*

Births and deaths are most commonly registered. The legislation may also say if registration of births and deaths is compulsory.

* *What are the time lines for vital event registration?*

In accordance with the legal framework of the country, when should vital events be registered? Is there a deadline for registering a vital event? Is there a difference in how soon an event is registered depending on where the vital event takes place and what kind of vital event it is? Is there a difference between birth and death registration? If yes, both should be specified. Generally, in actual practice, are vital events usually registered immediately or only some days, weeks or months afterwards? Is the time limit for late registration aligned to international recommendations of up to one year?

* *Does the legislation specify how the registration should be done?*

For example, is it usually the case that for institutional births the institution is responsible for providing a notification of a birth to the parents? What about non-institutional births? Are the parents responsible for obtaining a birth notification from a midwife, village chief or other respected person? Or do they have to register the birth elsewhere afterwards?

* Does the legislation specify which information should be included when registering?

Typical key information could be name of person, birth or death date, etc.

* *Does the legislation specify who can register? Can the vital events of all residents be registered or only those of citizens? Is it, for example, possible to register vital events for citizens of other countries, including refugees and stateless persons? If yes, under which conditions?*

In some countries, the law specifies that every birth should be registered but, in practice, persons with a foreign or an undetermined nationality are often denied the registration of their births.

* *Is it specified in the legislation which administrative units should register vital events, i.e. name of the institution, geographic level, etc.?*

For example, is it specified that registration should be done by local health facilities or by CR offices? Can vital events be registered outside the country? Where?

* *Are there any fees related to registration?*

Does the person registering a vital event have within the time stipulated by law or regulation to pay a fee to the Government Registrar? If possible, state where in the law this is specified and how it is regulated.

* *Is there a penalty for late and delayed registration? What is considered “late” in the law?*

Some countries have a timeline of 6 months for early registration whereas other countries have no timeline at all.

* *What do the relevant laws say about sharing and confidentiality of data?*

Is it specified which data can be shared with other institutions and which cannot? Are there exceptions for producing statistics or other areas? (See box 3.)

* *How are the registration laws implemented?*

If possible, say something about to what extent the intentions of the registration law are followed in different parts of the country and for different population groups.

* *Is there a system for issuing and administering ID cards which is integrated with the civil registration system, or is there a separate system for ID management? Are personal identification numbers used to identify individuals in* *the CR system and other systems?*

## Organizational structure, registration process and information flows

The description of the organizational structure should cover the two following issues:

* How the CRVS system is organized between agencies at the central level, who has which responsibilities, and the data flow between the different agencies
* How the different agencies are organized internally, the data flow between the different units and administrative levels, and their responsibilities.

In order for the audience to get a quick overview, it may be useful to present flow charts of the inter-linkages and data flows.

Figure 2.1 presents a possible way of showing the overall structure and data flows within and between agencies. It includes:

* Regional levels of registration offices: In some countries, there are only one or two levels, while in others there can be three or more. In the example, there are three levels. It is useful to mention the number of local registration offices as well as the number of regional offices.
* Flow of information from one unit to another: In the figure, it is assumed that the local health facility is the first point of registration. The arrows show how the information flows go from there. It is assumed that information is shared with the local CR office, but, in some countries, there are no registration offices at the local level. In some countries, information may also be sent directly to the Ministry of Health or the Vital Statistics Compiling Office.
* Data flow at central level: It is common that the data flow from the Civil Register to the Vital Statistics Compiling Office, as shown in the figure. In some countries, the Civil Registration Authority carries out the compilation and statistical work itself while in others, a Ministry, often the Ministry of Health, might be responsible.

Figure 2.1: Possible organizational chart presenting multisectoral health facility based engagements on different levels



It is possible to split the information in figure 2 into two or more different figures, presenting different levels or reporting schemes. Box 4 gives an example of how this is done in Kenya.

Figure 2.1 does not provide information about the responsibilities of the different actors involved. ECA has developed a general figure showing possible data flow, and the responsibilities of the different actors at central level (see figure 2.2).

Figure 2.2: Possible organizational chart showing the data flow and responsibilities of the different actors at central level



*Source:* <http://apai-crvs.org/>

### Registration process and information flows

In this section, following the overall presentation of the organization in the previous chapter, the processes and information flows should be presented in more detail.

The VSR, especially if it is published for the first time, should include a description of how a vital event is registered in the country. It may be useful to present the registration of births and deaths *separately*, as there are important differences between these events, although there are also similarities for events occurring at health facilities. A graph may be included here or in the respective vital events chapter on the data flows for each event. It may be important to provide separate charts for the registration processes of institutional and non-institutional events, i.e. events occurring outside health institutions. If the process is different for the different vital events, charts should be presented separately for each event, as shown in figures B.4.1 and B.4.2 for Kenya (box 4).

The description of the registration process should include the following key issues:

* W*here do the vital events usually occur? At home, at a medical facility or elsewhere?*

If there is available information, it is useful to know the share of births and deaths taking place at the different locations. These shares are quite different for births and deaths in most countries, so information should be included separately for both. A table or graph showing the figures by place of occurrence, such as in box 4, could be included here.

* *Where are the vital events usually registered?*

At a medical facility or at a local registration office? Can births and deaths be registered at medical institutions or only at local civil registration offices – or both? Are there differences between birth and death registration on this?

For vital events occurring in a health facility, the registration process is often initiated there, either by health personnel or by CR staff located there. It is important to describe the system that has been established for notification of the event, registration of the event, and possible certification of the event. The division of labour between the different institutions has to be clearly explained, describing the role of the health facility and what falls under the responsibility of the local CR office, and other roles, such as local government if they are involved in the process. For births (and deaths) occurring at home or elsewhere in the community, informants, that is, the affected family members (parents or next of kin), or those designated by law, need to initiate the registration process. This is usually done by reporting the event to the local registration office within the period required by law, this is important for collecting current vital events information.

The report should include a map or a table showing the different regional divisions and the registration service points in the country, including the lowest administrative unit where registration of vital events takes place. The table should ideally include regional codes, etc. A good example of this can be found in the KenyaVSR for2013, which shows a map of the sub-counties in Kenya and a list of local CR offices in each county (box 5).

* *How are the vital events usually registered?*

Information about a vital event is usually recorded at a local registration office. It is useful to know if this information is entered into a book, on a paper list, a separate paper form or slip for each event, a computer/electronic database, or any other means. If the data are computerized, are the data entered at a stand-alone computer or via Internet into a local, regional or national server? In cases that rely on paper forms, is all the information in the forms recorded and made available electronically in a database?

* Are there procedures for checking the quality of data?

Are there procedures for verification of information received and entered? Is there a supervisor who has as his/her responsibility to check that information has been entered correctly?

### **Late or delayed registration**

* How soon after the occurrence is the vital event registered? How is this related to the law on registration? What is the share of late registrations for births and deaths?

There are two issues with regard to late or delayed registration: The first issue is vital events that are registered after the deadline for registration according to the law of the country, called late or delayed registrations. There is no international recommendation on this and national laws usually range from three months (or less) to one year (or more). Some but far from all countries have introduced a special fee for late registrations. Such fees may encourage people to register earlier, but they may also have the effect to discourage some people from registering their vital events at all.

The second issue is registrations that arrive too late for inclusion in the annual (or monthly or quarterly) statistics. There is no international recommendation on this either. The Nordic countries, for example, have a deadline of 1st of February in the calendar year succeeding the year x under consideration. Vital event records that arrive after the first of February are included in the vital statistics for the current calendar year (x+1). This is more or less compensated for by events that arrive too late for the current year and which are included in the following year (x+2). But in periods with fast changes in demographic events such as births, the number of registered events for a year may be too low (or high). For most countries a cut-off date on 1st of February may be too soon. In Botswana, for example, “Timely registration are births that were registered within 60 days of occurrence as stipulated in the Births and Deaths Act.” (Statistics Botswana 2014).

