WEST AFRICAN HEALTH ORGANIZATION


# 2019

# HEALTH SITUATION IN THE ECOWAS REGION

West African Health Organization

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# ACRONYMS AND ABBREVIATIONS

| ABBREVIATION | DEFINITION |
|---|---|
| ANC | Antenatal Consultation |
| ARV | Antiretroviral |
| ARVT | Antiretroviral Treatment |
| CAPS | *Leadership Capacity Strengthening* |
| ECOWAS | Economic Community of West African States |
| EmONC | Emergency Obstetric and New-born Care |
| EPD | Epidemic-Prone Disease |
| HIS | Health Information System |
| HIV | The Human Immunodeficiency Virus |
| IPT | Intermittent Preventive Treatment of Malaria |
| NCDC | Nigerian Centre for Disease Control |
| NHIS | National Health Information System |
| PMTCT | Prevention of Mother-to-Child Transmission of HIV |
| RAD | *Regional Action Through Data* |
| RCDSC | Regional Centre for Surveillance and Disease Control |
| REDISSE | *Regional Disease Surveillance and Systems Enhancement* |
| TB | Tuberculosis |
| TFP | Technical and Financial Partner |
| WAHO | West African Health Organisation |

# FOREWORD

**Quality health information is critical to the prioritization, monitoring and evaluation of public health actions.**

Every year, WAHO produces a health situation report on the health situation in the ECOWAS region. The yearly report aims to share information coming directly from the countries for monitoring the performance of their health systems.

The report will also enable countries take ownership of the process, and thereby perpetuate the practice of preparing annual reports on the health situation of each of the ECOWAS member states.

This year, the "2019 health situation report" is being published for wide consumption as a booklet, but will also be available electronically.

Without a doubt, the production of this document greatly demonstrates an ongoing desire to share information on the region's health situation among the population.

The success and sustainability of the publication will therefore, largely depend on the extent to which it can help contribute to strengthening the health systems of member states, and on the continuous improvement of the quality of data shared by the National Health Information System (NHIS) of each country.

We believe that the efficient use of the regional health data sharing platform made available to countries since the end of 2014 will help achieve of this objective.

On behalf of the staff and management of WAHO, I thank and applaud all the various stakeholders, who contributed to the preparation of this report. We particularly thank the staff of the Ministries of Health, who assisted with the data collection.

WAHO is also grateful to USAID and the World Bank for their significant technical and financial support, through the "Regional Action through Data" (RAD) and the Regional Disease Surveillance Systems Enhancement (REDISSE) Projects respectively; both of which contribute to our health systems progress.

We are aware that this document can be improved and therefore remain open to your feedback to that effect.

**Prof Stanley OKOLO**
*Director General*

# 1. INTRODUCTION

The organisation, management and use of health information systems for decision making have been a great challenge for developing countries. ECOWAS countries in particular have, therefore, undertaken several initiatives to strengthen this important aspect of health systems management.

Since its establishment, the West African Health Organisation has continued to design initiatives and actions aimed at strengthening and/or maintaining strong and resilient health information systems that are capable of producing and making available quality information for timely decision-making. To that effect, a regional platform was set up, based on the DHIS2 technology. The platform helps to collect, manage and share, at the regional level, information on epidemic-prone diseases, and on many routine indicators, thereby facilitating mutual access to information among countries of the community.

Having set up the systems for collecting and managing routine information, it is important to ensure that they are enhanced. "The Health Situation in ECOWAS Countries" report is one of the 5 health information products that WAHO intends to use to disseminate health information within ECOWAS. Its main objective is to share information on the performance of healthcare systems of the 15 member countries every year. As a result, the main source of data is the national routine health information systems.

This document will summarize the main indicators characterizing the availability of services and their operational capacities, the coverage of priority health interventions, the use and quality of care, and the main causes of morbidity and mortality. It will present an overview of the 15 national health systems of ECOWAS. The data presented was collected from the countries in the year 2019 and cover the services of the year 2018. Data from national routine health information systems, for the time being, could only be available in the second quarter of the following year for faster countries.

This first experience also suffered much delay due to organisational challenges. Then with the COVID-19 pandemic, the document could only be released much later. However, it still remains highly vital, given the originality of the information available at the regional level.

Results of the analysis are categorized as follows:

- Demographic Indicators
- Availability of health care services
- Use of services (prevention and care)
- Reasons for medical consultation and causes of death
- Epidemic-prone diseases.

It is WAHO's wish that countries will adopt this document and that it occupies an important place among the tools for monitoring the performance of their health systems, to allow for more informed and better guided decisions..

# 2. METHODOLOGY

All the production stages of this document were executed with the contribution of health information systems managers from the 15 Member States. The stages range from validating collection tools and tracking indicators, to collecting data, validating them and finally validating the results.

The data presented in this report were provided by the countries. An Excel sheet was been sent to all countries (WAHO Liaison Officers and NHIS Managers) between June and September 2019 for the collection of year 2018 service data. Data verification, correction and validation were carried out between October and December 2019. The data verification and correction process consisted of a series of exchanges between WAHO's HIS team members and national HIS managers, with the objective of improving the completeness and accuracy of the data finally presented here.

The annual meeting of National HIS Managers with technical and financial partners (PTF) held in Banjul from 27 to 30 January, 2020 (having been postponed twice between October and December 2019), was an avenue for validating results of the analysis between countries and partners. Each country's delegation had time to present their data, receive feedback from counterparts and, based on the feedback, make any final modifications required. For some, there was need to give an additional two weeks after the meeting to complete/correct their data.

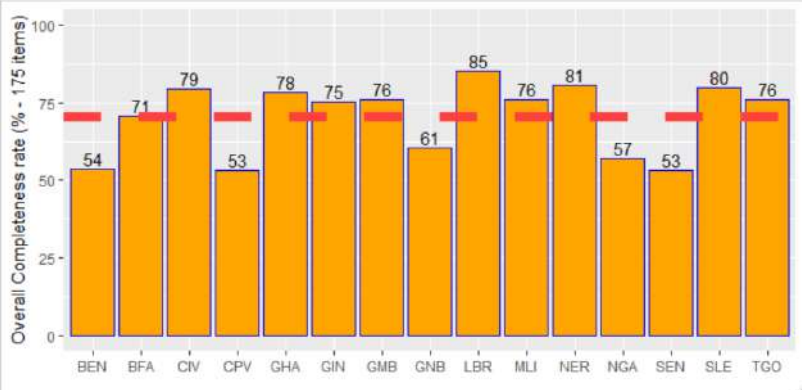



*Figure 1: Overall completeness rate (%) of collected data*

At the end of the meeting, the national participants and partners validated the regional report on the 2019 health situation, while taking into account data to be completed by the countries concerned.

Some incomplete data in this final version of the document are due to the fact that such data are not collected by the routine systems of the countries concerned. However, the overall completeness rate is 68% with a variation of 53% for Senegal to 85% for Liberia (Figure 1).

Most of the missing fields are a disaggregation of certain indicators (by sex or by age bracket).

Regarding the section on epidemic-prone diseases, it was written in collaboration with the Regional Centre for Surveillance and Control Disease (RCSDC) team, which is WAHO's specialized agency in the area. In view of the importance of time frame, this section of the report represents the year 2019.