A graph or table showing the proportion of vital events that are registered within the timelines set by the law would be useful. It would also be useful to know if in actual practice the vital events are registered immediately or only some days, weeks, months or years afterwards. Box 6 provides examples of how timelines are presented in South Africa and Botswana. In the VSR 2012 for Botswana, for example, there is a table and a chart showing whether the births were registered currently or late (i.e., occurred in previous calendar years). Another table shows how soon the births were registered (within one month, 1-3 months, etc.).

It may also be useful to make a table showing when (e.g. how late) the events which took place in a specific year were registered. Box 6 also provides an example of this.

* *It would be useful to mention if registration of births is linked to other public services such as immunization, use of other health services or enrolment to social security programmes.*

Some countries with low birth registration sometimes link registration to other public services in order to increase registration rates for older children or grown-ups. This may be considered as a kind of delayed registration of births. For the purpose of legal rights and protection, this is very useful. For vital statistics it is, however, far from ideal. One reason is that these delayed registrations cannot be used in vital statistics compilation.

Issuance of documentation

* *Does the institution where the vital event occurred issue a notification document on the birth or death to the relatives or those designated persons by law?*
* *Does the local registration office issue birth and death certificates or are these issued by another office? If yes, what is the procedure? Does the local civil registrar transmit the recorded information to the office responsible for issuing the certificates? How is this done – on paper or electronically?*

## **Transfer of records and information flow in the civil registration system**

Once the actual registration process has been described, it should be explained how the records are transferred from the local registration office (or medical institution) to a higher administrative level, regionally and/or nationally. In many countries, there are differences between the information flows of the vital events. If this is the case, the different processes should all be presented. A few key issues to consider are:

* *From which and to which office or institution are the records on vital events transferred? Is all information on the vital registration records transferred or only a part of them?*

For example, if the health sector is responsible for registration, are data from the vital registration records first transferred to the CR office at the local level or are they transferred directly to a regional health or CR office? These records can either be the original record of the registration document or a copy of this, or an aggregate of many records.

* *Are the transfers done electronically or on paper?*

In the previous chapter, specifications were made on how data were registered locally. If the registration was not done with an online system, are there different systems for recording the information at different organizational levels, e.g. on paper locally or regionally and electronically at the centre? Are all local offices reporting the civil events on paper or are some reporting electronically? Is the system electronic from the lowest administrative level where registration takes place to national level?

With regard to the following key points, there should be an agreement with the concerned stakeholder (CRO, MoH or NSO, etc.), preferably through a memorandum of understanding that should be updated from time to time.

* *If the information and data are transferred electronically, how is this done?*

What is the main approach for data transfer, online using Internet, by mobile phones or tablets, or offline with memory sticks or similar?

* *How often are the data transferred - daily, monthly, annually, or irregularly?*

Are there differences in the frequency of data transfer by reporting level and to whom the data are transferred? Are there regional differences in efficiency and delivery upon agreed time?

* *Are data transferred on an individual or aggregate level? How is confidentiality protected and maintained?*

This should also be presented for the different stages of the data transfer. Key information is whether the organization(s) that work on compiling vital statistics has access to micro data or not, and if yes, to which data they have access. This is because micro data make it easier to check for errors and prepare the relevant tables, as discussed in box 3. With aggregate data, there are very limited possibilities of checking the quality of the data received and it is usually not possible to design tables that deviate significantly from those received.

* *Are there systems for checking, editing and validating the data?*

Are there, for example, procedures for checking the quality of the information received from the local registration offices? If yes, which information and which offices? Who is responsible for the checking? Are the checks done at the regional or central level of the civil registration agency? What is the role of the statistical office in checking the data quality? Does the responsible organization carry out field visits, etc.? Are there systems in place for statistical editing and validation of the received data? See box 10 for a quick overview of data quality issues.

* Are there systems for ensuring data security?

Are, for example, the paper forms stored securely after information has been entered electronically in such a way that a verification of records can be done several months or years later? Are the electronic data stored in safe locations with stable power supply? Is access to the data limited to specified persons and with secure passwords? Are there back-up solutions for the electronic data?

### Organization of vital statistics production and dissemination

* *Once the data have been collected, who is responsible for processing and publishing the data?*

In most countries, there are two organizations at the national level that could be tasked with the processing and dissemination of vital statistics. These are either the civil registration authority or the national statistical office.

* In most countries, the statistical office has the main responsibility for compiling, analysing and publishing vital statistics. This is the case in countries such as Botswana, Ethiopia, Mozambique, Norway and Pakistan.
* In some countries, the production and dissemination of vital statistics is done by the civil registration agency (or the Ministry of Health) alone, as in India, or in collaboration with the NSO, as in in Kenya.
* In a few countries, both civil registration functions and the production and dissemination of vital statistics are the responsibility of the NSO, as in the Philippines. This was also the case in Norway from 1946 to 1964, when Statistics Norway was in charge of both. Between 1964 and 1990 the CPR was located within Statistics Norway and run jointly by the National Tax Administration (NTA) and Statistics Norway. The legal dimension of population registration was the main reason for its transfer from Statistics Norway to the Directorate of Taxes in 1991. There is, however, close cooperation between the two institutions and Statistics Norway receives daily a copy of all registration records.

## 2.4Incentives and disincentives for registration

It would be useful, but not absolutely necessary, to include a few paragraphs on factors which have influenced registration of vital events positively or negatively (often called incentives and disincentives) in the time period for which the report is valid. In box 9, we have included many examples of both incentives and disincentives which might provide input on what could be relevant for the contents of this chapter in the VSR.

# Chapter 3. Data Quality, Completeness and Definitions

## Quality of data

This chapter should first provide information about the approaches that are used when controlling data quality and processing data. The information about data quality may be short. Important information relates to:

* *Specifications in the legislation or overall statistical guidelines regarding data quality and how to make corrections*

There might be concrete specifications in the civil registration law. On a more general note, there might be guidelines within the national statistical system on how data should be cleaned. This will often be linked to quality assessment or quality assurance frameworks. If a specific method or system is used, this should be specified, as well as its main aspects.

* *Main procedures for checking for data errors*

Are there routines for quality control at the local registration offices? Is data quality control carried out on regional or national level?

* *Key methods used for improving quality*

A short description may be given of the measures that have been taken to improve data quality. If the data quality control is done at a central level, are there specific mechanisms for verification against the local level? (e.g., checks against original paper forms or with the persons who provided the information) How and how often? If not, have errors been corrected using other methods? Which ones?

In this template, we have included additional guidance in box 10 on how to check and improve data quality. The *United Nations* *Principles and Recommendations* for a VS system also provide useful information on quality assurance.

## **Completeness**[[6]](#footnote-6)

In this section, the completeness rates of birth and death registration at national and subnational level should be presented. This is important for two reasons:

* The rates alert the audience to discrepancies in completeness and provide a caution in the interpretation of statistics that are presented throughout the report, and
* They provide an objective baseline that can be used to measure and evaluate future progress in completeness.

Since the actual number of a vital event is usually not known, CR completeness needs to be calculated based on projections or estimates of the actual number (see box 24 on how to calculate the estimates). It is particularly important to include estimates of the proportion of the total number of births (and deaths) that is registered in the country and in each region and local administration. These proportions are essential indicators about CR completeness. If the proportions are low, the vital statistics based on registrations are less useful for planning.

### Completeness by group

The calculation of completeness rates should be done for the country as a whole and preferably for all the vital events presented in the report. Other groupings should also be considered if available:

* Gender
* Age
* Regional
* Urban/rural
* Place of occurrence
* Place of registration

However, it can be a challenge to get reliable and accurate denominator data at regional level especially if the census is not very recent. Moreover, subnational population projections tend to be quite inaccurate over time. Internal migration, for example, particularly rural-urban migration, is common in most countries but is not reported in most national registration systems. The estimated completeness rates may be influenced by unrecorded population changes caused by internal migration. It should be attempted to take this into account when the estimates are made.

The results can be shown using a table or a graph, such as table 3.1 for live births.

Table 3.1. Number and share of registered live births by region

|  |  |  |
| --- | --- | --- |
|  | Number of live births registered | Share of live births registered |
| Total |  |  |
| Region 1 |  |  |
| Region 2 |  |  |
| Region 3 |  |  |
| … |  |  |
| … |  |  |
| … |  |  |
| Region N |  |  |

Information on why there are differences between the different groups should be included, if available. For example, if there has been a campaign to improve birth registration in one region, this could be linked up with the regional completeness rate. Does it look like the completeness rate in this region is significantly higher than in other comparable regions? Other interesting issues to discuss relate to regional differences: how remote do people live, how is the access to health services in the region? What is the general level of education?

The illustrations from India and South Africa in box 12 show how completeness can be presented.

If available, completeness rates for other sub-populations, including vulnerable groups, could also be estimated and presented. Typical examples of this could be:

* Remote and hard to reach areas of the country
* Certain population groups (e.g. specific ethnic groups or refugees),
* Age of mother
* Previous number of births
* Level of education of mother and father

In order to estimate the levels of completeness for these sub-populations, data on the size of these subgroups are also needed, which is not always the case.

As emphasized earlier, it would improve the VSR if the results are discussed and analysed and not merely presented. This is important because it will provide the CR administration and policymakers with information on which areas or groups need special attention in order to achieve increased completeness.

### 3.2.2. Completeness rates over time

If VSRs have been published before or CR data are available for more than one year, the change in completeness over time should be presented and discussed, as shown in figure 3.5.

Table 3.2. Share of registered live births over time and by region

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Share of live births registered | Year 1 | Year 2 | … | Year N |
| Total |  |  |  |  |
| Region 1 |  |  |  |  |
| Region 2 |  |  |  |  |
| Region 3 |  |  |  |  |
| … |  |  |  |  |
| Region N |  |  |  |  |

Another aspect of completeness over time is linked to late registrations. In many countries, many births are not registered in the year of delivery, but one or more years later. It is therefore common that the completeness rates for children born a specific year increases over time. If available and relevant, a table or graph could be included which shows the increase in completeness over time for births occurring in one specific time period. This can give decision makers an understanding of when children are registered and possibly take action to improve timely registration. There are many ways of displaying this. Box 6 provides an example where the year of occurence is tabulated against the year of registration. An alternative way is to present the data as shown in table 3.3. below. With this approach, regional differences in late registration would also be visualized.

Table 3.3. Number of births by year of registration and region

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Share of live births registered | Year X | Year X+1 | … | Year X+N |
| Total |  |  |  |  |
| Region 1 |  |  |  |  |
| Region 2 |  |  |  |  |
| … |  |  |  |  |
| Region N |  |  |  |  |

## 3.3. Definitions and specifications

This section could also be called metadata, or information about the data. It is important for users to know the national definition of vital events and related background variables of all involved in the registration and processing of vital events data. This needs to be clearly specified either generally in an introductory chapter or for each of the vital events chapters, along with international definitions for comparison. The definitions and specifications are useful both for international stakeholders as it will clarify whether the data are comparable to data from other countries, and for national stakeholders in case there are different approaches nationally. Two examples:

* *Births: Which births are included, only live births or also still births? If live births, is the international definition used or are there national amendments? What about foetal deaths?*

The WHO definition of a live birth is as follows: “Live birth refers to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life - e.g. beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles - whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.”

* *Regional: Are the same definitions used for regional and local units by all Government bodies? Is there official agreement about the borders of all regions in the country?*

These questions might be especially relevant for smaller divisions. Also, urban and rural births may be defined differently. If yes, how it is defined in the report, if used, should be specified.

# Chapter 4. Births

In this chapter, data on registered live births should be presented. A combination of tables, graphs, maps and explanatory text will be useful for the audience. Linking back to earlier chapters, especially if completeness rates are low, should also be considered.

The tables and graphs to be presented will naturally depend on the variables collected when registering a birth. Box 15 provides a short overview of which variables are considered most important.

When considering which tables on births to include in the VSR, it is useful to look at the “Minimum list of tabulations” on live births in the *United Nations Principles and Recommendations*, as shown in Annex 2. This box includes a long list of detailed tables on births. If possible, all these tables should be included in the report. However, as mentioned in the previous box, some of the variables may not be available for some countries, especially for births which occur outside the health facilities. Some tables are also less important than others. Consequently, we are proposing a set of tables that we consider to be the most essential, especially in the first VSR(s) for a country. This set of essential tables is based on information usually available on birth notifications, registration sheets or birth registers. We have also considered the practice in countries in Africa and Asia that have already published VSRs. Gradually, the number and detail of the tables can be expanded, depending on the capacity of the CRVS authorities, the availability and quality of the data, and the needs of the country for planning, monitoring of the health sector, and other purposes.

It is important to make it clear in the VSR what the chapter on births covers. This template recommends that the chapter provides data on registered births. It is also important to emphasize that the chapter concerns live births only, if this is the case. Unless most of the births are registered by medical institutions, still births are probably so seriously underreported that it would be of little value for statistics, but they should at a minimum be reported by sex, data, maternal age and location, if available.

The main indicator, the total number of registered live births, should be published for as many years in the past as possible. The VSR could also present brief comments on the development of the number of registered live births in recent years. If possible there could be an attempt to distinguish changes in this number that are due to changes in the registration completeness, the number of women 15-49 years, and the changing fertility level (Total Fertility Rate). In addition to tables, graphs are an excellent way of communicating results.

As the list of tables recommended by the United Nations in Annex 2 indicates, live births should be presented for different subgroups. It is recommended that the totals are divided into subgroups for only one subgroup at a time in each table, as the table other­wise might be too complicated and difficult to grasp for the users. If the number of births in a subgroup is not known for all births, the number of unknowns (missing data) should be entered in a special column, marked *Unknown*, *Other* or *Missing*.

In the following section, more detail for some of the subgroupings are provided. Presentation of additional subgroups should be considered depending on data availability and stakeholder interests.

Region (province, district or municipality as appropriate)

The regional level to be chosen for tables and maps on regional division depends on:

* Administrative structure of the country
* Number and size of the administrative units. The most common names for administrative units in English are state, province, district, county and municipality. There may be special sub­divisions in large cities
* Availability of data and the general interest in regional data on live births. If there is a need to publish births for a large number of regional units, covering more than one page, the table could be put in an annex. Note that registration completeness may vary strongly between different regions. If possible, the registration completeness should be included together with the number of live births.

Tables could be made for one or more of three different definitions of region of birth:

* Place of occurrence
* Place of usual residence of the mother
* Place of registration

“Place of residence” is the most common definition when classifying births by place. Data on the number of births by place of usual residence are useful for studying the geographical distribution of birth. Birth rates, which can be calculated at subnational levels, are important for program planning, evaluation and research in many fields of application, such as health, education, population estimates and projection, and social and economic policy (*United Nations Recommendations*, p. 28). It is usually more important to have information about the geographical distribution of where women giving birth usually live, than where they happened to deliver or register the child.

However, United Nations (2014) also mentions that it may be useful to classify data on births by *both* place of occurrence and place of usual residence of the mother. This information may be used to see whether mothers are giving birth in the same civil division as that of their residence or in other geographical locations (*United Nations Recommendations*, p. 28).

Please note that in annex 2 most tables on fertility relate to place of usual residence of the mother. However, many countries do not collect information on place of usual residence of the mother and even if they do, they are not amenable to geographic coding and hence tabulation. In any case, it should always be specified when presenting a table or graph, which variable has been used for regional division. It may not be meaningful to compute fertility rates by place of occurrence as it is difficult to delineate and know the size of the population using the health facilities.