# 3. DEMOGRAPHIC INDICATORS

The population of ECOWAS was estimated at 385,145,845 inhabitants in 2018, of which 49% were women (Table 1). The annual growth rate was 3.07%.

*Table 1: Estimated population in 2018*

| PAYS / Countries / Paises | Population / População | Men | | Women | | Growth rate (%) |
|---|---|---|---|---|---|---|
| | | N | % | N | % | |
| BENIN | 11,554,473 | 5,681,576 | 49.2% | 5,872,897 | 50.8% | 3.52 |
| BURKINA FASO | 20,244,079 | 9,777,133 | 48.3% | 10,466,946 | 51.7% | 3.1 |
| CABO VERDE | 544,081 | 273,904 | 50.3% | 270,177 | 49.7% | 1.19 |
| COTE D'IVOIRE | 25,195,540 | 13,000,898 | 51.6% | 12,194,642 | 48.4% | 2.6 |
| The GAMBIA | 2,196,412 | 1,082,372 | 49.3% | 1,114,040 | 50.7% | 3.1 |
| GHANA | 29,551,253 | 14,410,639 | 48.8% | 15,140,614 | 51.2% | 2.17 |
| GUINEA | 11,883,516 | 5,754,536 | 48.4% | 6,128,981 | 51.6% | 3.1 |
| GUINEA BISSAU | 1,584,763 | 780,057 | 49.2% | 804,706 | 50.8% | 2.2 |
| LIBERIA | 4,279,698 | 2,140,963 | 50.0% | 2,138,735 | 50.0% | 2.1 |
| MALI | 19,599,288 | 9,603,651 | 49.0% | 9,995,637 | 51.0% | 3.6 |
| NIGER | 21,466,864 | 10,709,132 | 49.9% | 10,757,732 | 50.1% | 3.82 |
| NIGERIA | 206,174,292 | 104,745,553 | 50.8% | 101,428,739 | 49.2% | 3.2 |
| SENEGAL | 15,726,037 | 7,829,997 | 49.8% | 7,896,040 | 50.2% | 2.7 |
| SIERRA LEONE | 7,701,185 | 3,790,791 | 49.2% | 3,910,394 | 50.8% | 2.6 |
| TOGO | 7,440,364 | 3,628,345 | 48.8% | 3,812,019 | 51.2% | 2.45 |
| OVERALL | 385,141,845 | 193,209,547 | 50.2% | 191,932,299 | 49.8% | 3.07 |

For the purposes of proper planning and monitoring of health interventions, it was necessary to make estimates of key target populations. These were mainly children under one-year-old, children under five, women of child-bearing age, expected number of pregnancies and expected number of births. The various estimates are presented by country in Table 2.

*Table 2: Estimate of priority population groups in 2018*

| PAYS | Population 0-11 mois | Population 1-4 ans | Femmes 15-49 ans | Grossesses attendues | Naissances attendue |
|---|---|---|---|---|---|
| BENIN | 385 664 | 1 576 194 | 2 756 061 | 495 818 | 431 146 |
| BURKINA FASO | 777 145 | 2 822 405 | 4 856 340 | 1 118 519 | 897 371 |
| CABO VERDE | 10 498 | 41 865 | 143 683 | 10 544 | 10 544 |
| COTE D'IVOIRE | 885 359 | 3 204 409 | 6 086 255 | 1 056 888 | 880 740 |
| The GAMBIA | 63 696 | 287 730 | 557 889 | 98 839 | 92 249 |
| GHANA | 1 182 050 | 4 284 932 | 7 092 301 | 1 182 050 | 1 182 050 |
| GUINEE | 424 810 | 1 589 828 | 2 970 879 | 534 758 | 475 341 |
| GUINEE BISSAU | 69 401 | 249 468 | 412 654 | 84 407 | 69 401 |
| LIBERIA | 171 188 | 727 548 | 925 176 | 186 515 | 39 783 |
| MALI | 783 972 | 2 743 900 | 4 311 843 | 979 964 | 979 964 |
| NIGER | 930 966 | 3 431 074 | 4 458 729 | 974 236 | 779 389 |
| NIGERIA | 4 410 927 | 28 761 771 | 51 327 990 | 11 210 033 | 9 341 694 |
| SENEGAL | 109 596 | 422 366 | 3 785 362 | 694 462 | 578 718 |
| SIERRA LEONE | 308 047 | 1 055 062 | 3 746 190 | 656 332 | 546 944 |
| TOGO | 230 651 | 855 642 | 1 860 091 | 275 293 | 245 532 |
| ENSEMBLE | 10 743 970 | 52 054 194 | 95 291 443 | 19 558 659 | 16 550 866 |

# 4. AVAILABILITY OF HEALTH CARE SERVICES

## 4.1. *Private health facilities*

Private healthcare services exist in all ECOWAS countries, but information about their contribution to provision of health care to the population remains elusive to national health information systems.

To have an idea of the difference among the countries, Table 3 presents information on the availability of private health facilities and their contribution to health information. In terms of availability, Nigeria and Senegal have the largest numbers of private health facilities listed by the HIS (10,679 and 2,754 respectively). But unfortunately, these two countries are those where information on services provided to the population is not captured by health information systems. Burkina Faso and The Gambia, on their part, receive information from all the approved private facilities. At the regional level, 15.54% of private establishments share their information on services provided with the national health information system.

*Table 3: Number of private health facilities identified for data collection*

| PAYS | Nombre de formations | Nombre de répondants | Taux de réponse (%) |
|---|---|---|---|
| BURKINA FASO | 533 | 533 | 100,00 |
| The GAMBIA | 14 | 14 | 100,00 |
| LIBERIA | 312 | 301 | 96,47 |
| MALI | 794 | 651 | 81,99 |
| SIERRA LEONE | 92 | 50 | 54,35 |
| GHANA | 2 034 | 916 | 45,03 |
| GUINEE BISSAU | 18 | 8 | 44,44 |
| NIGER | 356 | 152 | 42,70 |
| TOGO | 242 | 91 | 37,60 |
| BENIN | 2 614 | 592 | 22,65 |
| COTE D'IVOIRE | 669 | 76 | 11,36 |
| CABO VERDE | 186 | 4 | 2,15 |
| GUINEE | 507 | 0 | 0 |
| NIGERIA | 10 679 | 0 | 0 |
| SENEGAL | 2 754 | 0 | 0 |
| ENSEMBLE | 21 804 | 3 388 | 15,54 |

# 4. AVAILABILITY OF HEALTH CARE SERVICES

## 4.2. Availability of health facilities by level of care

Availability of health facilities that ensure coverage of healthcare throughout the region has always been a great challenge in all countries of our region. Information on availability was collected by level of care; primary, secondary and tertiary level care services.

Coverage of healthcare services by country is presented in Table 4 and is summarized as follows:

*a) Coverage of tertiary healthcare services:*

- At the regional level, coverage is estimated at 0.07 per 100,000 inhabitants, that is roughly 1 hospital offering tertiary-level healthcare for 1.43 million people;
- Cabo Verde (with 1 hospital per 250,000 inhabitants) and The Gambia (with 1 hospital per 278,000 inhabitants) are the countries with the highest tertiary-health service coverage in the region.
- Ghana and Côte d'Ivoire have the lowest coverage (1 service per 5,000,000 inhabitants).