Table 4.1. Total number of live births by sex, incl. sex ratio at birth and site of delivery, 2012-2014

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Total** | Health facility | At home | Other |
| : |  |  |  |  |
| 2012 |  |  |  |  |
| 2013 |  |  |  |  |
| 2014 |  |  |  |  |

Source: Civil registration data

In this table, the place of occurrence is presented explicitly. This is useful for evaluating the need to expand a medical institution in an area, and also for assessing infant and maternal mortality. If data are available for more than one year, it is useful to present this so that changes and trends over time become more visible. Graphs can also be considered in this case.

Table 4.2. Live births by place of residence, region and urban–rural residence of the mother 201x

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Total** | Sex ratio | Completeness |
| Total |  |  |  |
| Region 1 |  |  |  |
| Region 2 |  |  |  |
| Region 3 |  |  |  |
| : |  |  |  |

Specify here how the births have been divided by regions, whether it is based on place of occurrence, place of registration or usual residence of the mother.

As shown in table 4.4, live births by region may be supplemented by other variables of interest, such as regional pattern in the sex ratio at birth registration completeness, if available. The table may also be combined with data on related variables, such as infant mortality.

#### ***Urban – rural***

The definition of urban and rural can vary and needs to be specified. It is most common to define urban and rural areas according to the administrative designation of some municipalities as cities, rather than on population size or density. Since the CR system is set up as a part of the administrative organization of the country, it is most likely that the classification of events as rural and urban will be linked to the existing administrative classification. There is usually little or no scope for the CR office or the NSO to redefine or reclassify events as rural and urban.

****Table 4.3. Crude Birth Rate****, 2012-2014

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Total** | Urban | Rural | Not known |
| : |  |  |  |  |
| 2012 |  |  |  |  |
| 2013 |  |  |  |  |
| 2014 |  |  |  |  |

Since this is a simple table it would be useful to include numbers for as many years as possible, to be able to study the time trends.

#### ***Gender***

Table 4.4 Registered live births by age of mother, 201x

|  |  |
| --- | --- |
|  | Total |
| 15-19 (and below 15) |  |
| 20-24 |  |
| 25-29 |  |
| 30-34 |  |
| 35-39 |  |
| 40-44 |  |
| 45+ |  |
| Total |  |

The sex ratio at birth is calculated as the number of boys per 100 girls. This number is usually in the order of 103-107 boys per 100 girls. Numbers very different from this range may indicate faulty registration procedures or gender-selective abortions. There may also be under-registration of girls (or boys) in some areas, although there is little evidence that this actually happens.

#### ***Birth indicators***

If data are available, the Vital Sattistics report should also present common birth-related indicators such as:

Crude birth rate

Sex ratio at birth

Low (or very low) birth weight (per cent)

Preterm live births (per cent)

How they can be calculated is presented in box 16

#### ***Characteristics of the mother***

Many characteristics of the mother recommended by P&R are rarely registered by civil registration, such as completed education, but if data are available, the educational level and the occupational status of the mother can be very useful information for policymakers.

The most commonly available information about the mother is:

* Age of mother
* Marital status
* Number of previous live births

As mentioned above, marital status of the mother can be discriminatory, leading to a serious problem for a person who has been given the label “illegitimate”.

Table 4.5 Registered live births by age of mother, 201x

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Total** | Urban | Rural | Age-specific fertility rates |
| 10-14 |  |  |  |  |
| 15-19 |  |  |  |  |
| 20-24 |  |  |  |  |
| 25-29 |  |  |  |  |
| 30-34 |  |  |  |  |
| 35-39 |  |  |  |  |
| 40-44 |  |  |  |  |
| 45-49 |  |  |  |  |
| 50+ |  |  |  |  |
| Not known |  |  |  |  |
| Total |  |  |  |  |

Age is usually defined as the age of the mother in completed years at the time of the delivery. Alternatively, age at the end of the year may be used. This is calculated as year of event (delivery) minus the mother’s year of birth.

Five-year age groups are the most common. One-year age groups may also be used. There are usually very few births below age 15 and above age 49, implying that these rows can usually be deleted. There are also commonly used indicators linked to the characteristics of the mother. These are:

* Age-specific fertility rate
* General fertility rate
* Total fertility rate.

 These indicators are important for several purposes, such as making population projections, and for assessing the number of births by women in high-risk groups, i.e., the youngest (under 20) and oldest (over 45). Box 16 specifies how these indicators can be calculated.

# Chapter 5. Deaths

In this chapter, the available registration data on deaths should be presented. A combination of tables, graphs and explanatory text will be useful for the audience. The data to be presented will naturally depend on the variables collected and their quality. As a guide, variables which are recommended by the United Nations are presented for deaths and for foetal deaths in box 18.

#### ***Death indicators***

**In addition to the general presentation of registered deaths, there are a few rates and indicators which are often used and demanded both by national and international stakeholders. Many are also part of the Sustainable Development Goals presented in the introductory guidelines, chapter IV, such as:**

* **Crude death rate**
* **Infant mortality rate (IMR)**
* **Under five mortality rate (U5MR)**
* **Maternal mortality rate (MMR)**
* **Age-specific mortality rates**
* **Death rates by age and sex (qx)**
* **Life expectancy at birth (LE, e0)**

**It may be very demanding to calculate these indicators, both regarding data requirements and methodology. Some of them are dependent on CoD information, such as the maternal mortality ratio. Box 19 provides short descriptions and how to calculate each of them. If available, these rates could be presented. However, if completeness rates are low and the quality of the rates uncertain, postponement of publication of these rates until later, perhaps in a separate report.**

Again, it should be emphasized that in settings with weak CR systems the top priority is to collect and disseminate data on all deaths by age, sex, data of occurrence and location. The example from South African (see box 20 below) shows age- and sex-specific mortality rates that can track the decline in HIV-related mortality.

# Chapter 6. Causes of death

Many countries have poor or non-existent CoD data. One reason for this is that a good determination of cause of death can only be done by a medical doctor. Most CR systems do not register medical certificates. CoD can also be ascertained by a verbal autopsy but this is of questionable reliability.

Nevertheless, with the same justification as for publishing incomplete data on births and deaths, beginning to publish what is available on CoD should be considered. This might increase the focus on data quality and the need for improvements in the registration system.

Several countries have chosen to publish CoD reports separately because the availability of data does not always concur with the availability of birth and death data. This is linked to differences in institutional arrangements and responsibilities. South Africa, for example, publishes statistics on deaths and cause of death together in a special report. See <http://www.statssa.gov.za/?page_id=1856&PPN=P0309.3&SCH=6377>. This template and guideline does not cover this topic as thoroughly as births and deaths, but there are plans to publish a separate CoD guide and template.

According to WHO (2010a), “A frequently used indicator of the quality of cause-of-death data is the percentage of all deaths for which the cause is classified as ill-defined (chapter XVIII of the ICD-10). Ill-defined causes are of no public health value. Also, where they are common, they will make the cause-of-death distribution unreliable, because the true causes of death are hidden and hence underestimated. Generally, it is often mentioned that the percentage of deaths for which the cause is ill-defined should be less than 10 per cent at ages 65 years and over, and less than 5 per cent at ages below 65 years. If the percentage of ill-defined causes has declined significantly, caution must be exercised when interpreting trends in specific causes (such as cancers or heart disease), because changes in death rates from these causes may be largely or entirely due to the redistribution effect from ill-defined to more-specific causes.”

WHO has published several publications on cause of death statistics that should be consulted, including *International Classification of Diseases* (WHO 2010), *Analysing mortality levels and causes of death (ANACoD)* (WHO 2011), and *Application of ICD-10 for low-resource settings initial cause of death collection: The Startup Mortality List* (WHO 2014). Moreover, the Training Course on Civil Registration and Vital Statistics Systems developed by the International Statistics Program of CDC, also has several modules addressing cause-of-death statistics. See <http://www.cdc.gov/nchs/isp/isp_fetp.htm>.

If causes-of-death statistics are to be included in the VSR, there should be a presentation of issues and statistics such as:

* System for classifying causes of death (preferably ICD-10)
* Reported causes of death
* Method of ascertaining the cause of death
* Broad groups of the underlying causes of death:
	+ communicable/perinatal/maternal
	+ non-communicable
	+ external causes
* Natural and non-natural causes of death
* Deaths by cause, age, and sex
* Major groups of causes of death as per Global Burden of Disease
* Broad groups of natural causes of death
* Non-natural causes of death
* Comparison between immediate, contributing and underlying causes of death

# Chapter 7. Marriages and Divorces

In this chapter, statistics on marriages, divorces and other marital changes may be presented if data on such events are registered. A combination of tables, graphs and explanatory text will be useful. Linkages to earlier chapters, especially the one on completeness, should also be considered.

It may be useful to start this section by mentioning how a marriage is defined in the country. The *United Nations Principles and Recommendations* say that a marriage is “the act, ceremony or process by which the legal relationship of spouses is constituted. The legality of the union may be established by civil, religious or other means as recognized by the laws of each country.” The Principles says that “Countries may wish to expand this definition to cover civil unions if they are registered...” and that “It is necessary to take into account customary unions (which are legal and binding under customary law) and extralegal unions, known as de facto or consensual unions.”

A divorce is defined as “the final legal dissolution of a marriage, that is, that separation of spouses which confers on the parties the right to remarriage under civil, religious and/or other provisions, according to the laws of each country.”

A legal contract of marriage may be dissolved by: (a) the death of one of the spouses, (b) a divorce decree or (c) cancellation (annulment).

The tables and graphs to be presented on marriage and divorce will depend on the variables collected when registering a birth. Annex 1 provides an overview of the variables that are considered most important; so if available, these should be considered when presenting information. Annex 2 included a list of tables recommended by P&R as well as some tables if indicators.

# Chapter 8. Summary Tables

At the end of the VSR, there may be a few summary tables that show the development of the major vital statistics indicators over time, for as many years as possible. United Nations (2014, p. 159) proposes a list of summary tables which also can be found in annex 2.

The tables recommended by the United Nations are important and efforts should be made to include as many as possible. Data on some of these variables may, however, not be available at all or there may be serious under-registration, in particular of foetal deaths, infant deaths, marriages and divorces. If data are not available by place of residence, the numbers may be tabulated by place of occurrence or registration.

The most essential of these tables is the last one, ST-9. See table 7.1.

Table 7.1 Time series of vital events, 201x

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | Live births | Deaths  | Infant deaths | Marriages | Divorces |
| : |  |  |  |  |  |
| 2012 |  |  |  |  |  |
| 2013 |  |  |  |  |  |
| 2014 |  |  |  |  |  |

If there are data on internal or external migrations they could be included in this table. Another essential summary table is one showing vital *rates*, based on the calculation explained in section 3.2. See table 7.2.

Table 7.2. Time series of vital rates, 201x

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year | Crude Birth Rate | Crude Death Rate | Population size  | Population growth  |
| : |  |  |  |  |
| 2012 |  |  |  |  |
| 2013 |  |  |  |  |
| 2014 |  |  |  |  |

To make this table, it is necessary to use denominators with counts or estimates of the population size. Section 3.2 explains how this can be done from population censuses and population projections.

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# Annex 1: Civil registration variables

Source: Table III.1, pp. 18-19, UN Principles and Recommendations.

Definitions and specifications are presented in Chapter III.D, pp. 24-48, P&R. Core topics are indicated by boldface (from P&R).