*b) Coverage of secondary healthcare services:*

- With regard to secondary healthcare services, the regional average is estimated at 1.52 facilities per 100,000 inhabitants, that is roughly one facility for 65,790 inhabitants.
- The Gambia (with 1 service for 13,550 inhabitants), followed far behind by Nigeria (with 1 service for 48,309 inhabitants) are the countries with the highest coverage.
- While Benin and Niger are the least equipped in the category.

*c) Coverage of primary healthcare services (first-contact services):*

- For facilities offering primary healthcare, the ratio is 16.82 per 100,000 inhabitants. This amounts to about 1 health facility for 5,945 inhabitants.
- Within the region, The Gambia is the country with the best coverage in primary level healthcare with one health facility for approximately 2,500 inhabitants;
- On the contrary, Cabo Verde, Guinea Bissau and Benin are the least served countries in this category of services.

***" Availability of health facilities that ensure coverage of healthcare throughout the region has always been a great challenge in all countries of our region. "***

# 4. AVAILABILITY OF HEALTH CARE SERVICES

## *4.2. Availability of health facilities by level of care*

*Table 4: Estimated coverage of health facilities per 100,000 inhabitants in 2018 by level of care*

| PAYS | Etablissement de santé primaire | Etablissement de santé secondaire | Etablissement de santé tertiaire |
|---|---|---|---|
| BENIN | 7,86 | 0,04 | 0,05 |
| BURKINA FASO | 11,00 | 0,22 | 0,07 |
| CABO VERDE | 5,90 | 0,70 | 0,40 |
| COTE D'IVOIRE | 9,80 | 0,47 | 0,02 |
| The GAMBIA | 40,61 | 7,38 | 0,36 |
| GHANA | 28,16 | 1,77 | 0,02 |
| GUINEE | 17,10 | 1,80 | 0,19 |
| GUINEE BISSAU | 6,94 | 1,01 | 0,19 |
| LIBERIA | 20,40 | 0,76 | 0,05 |
| MALI | NA | 1,17 | 0,12 |
| NIGER | 16,97 | 0,09 | 0,03 |
| NIGERIA | 17,56 | 2,07 | 0,07 |
| SENEGAL | 29,06 | 0,28 | 0,07 |
| SIERRA LEONE | 17,26 | 0,73 | 0,10 |
| TOGO | 15,60 | 1,50 | 0,04 |
| ENSEMBLE | 16,82 | 1,52 | 0,07 |

**" Information on availability was collected by level of care, including primary, secondary, and tertiary care services. "**

# 4. AVAILABILITY OF HEALTH CARE SERVICES

## 4.3. Availability of beds, essential drugs and EmONC services

With regard to beds and drugs in health facilities, the problem is mainly the lack of data. Only four of the 15 countries (Benin, Cote d'Ivoire, Guinea and Guinea Bissau) were able to indicate the proportion of health facilities possessing all the elements in the list of essential drugs, according to their type.

Four other countries (Benin, Guinea Bissau, Senegal and Sierra Leone) do not have data on the availability of health facilities offering emergency obstetric and new-born care (EmONC) services.

The available information has been presented in Table 5.

*Table 5: Availability of hospital beds, essential drugs and EmONC services in 2018*

| PAYS | Lits d'hospitalisation (pour 10 000 hbts) | Disponibilité des médicaments essentiels (%) | Disponibilité des SONU (pour 500 000 hbts) | Disponibilité des SONU de base (pour 500 000 hbts) | Disponibilité des SONU Complets (pour 500 000 hbts) |
|---|---|---|---|---|---|
| COTE D'IVOIRE | 0,67 | 92,44 | 0,18 | 0,36 | 0,22 |
| BENIN | 4,70 | 35,00 | NA | NA | NA |
| GUINEE | 1,00 | 21,50 | 2,48 | 1,05 | 1,43 |
| GUINEE BISSAU | NA | 13,00 | NA | NA | NA |
| BURKINA FASO | 3,10 | NA | 0,90 | 0,90 | 0,70 |
| CAP VERT | 20,35 | NA | 6,00 | NA | NA |
| The GAMBIA | 10,40 | NA | 60,00 | 46,00 | 14,00 |
| GHANA | 10,24 | NA | 495,83 | 416,40 | 79,44 |
| LIBERIA | 694,00 | NA | 86,00 | 83,30 | 4,10 |
| MALI | 2,91 | NA | 14,00 | 12,00 | 2,00 |
| NIGER | 2,50 | NA | 29,00 | 28,00 | 1,00 |
| NIGERIA | NA | NA | 1,20 | NA | NA |
| SENEGAL | 0,72 | NA | NA | NA | NA |
| SIERRA LEONE | 2,05 | NA | NA | 4,80 | 1,60 |
| TOGO | 7,00 | NA | 4,50 | 2,89 | 1,61 |
| VALEURS REFERENCE | NA | 100 | 5,00 | 4,00 | 1,00 |

# 4. AVAILABILITY OF HEALTH CARE SERVICES

## *4.4. Availability of essential health personnel in public health facilities*

The availability of the health personnel needed to ensure quality care in the various health facilities is one of the vital indicators for classifying the operational capacity of health services.

For this report, only two essential categories of healthcare professionals (doctors and nurses) are under consideration.

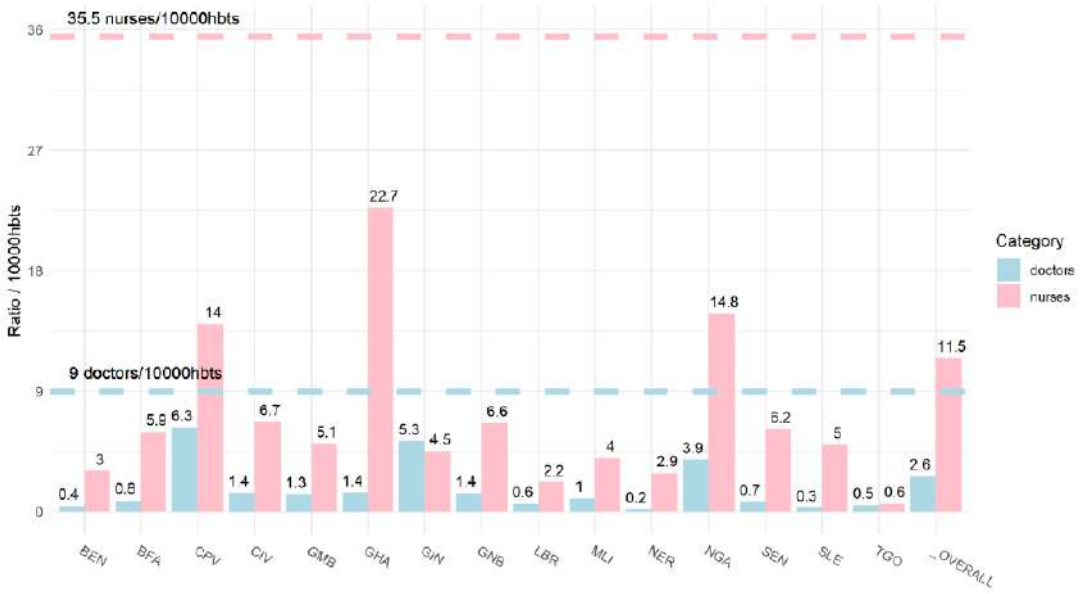



*Figure 2: Ratio of health personnel to 10,000 inhabitants in countries of the region in 2018*

The horizontal lines drawn are benchmarks from the World Health Organisation, which believes that in order to attainment the SDGs, countries should have at least 9 doctors per 10,000 inhabitants[1] and 35.5 nurses and midwives for the same population[2].