|  |  |
| --- | --- |
|  | **Birth registration variables** |
| **Number** | **Topic** | **Available from CR of birth** | **Available from other sources** | **Not available** | **Year(s) available** |
| (i) | **Characteristic of the event** |  |  |  |  |
| a | **Date of occurrence** |  |  |  |  |
| b | **Date of registration** |  |  |  |  |
| c | **Place of occurrence** |  |  |  |  |
| d | **Locality of occurrence**  |  |  |  |  |
| e | **Urban/rural occurrence**  |  |  |  |  |
| f | **Place of registration** |  |  |  |  |
| g | **Type of birth (i.e., single, twin, triplet, quadruplet or higher-multiple delivery)** |  |  |  |  |
| h | **Attendant at birth**  |  |  |  |  |
| i | Type of place of occurrence (hospital, home, etc.)  |  |  |  |  |
| (ii) | **Characteristics of the newborn** |  |  |  |  |
| a | **Sex** |  |  |  |  |
| b | **Weight at birth**  |  |  |  |  |
| (iii) | **Characteristics of the mother** |  |  |  |  |
| a | **Date of birth** |  |  |  |  |
| b | **Age**  |  |  |  |  |
| c | **Marital status** |  |  |  |  |
| d | **Child born in wedlock (legitimacy status of the child)**  |  |  |  |  |
| e | **Educational attainment**  |  |  |  |  |
| f | Literacy status |  |  |  |  |
| g | Ethnic and/or national group |  |  |  |  |
| h | Citizenship |  |  |  |  |
| i | Economic activity status |  |  |  |  |
| j | Usual occupation |  |  |  |  |
| k | Socioeconomic status |  |  |  |  |
| l | **Place of usual residence**  |  |  |  |  |
| m | **Locality of residence**  |  |  |  |  |
| n | **Urban/rural residence**  |  |  |  |  |
| o | **Duration of residence in usual place**  |  |  |  |  |
| p | Place of previous residence |  |  |  |  |
| q | **Place/country of birth**  |  |  |  |  |
| r | **Migrant status**  |  |  |  |  |
| s | Date of last menstrual cycle of the mother |  |  |  |  |
| t | Gestational age |  |  |  |  |
| u | Number of prenatal visits |  |  |  |  |
| v | Month of pregnancy prenatal care began |  |  |  |  |
| w | **Children born alive to mother during her entire lifetime**  |  |  |  |  |
| x | **Birth order or parity**  |  |  |  |  |
| y | Foetal deaths to mother during her entire lifetime |  |  |  |  |
| z | Date of last previous live birth |  |  |  |  |
| aa | **Foetal deaths to mother during her entire lifetime**  |  |  |  |  |
| ab | **Date of last previous live birth**  |  |  |  |  |
| ac | **Interval since last previous live birth**  |  |  |  |  |
| ad | **Date of marriage**  |  |  |  |  |
| ae | **Duration of marriage**  |  |  |  |  |
| (iv) | **Characteristics of the father (if known)** |  |  |  |  |
| a | **Date of birth**  |  |  |  |  |
| b | **Age**  |  |  |  |  |
| c | **Marital status**  |  |  |  |  |
| d | **Educational attainment**  |  |  |  |  |
| e | Literacy status |  |  |  |  |
| f | Ethnic and/or national group |  |  |  |  |
| g | Citizenship |  |  |  |  |
| h | Economic activity status |  |  |  |  |
| i | Usual occupation |  |  |  |  |
| j | Socioeconomic status |  |  |  |  |
| k | **Place of usual residence**  |  |  |  |  |
| l | **Locality of residence**  |  |  |  |  |
| m | **Urban/rural residence**  |  |  |  |  |
| (v) | **Characteristics of population at risk** | See P&R p. 48  |  |  |
|   |  |  |  |   |   |
|   | **Death registration variables** |  |  |   |   |
| **Number** | **Topic** | **Available from CR of births** | **Available from other sources** | **Not available** | **Year(s) available** |
| (i) | **Characteristics of the event** |  |  |  |  |
| a | **Date of occurrence** |  |  |  |  |
| b | **Date of registration** |  |  |  |  |
| c | **Place of occurrence**  |  |  |  |  |
| d | **Locality of occurrence**  |  |  |  |  |
| e | **Urban/rural occurrence**  |  |  |  |  |
| f | **Place of registration**  |  |  |  |  |
| g | **Cause of death**  |  |  |  |  |
| h | Manner of death |  |  |  |  |
| i | Whether autopsy findings were used to establish cause of death |  |  |  |  |
| j | Death occurring during pregnancy, childbirth and puerperium (for females 15-49 years of age) |  |  |  |  |
| k | **Certifier**  |  |  |  |  |
| l | **Type of certification**  |  |  |  |  |
| m | Type of place of occurrence (hospital, home, etc.)  |  |  |  |  |
| (ii) | **Characteristics of the decedent** |  |  |  |  |
| a | **Date of birth**  |  |  |  |  |
| b | **Age**  |  |  |  |  |
| c | **Sex**  |  |  |  |  |
| d | **Marital status**  |  |  |  |  |
| e | Educational attainment |  |  |  |  |
| f | Literacy status |  |  |  |  |
| g | Ethnic and/or national group |  |  |  |  |
| h | Citizenship |  |  |  |  |
| i | Economic activity status |  |  |  |  |
| j | Usual occupation |  |  |  |  |
| k | Socioeconomic status |  |  |  |  |
| l | Whether birth was registered (for deaths under 1 year of age) |  |  |  |  |
| m | Born in wedlock (for deaths under 1 year of age) |  |  |  |  |
| n | Legitimacy status (for deaths under 1 year of age) |  |  |  |  |
| o | **Place of usual residence**  |  |  |  |  |
| p | **Place of usual residence of the mother (for deaths under 1 year of age)**  |  |  |  |  |
| q | **Locality of residence**  |  |  |  |  |
| r | **Urban/rural residence**  |  |  |  |  |
| s | Duration of residence in usual (present) place |  |  |  |  |
| t | Place of previous residence |  |  |  |  |
| u | Place of birth |  |  |  |  |
| v | Migrant status |  |  |  |  |
| (iii) | **Characteristics of population at risk** | See P&R p. 48  |  |  |
|   |  |  |  |  |  |
|   | **Foetal death registration variables** |  Still births? |   |   |
| **Number** | **Topic** | **Available from CR of births** | **Available from other sources** | **Not available** | **Year(s) available** |
| (i) | **Characteristics of the event** |  |  |  |  |
| a | **Date of occurrence (of foetal delivery)**  |  |  |  |  |
| b | **Date of registration**  |  |  |  |  |
| c | **Place of occurrence**  |  |  |  |  |
| d | **Locality of occurrence**  |  |  |  |  |
| e | **Urban/rural occurrence**  |  |  |  |  |
| f | **Place of registration**  |  |  |  |  |
| g | Type of birth (i.e., single, twin, triplet, quadruplet, or higher-multiple delivery) |  |  |  |  |
| h | Attendant at birth |  |  |  |  |
| i | Certifier |  |  |  |  |
| j | Type of certification |  |  |  |  |
| k | Cause of foetal death |  |  |  |  |
| l | Type of place of occurrence (hospital, home, etc.) |  |  |  |  |
| (ii) | **Characteristics of the foetus** |  |  |  |  |
| n | **Sex**  |  |  |  |  |
| a | Delivered in wedlock |  |  |  |  |
| b | Legitimacy status |  |  |  |  |
| c | Weight at delivery |  |  |  |  |
| d | Date of last menstrual period of the mother |  |  |  |  |
| e | Gestational age |  |  |  |  |
| (iii) | **Characteristics of the mother** |  |  |  |  |
| a | **Date of birth**  |  |  |  |  |
| b | **Age**  |  |  |  |  |
| c | Number of prenatal visits |  |  |  |  |
| d | **Children born alive to mother during her entire lifetime**  |  |  |  |  |
| e | **Birth order or parity**  |  |  |  |  |
| f | Children born to mother during her entire lifetime and still living |  |  |  |  |
| g | **Foetal deaths to mother during her entire lifetime**  |  |  |  |  |
| h | **Date of last previous live birth**  |  |  |  |  |
| i | **Interval since last previous live birth**  |  |  |  |  |
| j | **Date of marriage**  |  |  |  |  |
| k | **Duration of marriage**  |  |  |  |  |
| l | Educational attainment |  |  |  |  |
| m | Literacy status |  |  |  |  |
| n | Economic activity status |  |  |  |  |
| o | Usual occupation |  |  |  |  |
| p | Socioeconomic status |  |  |  |  |
| q | Ethnic and/or national group |  |  |  |  |
| r | Citizenship |  |  |  |  |
| s | **Place of usual residence** |  |  |  |  |
| t | **Locality of residence**  |  |  |  |  |
| u | **Urban/rural residence** |  |  |  |  |
| v | Duration of residence in usual (present) place |  |  |  |  |
| x | Place of previous residence |  |  |  |  |
| y | Place of birth |  |  |  |  |
| z | Migrant status |  |  |  |  |
| (iv) | **Characteristics of the father** |  |  |  |  |
| a | **Date of birth**  |  |  |  |  |
| b | **Age**  |  |  |  |  |
| c | Education attainment (30) ¦ |  |  |  |  |
| d | Literacy status (31) ¦ |  |  |  |  |
| e | Economic activity status (34) ¦ |  |  |  |  |
| f | Usual occupation (35) ¦ |  |  |  |  |
| g | Socioeconomic status |  |  |  |  |
| h | **Place of usual residence**  |  |  |  |  |
| i | **Locality of residence**  |  |  |  |  |
| j | **Urban/rural residence**  |  |  |  |  |
| k | Duration of residence in usual (present) place |  |  |  |  |
| l | Place of previous residence |  |  |  |  |
| m | Place of birth |  |  |  |  |
| n | Migrant status |  |  |  |  |
| o | Ethnic and/or national group |  |  |  |  |
| p | Citizenship |  |  |  |  |
| (v) | **Characteristics of population at risk** | See P&R p. 48  |  |  |
|  |  |  |  |  |  |
|  | **Marriage registration variables** |  |  |  |  |
| **Number** | **Topic** | **Available from CR of marriages** | **Available from other sources** | **Not available** | **Year(s) available** |
| (i) | **Characteristics of the event** |  |  |  |  |
| a | **Date of occurrence (of foetal delivery)**  |  |  |  |  |
| b | **Date of registration**  |  |  |  |  |
| c | **Place of occurrence**  |  |  |  |  |
| d | **Locality of occurrence**  |  |  |  |  |
| e | **Urban/rural occurrence**  |  |  |  |  |
| f | **Place of registration**  |  |  |  |  |
| g | Type of marriage |  |  |  |  |
| (ii) | **Characteristics of bride and groom (separately)** |  |  |  |
| a | **Date of birth** |  |  |  |  |
| b | **Age** |  |  |  |  |
| c | Marital status (previous) |  |  |  |  |
| d | Number of previous marriages |  |  |  |  |
| e | Marriage order |  |  |  |  |
| f | Educational attainment |  |  |  |  |
| g | Literacy status |  |  |  |  |
| h | Economic activity status |  |  |  |  |
| i | Usual occupation |  |  |  |  |
| j | Socioeconomic status |  |  |  |  |
| k | Ethnic and/or national group |  |  |  |  |
| l | Citizenship |  |  |  |  |
| m | **Place of usual residence** |  |  |  |  |
| n | **Locality of residence** |  |  |  |  |
| o | **Urban/rural residence** |  |  |  |  |
| p | Duration of residence in usual (present) place |  |  |  |  |
| q | Place of previous residence |  |  |  |  |
| r | Place of birth |  |  |  |  |
| s | Migrant status |  |  |  |  |
| (iii) | **Characteristics of population at risk** | See P&R p. 48  |  |  |  |
|  |  |  |  |  |  |
|  | **Divorce registration variables** |  |  |  |  |
| **Number** | **Topic** | **Available from CR of divorces** | **Available from other sources** | **Not available** | **Year(s) available** |
| (i) | **Characteristics of the event** |  |  |  |  |
| a | **Date of occurrence** |  |  |  |  |
| b | **Date of registration** |  |  |  |  |
| c | **Place of occurrence** |  |  |  |  |
| d | **Locality of occurrence** |  |  |  |  |
| e | **Urban/rural occurrence** |  |  |  |  |
| f | **Place of registration** |  |  |  |  |
| (ii) | **Characteristics of divorcees (husband and wife separately)** |  |  |
| a | Date of birth |  |  |  |  |
| b | Age |  |  |  |  |
| c | Type of marriage being dissolved |  |  |  |  |
| d | Number of dependent children of divorced persons |  |  |  |  |
| e | Number of children born alive to the marriage being dissolved |  |  |  |  |
| f | **Date of marriage** |  |  |  |  |
| g | **Duration of marriage** |  |  |  |  |
| h | Mode of dissolution of previous marriage |  |  |  |  |
| i | Number of previous marriages |  |  |  |  |
| j | Marriage order |  |  |  |  |
| k | Educational attainment |  |  |  |  |
| l | Literacy status |  |  |  |  |
| m | Economic activity status |  |  |  |  |
| n | Usual occupation |  |  |  |  |
| o | Socioeconomic status |  |  |  |  |
| p | Ethnic and/or national group |  |  |  |  |
| q | Place of usual residence |  |  |  |  |
| r | Locality of residence |  |  |  |  |
| s | Urban/rural residence |  |  |  |  |
| t | Duration of residence in usual (present) place |  |  |  |  |
| u | Place of previous residence |  |  |  |  |
| v | Place of birth |  |  |  |  |
| w | Migrant status |  |  |  |  |
| x | Place of occurrence of marriage being dissolved |  |  |  |  |
| (iii) | **Characteristics of population at risk** | See P&R p. 48  |  |  |