The estimated regional ratio is 2.6 doctors to 10,000 inhabitants and 11.5 nurses to 10,000 inhabitants. The highest coverage for doctors is 6.3 in Cabo Verde compared to 0.2 in Niger.

*[1] https://unstats.un.org/sdgs/metadata/files/Metadata-03-08-01.pdf*
*[2]https://apps.who.int/iris/bitstream/handle/10665/250368/9789241511131-eng.pdf;jsessionid=C657F5061686017A190382FD75EB4552?sequence=1*

# 5. USE OF HEALTH SERVICES (PREVENTION AND CARE)

## 5.1. *Immunization services*

The immunization coverage reported by countries for 2018 is presented in Figure 3 for three main vaccines (BCG, DTP3/Penta3 and Measles) and for the percentage of children fully vaccinated. Two things can be observed from the figure:

- The first is that countries still have difficulty estimating the target population for vaccination. Benin, Burkina Faso, Mali, Niger and Nigeria reported coverage rates of over one hundred per cent nationally. This is usually because the denominators used to calculate these indicators are estimated from different sources and may lead to different assumptions;
- Secondly, the coverage of fully vaccinated children is sometimes higher than that of a specific vaccine, as in Nigeria and Senegal. On the other hand, Côte d'Ivoire, Ghana and Niger, with a relatively high coverage (over 90%) of 3 vaccines separately, have a very low coverage of completely vaccinated children (less than 40%). This demonstrates, in our view, the problem of quality of data recorded on vaccination.

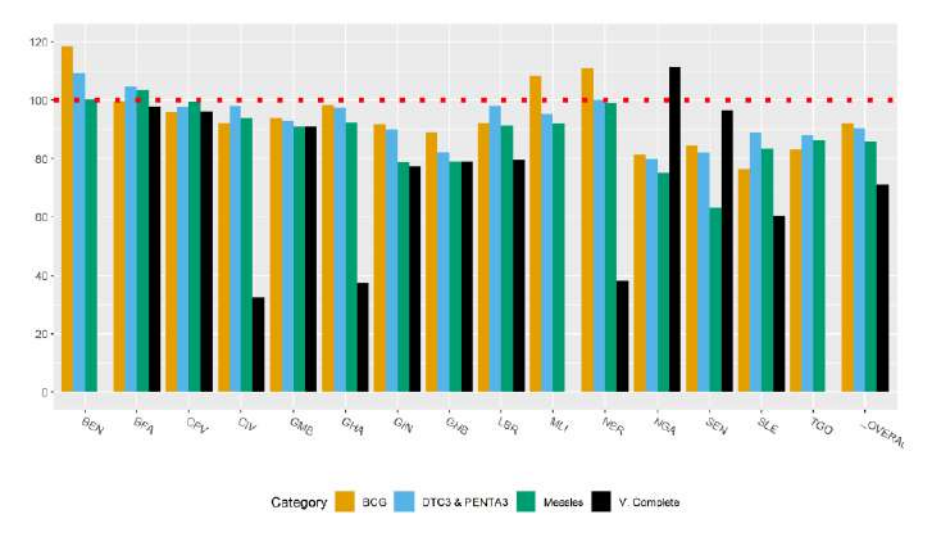



*Figure 3: Reported immunisation coverage in public health facilities in 2018 (%)*

There is need to continue extensive discussion on the two challenges at national and regional levels in order to find a consensual and harmonized methodology for estimating and recording vaccination data in all countries.

Generally, vaccine coverage is relatively high n almost all countries, mainly in Cabo Verde. The regional coverage is 91.89% for BCG, 90.23% for Penta3, and 85.74% for measles, with 71.12% of children fully vaccinated.

# 5. USE OF HEALTH SERVICES (PREVENTION AND CARE)

## 5.2. *Obstetrical services*

### 5.2.1. Antenatal care

Information on antenatal care visits is presented in Table 6. The regional average for attendance to the first antenatal consultation (ANC1) is 64.5%. This means that two out of three pregnant women had at least one visit for pregnancy monitoring. But at the national level, the data is worrisome. In Benin, the proportion of pregnant women who have had ANC1 exceeds 100%, whereas in Nigeria, it is 52.1% and in Senegal, 53%.

The percentage of women having made at least four antenatal visits (ANC4) at the regional level is barely 30.3%, which is less than one-third, with the highest value of 84.6% in Cabo Verde and the lowest, 17% in Liberia.

Finally, the table below presents the proportion of pregnant women who received two doses of malaria prophylactic treatment (IPT2) at their second visit. At the regional level, the indicator is 43.2%.

*Table 6: Coverage of antenatal consultations (ANC) and prevention of malaria in pregnant women in 2018*

| PAYS | Au moins 1 CPN (%) | Au moins 4 CPN (%) | A reçu un TPI2 à la CPN |
|---|---|---|---|
| BENIN | 109,20 | 26,50 | NA |
| CABO VERDE | 91,00 | 84,60 | 29,80 |
| GUINEE | 90,80 | 54,50 | 75,30 |
| COTE D'IVOIRE | 86,76 | 30,34 | 63,11 |
| NIGER | 84,79 | 35,36 | 62,90 |
| SIERRA LEONE | 82,40 | 53,51 | 76,86 |
| The GAMBIA | 80,63 | 45,81 | 76,08 |
| GHANA | 79,50 | 74,70 | 59,70 |
| BURKINA FASO | 79,04 | 39,26 | 71,46 |
| MALI | 77,70 | 23,88 | 43,00 |
| TOGO | 77,70 | 34,70 | 68,40 |
| LIBERIA | 76,00 | 17,00 | 13,00 |
| GUINEE BISSAU | 73,00 | 28,00 | 64,49 |
| SENEGAL | 53,00 | 48,00 | 58,51 |
| NIGERIA | 52,10 | 21,40 | 32,00 |
| **ENSEMBLE** | **64,48** | **30,33** | **43,21** |

# 5. USE OF HEALTH SERVICES (PREVENTION AND CARE)

## 5.2. *Obstetrical services*

### 5.2.2. *Assisted delivery and Cesarean sections*

Table 7 describes the characteristics of child deliveries and births. A total of 6,081,624 deliveries were performed with the assistance of qualified personnel. This represents 39.49% of expected deliveries.

Assisted deliveries are higher in Cabo Verde (92.94%), followed by Burkina Faso (86.30%).

The table also presents the rate of Caesarean sections.

*Table 7: Births recorded in health facilities in 2018*

| PAYS | Assistés par un personnel qualifié (nb) | Assistés par un personnel qualifié (%) | Taux de césarienne (%) |
|---|---|---|---|
| BENIN | 271 922 | 63,07 | 10,00 |
| BURKINA FASO | 774 414 | 86,30 | 2,51 |
| CAP VERT | 9 800 | 92,94 | 34,90 |
| COTE D'IVOIRE | 608 212 | 69,06 | 3,70 |
| The GAMBIA | 53 200 | 57,67 | 3,89 |
| GHANA | 709 499 | 60,02 | 18,00 |
| GUINEE | 262 981 | 55,32 | 3,70 |
| GUINEE BISSAU | 30 197 | 43,51 | 6,60 |
| LIBERIA | 106 096 | 68,26 | 7,20 |
| MALI | 546 911 | 55,81 | 3,00 |
| NIGER | 375 463 | 38,54 | *NA* |
| NIGERIA | 1 432 323 | 21,85 | 1,30 |
| SENEGAL | 386 827 | 66,84 | 5,00 |
| SIERRA LEONE | 346 616 | 63,37 | 5,00 |
| TOGO | 167 163 | 68,08 | 7,10 |
| **ENSEMBLE** | **6 081 624** | **39,49** | **4,08** |

# 5. USE OF HEALTH SERVICES (PREVENTION AND CARE)

## 5.2. *Obstetrical services*

### 5.2.2. *Assisted delivery and Cesarean sections*

Cabo Verde (34.90%) and Ghana (18.00%) have very high levels of cesarean sections performed (exceeding the 15% maximum expected level). But in contrast, the Cesarean section rate in Nigeria (1.30%), Burkina Faso (2.51%), Mali (3.00%), Côte d'Ivoire (3.70%) and The Gambia (3.89%) are lower than the minimum expected level of 5% (Figure 4).

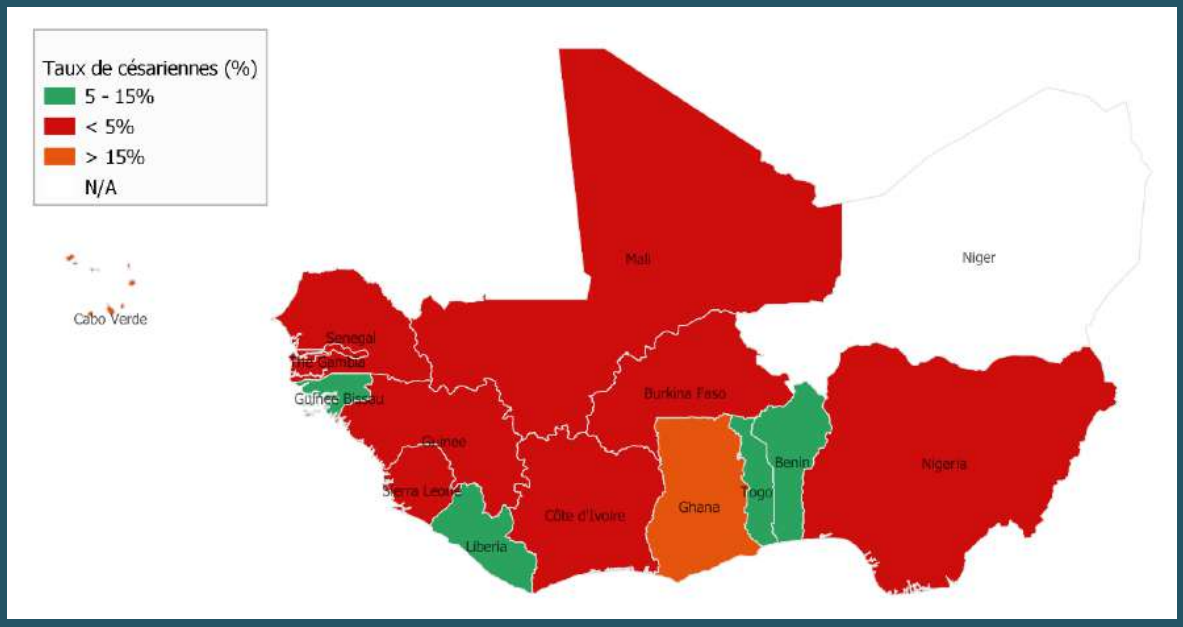



*Figure 4: Cesarean section rate in ECOWAS countries*

***"Cabo Verde (34.90%) and Ghana (18.00%) have very high levels of cesarean sections performed."***

# 5. USE OF HEALTH SERVICES (PREVENTION AND CARE)

## 5.2. *Obstetrical services*

### 5.2.3. *Prevention of Mother-to-Child Transmission (PMTCT) of HIV*

Table 8 shows that 89.71% of pregnant women were tested for HIV in 2018 during ANC, and only Côte d'Ivoire succeeded in testing all pregnant women. Guinea and Niger, on the other hand, did not attain 50% of the tests.

The percentage of pregnant women who tested positive in the region is around 1.40%, ranging from 0.02% in Ghana to more than 3% in Guinea Bissau. In all, an average of 78.9% of HIV-positive women was put on ARV treatment in the region, ranging from 64% in Senegal to 86% in Benin and Togo.

*Table 8: Prevention of mother-to-child transmission of HIV during antenatal consultations in 2018*

| PAYS | Femmes enceintes ayant fait le test VIH lors des CPN (%) | Femmes séropositives au VIH parmi les femmes testées (%) | Femmes recevant un traitement parmi les femmes séropositives au VIH (%) |
|---|---|---|---|
| COTE D'IVOIRE | 100.00 | 0.83 | 95.00 |
| NIGERIA | 96.30 | 1.90 | 82.50 |
| BURKINA FASO | 92.21 | 0.63 | 96.33 |
| GHANA | 92.20 | 0.02 | 83.00 |
| CABO VERDE | 91.10 | NA | NA |
| SIERRA LEONE | 89.80 | 1.30 | 90.10 |
| LIBERIA | 88.00 | 2.40 | 98.00 |
| BENIN | 86.86 | 0.71 | 95.26 |
| TOGO | 85.00 | 2.20 | 98.00 |
| The GAMBIA | 82.40 | 1.80 | 70.99 |
| MALI | 81.92 | 0.50 | 94.00 |
| SENEGAL | 76.00 | 0.19 | 64.00 |
| GUINEE BISSAU | 58.84 | 3.05 | NA |
| NIGER | 46.62 | 0.05 | 81.33 |
| GUINEE | 42.96 | 2.19 | 65.00 |
| ENSEMBLE | 89.71 | 1.40 | 78.90 |

***"The percentage of pregnant women who tested positive in the region is around 1.40%."***

# 5. USE OF HEALTH SERVICES (PREVENTION AND CARE)

## 5.3. *Treatment of HIV & AIDS and Tuberculosis*

### 5.3.1. HIV

The information provided by countries for 2018 indicates that 2,369,840 PLHIV are on antiretroviral treatment in the whole of ECOWAS. Nigeria accounts for over 44% of the total persons on antiretroviral therapy.

Table 9 describes the distribution of persons on ARVs by country. Women constitute more than double the number of men on antiretroviral treatment, while children under the age of 15 represent only 5.3% of persons on antiretroviral treatment.

It should be noted that the proportion of PLHIV on antiretroviral treatment compared to the number eligible for antiretroviral treatment (coverage in antiretroviral treatment) varies between 99% in Côte d'Ivoire and Senegal (the highest) and 31% in Guinea Bissau (lowest). Only 3 countries (Côte d'Ivoire, Senegal and Togo) have reached the 90% coverage target in antiretroviral treatment.