# Annex 2: Tabulation plan

This annex includes the tables recommended by Principles and Recommendations as well as other tables proposed in these Guidelines. It may be useful to go through these lists when making the tabulation plan and to include the years(s) for which the tables can (or should) be made. The choice and numbering of the tables is up to the country.

Place of usual residence is commonly considered to be the most important location variable. The number of administrative units to be included depends on the administrative structure of the CR system and the number of units. If the number of units is large a more detailed table may be included as an annex to the vital statistics report and/or a web table.

The most important of the completeness tables are the national estimates of completeness rates for each vital event. They should be estimated for as many years as possible and by sex if the data are available. The regional rates are important for monitoring the registration level at regional levels, but should be given second priority. They are also more complicated to estimated and usually less reliable, since regional population estimates are usually not so easily available, unless a census has recently been conducted.

**A2.1 Completeness tables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table num­ber** | **Num­ber in P&R** | **Completeness rate for / Table content** | **Pos­­sible: Yes/ No** | **Possible if CR data are com­­bined with other data sources** | **Year(s)** |
|  |  | **First priority tables** |  |  |  |
| C-1 |  | Completeness of registration of births |  |  |  |
| C-2 |  | Completeness of registration of births by sex and region |  |  |  |
| C-5 |  | Completeness of registration of deaths |  |  |  |
| C-6 |  | Completeness of registration of deaths by sex and region |  |  |  |
|  |  | **Second priority tables** |  |  |  |
| C-3 |  | Completeness of registration of children under 5  |  |  |  |
| C-4 |  | Completeness of registration of children under 5 by sex and region |  |  |  |
| C-7 |  | Completeness of registration of causes of death  |  |  |  |
| C-8 |  | Completeness of registration of causes of deaths by sex and region |  |  |  |
| C-9 |  | Completeness of registration of marriages |  |  |  |
| C-10 |  | Completeness of registration of marriages by sex and region |  |  |  |
| C-11 |  | Completeness of registration of divorces |  |  |  |
| C-12 |  | Completeness of registration of divorces by sex and region |  |  |  |

**A2.2 Live births tables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table num­ber** | **Num­ber in P&R** | **Table content** | **Pos­­sible: Yes/ No** | **Possible if CR data are com­­bined with data from other sources** | **Year(s)** |
|  |  | **First priority tables** |  |  |  |
| 4.1 | IB-1 | Total number of live births by sex, incl. sex ratio at birth and site of delivery1 |  |  |  |
| 4.2 | ST-3 | Live births by place of residence1 and urban–rural residence of the mother1 |  |  |  |
| 4.3 | LB-9 | Live births by age of mother (15-19, 20-24 … 45-49) |  |  |  |
| 4.4 | LB-1 | Live births by place of occurrence and sex of child1 |  |  |  |
| 4.5 | LB-2 | Live births by place of occurrence and place of usual residence of mother |  |  |  |
|  |  | **Second priority tables** |  |  |  |
|  | LB-3 | Live births by place of registration, month of occurrence and month of registration |  |  |  |
|  | LB-9 | Live births by place of usual residence and age of mother, sex of child and live-birth order |  |  |  |
|  | LB-11 | Live births by place of birth, place of usual residence and age of mother |  |  |  |
|  | LB-13 | Live births by place of occurrence, site of delivery and attendant at birth |  |  |  |
|  | LB-4 | Live births by month, place of occurrence and place of usual residence of mother |  |  |  |
|  | LB-5 | Live births by age, place of usual residence and marital status of mother |  |  |  |
|  | LB-6 | Live births by age of father |  |  |  |
|  | LB-7 | Live births by place of usual residence, age and educational attainment of mother |  |  |  |
|  | LB-8 | Live births by educational attainment and age of mother, and live-birth order |  |  |  |
|  | LB-10 | Live births by live-birth order and interval between last and previous live births to mother |  |  |  |
|  | LB-12 | Live births by place of usual residence and age of mother and legitimacy status |  |  |  |
|  | LB-14 | Live births by site of delivery, attendant at birth and birth weight |  |  |  |
|  | LB-15 | Live births by birth weight and place of usual residence and educational attainment of mother |  |  |  |
|  | LB-16 | Live births by gestational age, place of usual residence of mother and birth weight |  |  |  |
|  | LB17- | Live births by birth weight, place of usual residence of mother and month in which prenatal care began |  |  |  |
|  | LB-18 | Live births by age and place of usual residence of mother and month in which prenatal care began |  |  |  |
|  | LB-19 | Live births by live-birth order, place of usual residence of mother and month in which prenatal care began |  |  |  |
|  | LB-20 | Live births by place of usual residence of mother and duration of residence at the LB-current usual residence |  |  |  |

1 May also include the sex ratio at birth.

**Table A2.3. Indicators of Live Births**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table num­ber** | **Number in Guide­lines** | **Table content** | **Pos­­sible: Yes/ No** | **Possible if CR data are com­­bined with data from other sources** | **Year(s)** |
|  |  | **First priority tables** |  |  |  |
|  | IB-1 | Crude Birth Rate (CBR) |  |  |  |
|  | IB-2 | Age-specific Birth Rates (ASBR) for 5-year age groups |  |  |  |
|  | IB-3 | Total Fertility Rate (TFR) |  |  |  |
|  |  | **Second priority tables** |  |  |  |
|  | IB-4 | General Fertility Rate (GFR) |  |  |  |
|  | IB-5 | Net Reproduction Rate (NRR) |  |  |  |
|  | IB-6 | Mean (or median) age at childbearing  |  |  |  |
|  | IB-7 | Mean (or median) age at first birth |  |  |  |
|  | IB-8 | Proportion of births born in marriage |  |  |  |
|  | IB-9 | Children Ever Born |  |  |  |