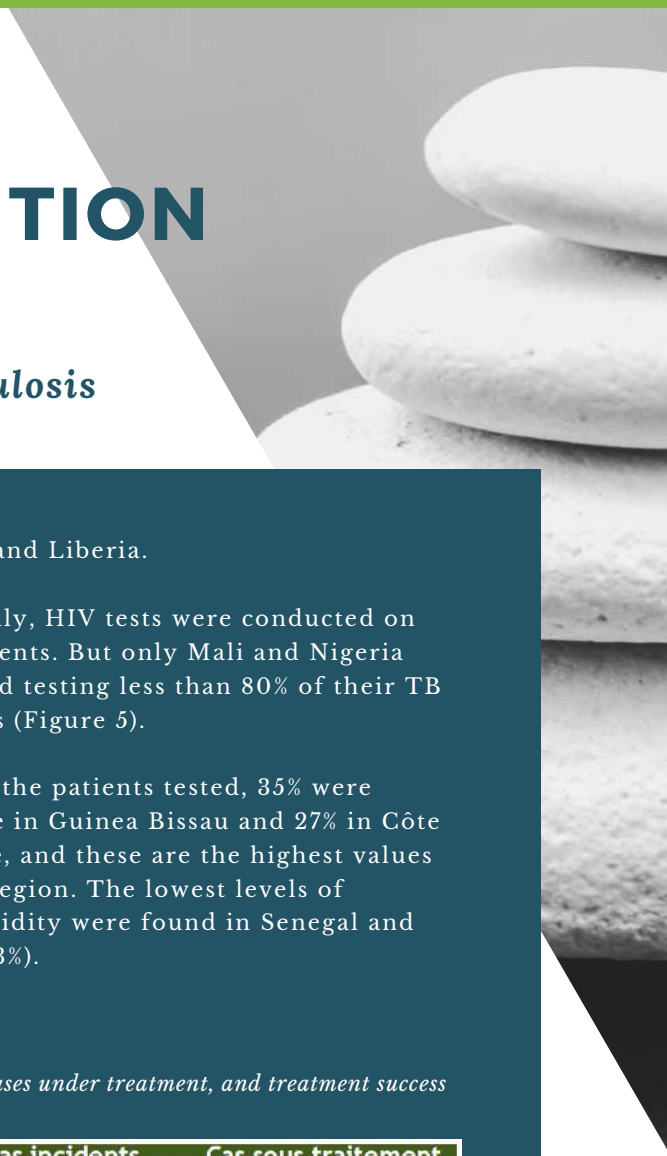
Where information is available, the values in parentheses in the sex and age columns represent the proportion of these persons on antiretroviral therapy compared to the category's treatment need (coverage).

Apart from Burkina Faso, the proportion of women is still 2.5% higher than that of men among people living with HIV and on antiretroviral treatment.

In Senegal, 100% of children needing treatment received it.

*Table 9: Antiretroviral therapy in ECOWAS States in 2018*
*(percentages of needs covered are shown by category in parentheses)*

| PAYS | Patients recevant des ARV (%) | Patients sous TARV parmi les patients qui devaient recevoir ARV, % | Distribution de patients sous ARV par sexe (% des besoins couverts) | | Patients sous ARV par tranche d'Age (% des besoins couverts) | |
|---|---|---|---|---|---|---|
| | | | masculin | féminin | Enfants < 15 ans | Adultes 15+ans |
| BENIN | 38 360 | *NA* | 11 497 (*NA*) | 26 863 (*NA*) | 1 785 (*NA*) | 36 575 (*NA*) |
| BURKINA FASO | 66 983 | 87 | 19 373 (90) | 47 610 (86) | 2 684 (56) | 64 299 (87) |
| CABO VERDE | 2 200 | 76 | 929 (*NA*) | 1 271 (*NA*) | 85 (*NA*) | 2 115 (*NA*) |
| COTE D'IVOIRE | 252 125 | 99 | 69 962 (*NA*) | 182 163 (*NA*) | 12 347 (*NA*) | 239 778 (*NA*) |
| The GAMBIA | 7 550 | 36 | 1 600 (17) | 5 400 (37) | 550 (30) | 7 000 (29) |
| GHANA | 59 041 | *NA* | 14 268 (*NA*) | 44 773 (*NA*) | 2 616 (*NA*) | 56 425 (*NA*) |
| GUINEE | 48 519 | 35 | 14 761 (*NA*) | 33 758 (*NA*) | 2 157 (*NA*) | 46 362 (*NA*) |
| GUINEE BISSAU | 14 121 | 31 | 2 515 (16) | 11 606 (49) | 347 (06) | 13 774 (37) |
| LIBERIA | 13 890 | *NA* | 3 731 (*NA*) | 10 159 (*NA*) | 681 (*NA*) | 13 209 (*NA*) |
| MALI | 7 955 | *NA* | 2 839 (*NA*) | 5 116 (*NA*) | 615 (74) | 7 340 (79) |
| NIGER | 19 793 | 54 | 7 168 (39) | 12 625 (69) | 1 330 (53) | 18 463 (54) |
| NIGERIA | 1 049 019 | 55 | 325 956 (*NA*) | 723 063 (*NA*) | 51 127 (36) | 997 892 (67) |
| SENEGAL | 26 464 | 99 | 7 833 (90) | 18 631 (96) | 1 376 (100) | 25 088 (93) |
| SIERRA LEONE | 28 450 | 39 | 7 621 (18) | 20 829 (65) | 1 123 (24) | 27 327 (40) |
| TOGO | 735 370 | *90* | *NA ( NA)* | *NA ( NA)* | 47 657 (90) | 687 713 (90) |
| **ENSEMBLE** | **2 369 840** | **NA** | **490 053 (NA)** | **1 143 867 (NA)** | **126 480 (NA)** | **2 243 360 (NA)** |



# 5. USE OF HEALTH SERVICES (PREVENTION AND CARE)

## 5.3. *Treatment of HIV & AIDS and Tuberculosis*

### 5.3.2. *Tuberculosis*

Information on treatment for tuberculosis is presented in Table 10. A total of 208,574 new cases were registered in 2018.

The most populous countries generally reported the highest numbers. About 216,187 persons were on treatment for TB in 2018, with a reported treatment success rate of 85.37%. Only two countries (Benin and Sierra Leone) reported a success rate of over 90%, the lowest values available being in Guinea Bissau and Liberia.

Generally, HIV tests were conducted on TB patients. But only Mali and Nigeria reported testing less than 80% of their TB patients (Figure 5).

Among the patients tested, 35% were positive in Guinea Bissau and 27% in Côte d'Ivoire, and these are the highest values in the region. The lowest levels of comorbidity were found in Senegal and Niger (3%).

*Table 10: Number of incident cases (new and relapses), number of cases under treatment, and treatment success rate in public health facilities in 2018*

| PAYS | Taux de succès du traitement (%) | Cas incidents (nouveau cas) | Cas sous traitement |
|---|---|---|---|
| BENIN | 97,00 | 3 291 | 4 096 |
| SIERRA LEONE | 90,80 | 17 143 | 17 169 |
| GUINEE | 88,00 | 8 906 | 14 332 |
| SENEGAL | 87,10 | 10 257 | 13 663 |
| The GAMBIA | 86,00 | 2 394 | 2 394 |
| NIGERIA | 86,00 | 103 630 | 106 533 |
| COTE D'IVOIRE | 85,00 | 21 031 | 21 053 |
| NIGER | 82,63 | 10 634 | 10 839 |
| TOGO | 80,69 | 2 501 | 2 144 |
| MALI | 79,00 | 6 889 | 7 084 |
| BURKINA FASO | 78,95 | 4 126 | 7 110 |
| GUINEE BISSAU | 76,00 | 1 594 | 2 031 |
| LIBERIA | 76,00 | 7 653 | 7 739 |
| CABO VERDE | NA | 153 | NA |
| GHANA | NA | 8 372 | NA |
| **ENSEMBLE** | **85,37** | **208 574** | **216 187** |

# 5. USE OF HEALTH SERVICES (PREVENTION AND CARE)

## 5.3. *Treatment of HIV & AIDS and Tuberculosis*

### 5.3.2. *Tuberculosis*


*Figure 5: Proportion of tuberculosis patients screened for HIV and proportion of HIV-positive cases in public health facilities in 2018 (%)*

***"Generally, HIV tests were conducted on TB patients."***

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.1. Main reasons for consultation*

### 6.1.1. For the general population

In 2018, a total of 158,851,479 outpatient consultations were observed in health facilities of all ECOWAS countries. This number shows that each inhabitant had consulted with a probability of 41.2% during the year (more than 4 out of 10 people used the medical service for reasons other than vaccination or prenatal consultation).

Detailed information on the reasons (causes) why people went for consultations is very limited. Nevertheless, 98,051,623 consultations (62% of the declared total) could be classified by reason (causes of consultations). The first five reasons for consultation are presented in Figure 6. Malaria takes the lead (38.45%), followed by respiratory infections (17.02%). diarrhea (8.33%), non-communicable diseases (3.35%) and anaemia (2.65%) complete the list.

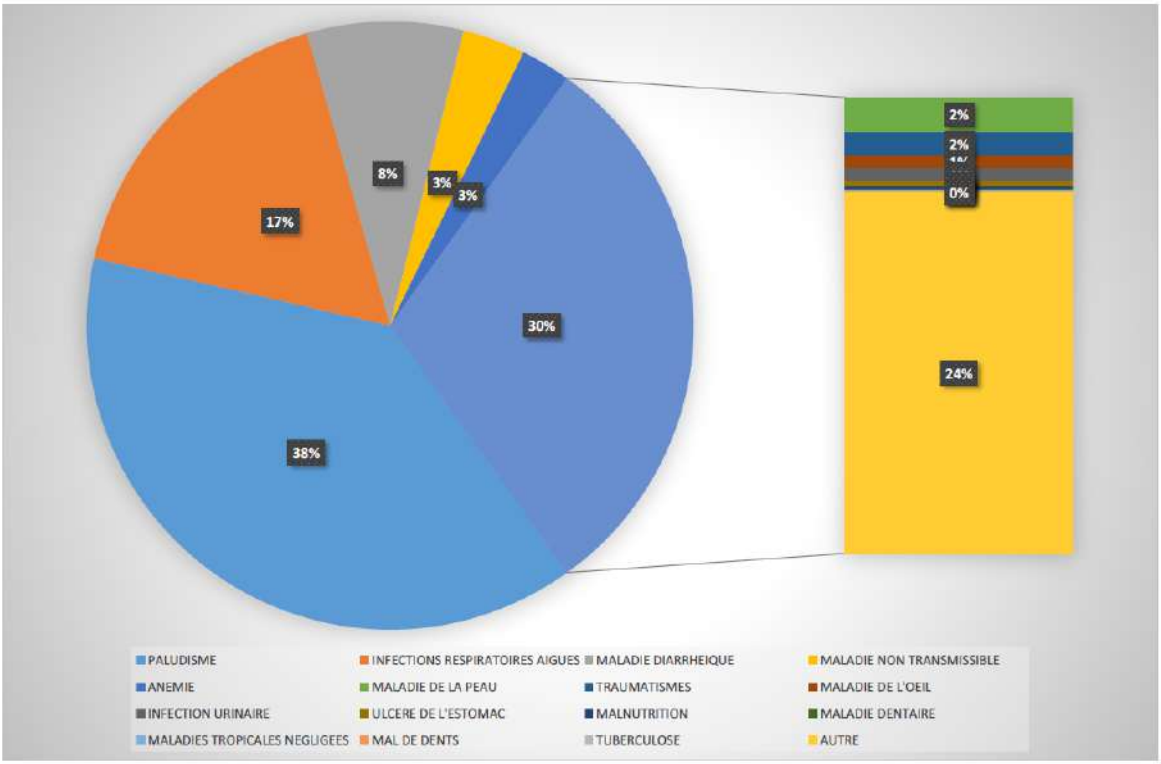



*Figure 6: Distribution of reasons for consultation in public health facilities in 2018*

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.1. Main reasons for consultation*

### 6.1.2. For children UNDER 5 years old

Among the outpatient consultations observed, 39,911,429 (25%) were for children under 5 years of age. This left the estimated probability of seeing a doctor at 58.77% for each child under 5 in 2018 (about 6 out of 10 children). The data that helped to classify the reasons were from 39,675,877 consultations, i.e. 99.4% of the total number of consultations reported for children under 5 years old.

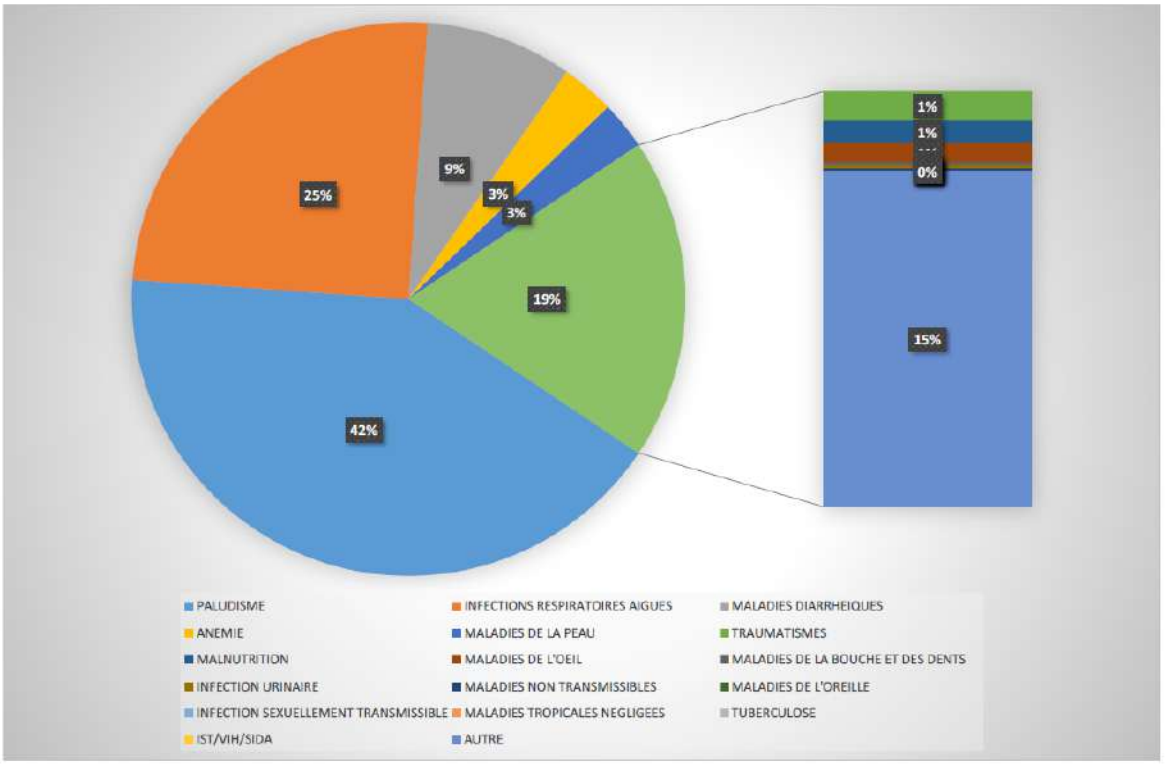



*Figure 7: Distribution of reasons for consultation among children under 5 years old in 2018*