**A2.4 Death tables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table num­ber** | **Num­ber in P&R** | **Table content** | **Pos­­sible: Yes/ No** | **Possible if CR data are com­­bined with data from other sources** | **Year(s)** |
|  |  | **First priority tables** |  |  |  |
|  | DE-1 | Deaths by place of usual residence and sex of decedent |  |  |  |
|  | DE-2 | Deaths by place of occurrence and place of usual residence and sex of decedent |  |  |  |
|  | DE-4 | Deaths by place of registration, month of occurrence and month of registration |  |  |  |
|  | DE-5 | Deaths by place of occurrence and site of occurrence |  |  |  |
|  | DE-6 | Deaths by place of usual residence, age and sex of decedent |  |  |  |
|  |  | **Second priority tables** |  |  |  |
|  | DE-3 | Deaths by month and place of occurrence and place of usual residence of decedent |  |  |  |
|  | DE-7 | Deaths by age, sex, place of usual residence and marital status of decedent |  |  |  |
|  | DE-8 | Deaths by place of usual residence, age, sex and educational attainment of decedent |  |  |  |
|  | DE-9 | Deaths by sex, cause of death, place of usual residence and age of decedent |  |  |  |
|  | DE-10 | Deaths by month of occurrence and cause of death |  |  |  |
|  | DE-11 | Deaths by place of occurrence, sex of decedent and type of certification |  |  |  |
|  | DE-12 | Maternal deaths by cause of death and age of woman |  |  |  |
|  | DE-13 | Deaths by age and type of usual activity of decedent |  |  |  |

**A2.5 Indicators of deaths tables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table num­ber** | **Num­ber in P&R** | **Table content** | **Pos­­sible: Yes/ No** | **Possible if CR data are com­­bined with data from other sources** | **Year(s)** |
|  |  | **First priority tables** |  |  |  |
|  | ID-1 | Total number of deaths by sex |  |  |  |
|  | ID-2 | Crude Death Rate (CDR) |  |  |  |
|  | ID-3 | Infant Mortality Rate (IMR) |  |  |  |
|  | ID-4 | Under 5 Mortality Rate (U5MR) |  |  |  |
|  | ID-5 | Maternal Mortality Rate (MMR) |  |  |  |
|  | ID-6 | Age-specific Death Rates (mx) for 5-year age groups by sex |  |  |  |
|  | ID-7 | Life expectancy at birth (e0) |  |  |  |
|  |  | **Second priority tables** |  |  |  |
|  | ID-8 | Life table for each sex |  |  |  |

**A2.6 Marriages and divorces tables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table num­ber** | **Num­ber in P&R** | **Table content** | **Pos­­sible: Yes/ No** | **Possible if CR data are com­­bined with data from other sources** | **Year(s)** |
|  | MA-1 | Marriages by place of usual residence of groom and month of occurrence |  |  |  |
|  | MA-2 | Marriages by place of usual residence of groom and age of bride and of groom |  |  |  |
|  | MA-3 | Marriages by age and previous marital status of bride and of groom |  |  |  |
|  | MA-4 | Marriages by educational attainment of bride and of groom |  |  |  |
|  | MA-5 | Marriages by occupation of bride and of groom |  |  |  |
|  | DI-1 | Divorces by place of usual residence of husband |  |  |  |
|  | DI-2 | Divorces by age of husband and wife |  |  |  |
|  | DI-3 | Divorces by duration of marriage and age of husband and of wife |  |  |  |
|  | DI-4 | Divorces by duration of marriage and number of dependent children |  |  |  |
|  | DI-5 | Divorces by educational attainment of husband and of wife |  |  |  |
|  | DI-6 | Divorces by occupation of husband and of wife |  |  |  |
|  | DI-7 | Divorces by number of previous marriages of husband and of wife |  |  |  |
|  | ST-7 | Time series of marriages by place of usual residence of groom (past 10 years) |  |  |  |
|  | ST-8 | Time series of divorces by place of usual residence of husband (past 10 years) |  |  |  |

**A2.7 Indicators of marriages and divorces tables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table num­ber** | **Number in Guide­lines** | **Table content** | **Pos­sible (Yes/ No)** | **Possible if CR data are com­­bined with data from other sources** | **Year(s)** |
|  |  | **First priority tables** |  |  |  |
|  | MI-1 | Crude Marriage Rate and Crude Divorce Rate |  |  |  |
|  | MI-2 | Mean age at first marriage |  |  |  |
|  | MI-3 | Mean age at divorce |  |  |  |
|  |  | **Second priority tables** |  |  |  |
|  | MI-4 | Proportion of marriages ending in divorce |  |  |  |

**A2.8 Summary tables**

The tables marked with a star may be more appropriate in the chapter on each vital event.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table num­ber** | **Num­ber in P&R** | **Table content** | **Pos­­sible: Yes/ No** | **Possible if CR data are com­­bined with data from other sources** | **Year(s)** |
|  | ST-1 | Live births, deaths, infant deaths, foetal deaths, marriages and divorces by place of usual residence |  |  |  |
|  | ST-2 | Crude birth rate, crude death rate, infant mortality rate by sex, foetal mortality rate, crude marriage rate and crude divorce rate, by place of usual residence |  |  |  |
|  | ST-3 | Time series of live births by place of usual residence of mother (past 10 years)\* |  |  |  |
|  | ST-4 | Time series of deaths by place of usual residence of decedent (past 10 years)\* |  |  |  |
|  | ST-5 | Time series of infant deaths by place of usual residence of mother (past 10 years)\* |  |  |  |
|  | ST-6 | Time series of foetal deaths by place of usual residence of mother (past 10 years)\* |  |  |  |
|  | ST-7 | Time series of marriages by place of usual residence of groom (past 10 years)\* |  |  |  |
|  | ST-8 | Time series of divorces by place of usual residence of husband (past 10 years)\* |  |  |  |
|  | ST-9 | Times series of vital events in the country (past 10 years) |  |  |  |

# Annex 3: Registration forms

The VSR should attach the notification and registration forms for births and deaths and other relevant CRVS forms and documents, including forms for transferring aggregate data to the statiscal office. The forms should be the original forms in the official language(s) of the country, with translations into English if available.

# Annex 4: Definitions

It is useful to include a list of definitions used in the VSR, especially for terms with varying definitions internationally, such as for live births and completeness of vital registration, including the formula for estimating the completeness rates.

1. The six most recent volumes of *Handbook on Civil Registration and Vital Statistics Systems* focus on the following themes:

	1. Management, Operation and Maintenance (1998)
	2. Preparation of a Legal Framework (1998)
	3. Developing Information, Communication and Education (1998)
	4. Policies and Protocols for the Release and Archiving of Individual Records (1998)Computerization (1998)

Training (2002)

These handbooks can be downloaded from <http://unstats.un.org/unsd/demographic/standmeth/handbooks/default.htm> [↑](#footnote-ref-1)
2. <http://www.uneca.org/sites/default/files/uploaded-documents/Statistics/CRVS/assessment_tool_en.pdf> [↑](#footnote-ref-2)
3. <http://www.unescap.org/resources/guidelines-setting-and-monitoring-goals-and-targets-regional-action-framework-civil-0> , [http://www.unescap.org/our-work/statistics/civil-registration-and-vital-statistics/about or getinthepicture.org](http://www.unescap.org/our-work/statistics/civil-registration-and-vital-statistics/about%20or%20getinthepicture.org) [↑](#footnote-ref-3)
4. <http://www.uq.edu.au/hishub/docs/WP01/WP_01.pdf> and or <http://www.emro.who.int/civil-registration-statistics/assesment/crvs-rapid-assessments.html> [↑](#footnote-ref-4)
5. <http://www.cdc.gov/nchs/isp/isp_fetp.htm> [↑](#footnote-ref-5)
6. Most of this section is based on the *Kenya Annual Vital Statistics Report, 2013* and on ESCAP (2015). [↑](#footnote-ref-6)