***"The five major reasons for consultation are presented in Figure 7. They are malaria (41.72%), acute respiratory infections (24.99%), diarrhea (8.58%), anemia (3.12%) and skin diseases (2.80%)."***

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.1. Major reasons for consultation*

### 6.1.3. For adults 25 years and above (men and women)

Adult consultations reported in health facilities in 2018 were 41,851,740. These data come from only 9 countries (Benin, Burkina Faso, Cabo Verde, Nigeria and Senegal could not provide any data). More so, only 8 out of 15 countries were able to classify adult consultations per cause, and this classification covers 37,027,041 consultations.

Figure 8 presents the distribution per cause of consultation.

Again, malaria was the key reason for consultation (27.01%), followed by respiratory infections (11.21%), non-communicable diseases (8.17%), Diarrheal diseases (7.00%) and anemia (2.61%).

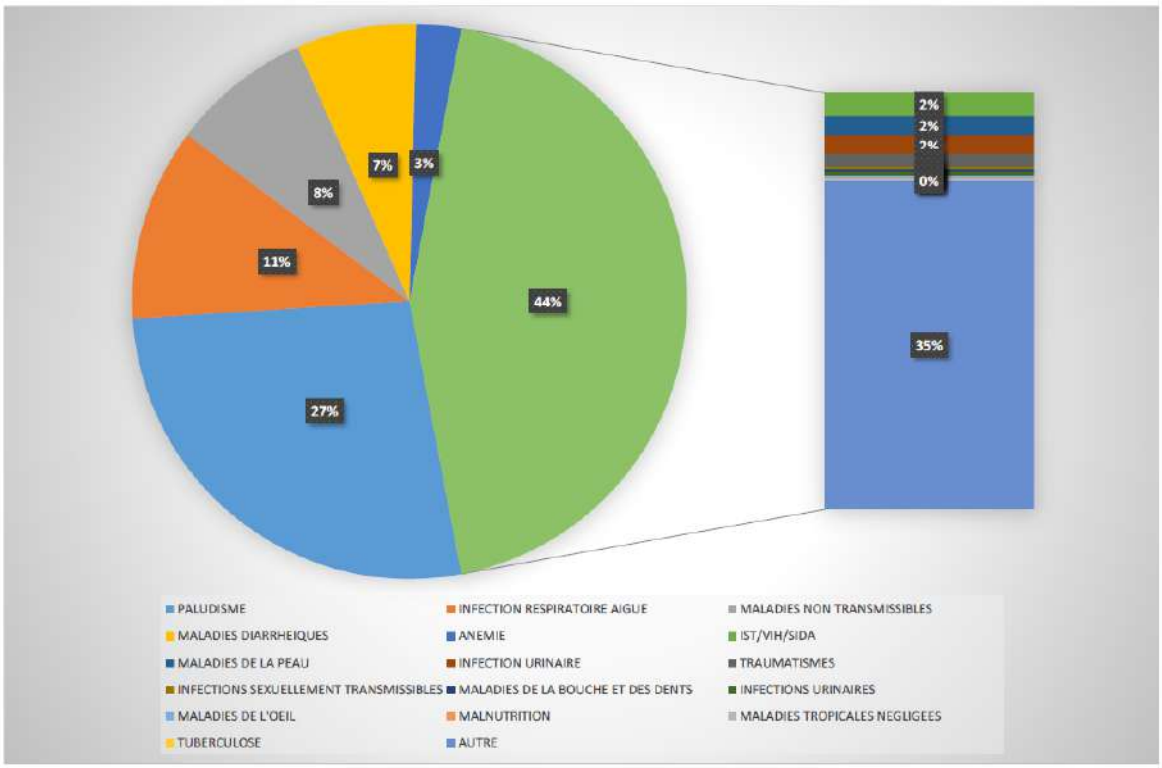



*Figure 8: Distribution of reasons for consultation among adults of 25 and above in 2018*

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.2. Maternal mortality in health facilities*

### 6.2.1. In-hospital maternal mortality

The number of maternal deaths in health facilities reported by countries in the region was 18,373 in 2018.

When this figure is compared with the number of pregnancies expected at the start of the year, it is observed that one in 1,000 pregnant women dies giving birth (0.94%) in a health facility.

In Guinea Bissau, maternal mortality is very high (2.62 per 1,000).

The gaping inequality among countries is illustrated in Figure 9.


*Figure 9: Maternal mortality rate (per 1,000 pregnant women)*

***"It is observed that one in 1,000 pregnant women dies giving birth (0.94%) in a health facility."***

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.2. Maternal mortality in health facilities*

### 6.2.1. In-hospital maternal mortality

Some countries provided information on the distribution of maternal deaths by age bracket. Table 11 shows us that among the reported maternal deaths; more than a third were in young women under 25 years old. This proportion is very high in Liberia (43.0%) and Niger (42.2%).

*Table 11: Number of maternal deaths in ECOWAS countries in 2018 and distribution by age bracket.*

| Pays | Nombre de décès maternels | Moins de 25 ans (%) | De 25 – 34 ans (%) | 35 ans et plus (%) |
|---|---|---|---|---|
| BENIN | 670 | NA | NA | NA |
| BURKINA FASO | 890 | NA | NA | NA |
| CAP VERT | 4 | - | 50,00 | 50,00 |
| COTE D'IVOIRE | 753 | 37,84 | 34,00 | 28,15 |
| The GAMBIA | 55 | NA | NA | NA |
| GHANA | 876 | 19,30 | 53,20 | 27,50 |
| GUINEE | 929 | NA | NA | NA |
| GUINEE BISSAU | 221 | NA | NA | NA |
| LIBERIA | 329 | 43,00 | 32,00 | 25,00 |
| MALI | 511 | NA | NA | NA |
| NIGER | 1,283 | 42,24 | 53,00 | 4,75 |
| NIGERIA | 10,805 | NA | NA | NA |
| SENEGAL | 124 | 37,90 | 62,10 | - |
| SIERRA LEONE | 599 | NA | NA | NA |
| TOGO | 324 | NA | NA | NA |
| **Total** | **18,373** | **34,16** | **48,15** | **17,69** |

***"Of the reported maternal deaths, more than one-third occurred among young women under the age of 25. "***

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.2. Maternal mortality in health facilities*

### 6.2.2. In-hospital maternal mortality ratio

Based on the information provided by the countries, the number of maternal deaths in health facilities is estimated at 211.43 women per 100,000 live births in the ECOWAS region.

The distribution among countries of the region is presented in Figure 10.

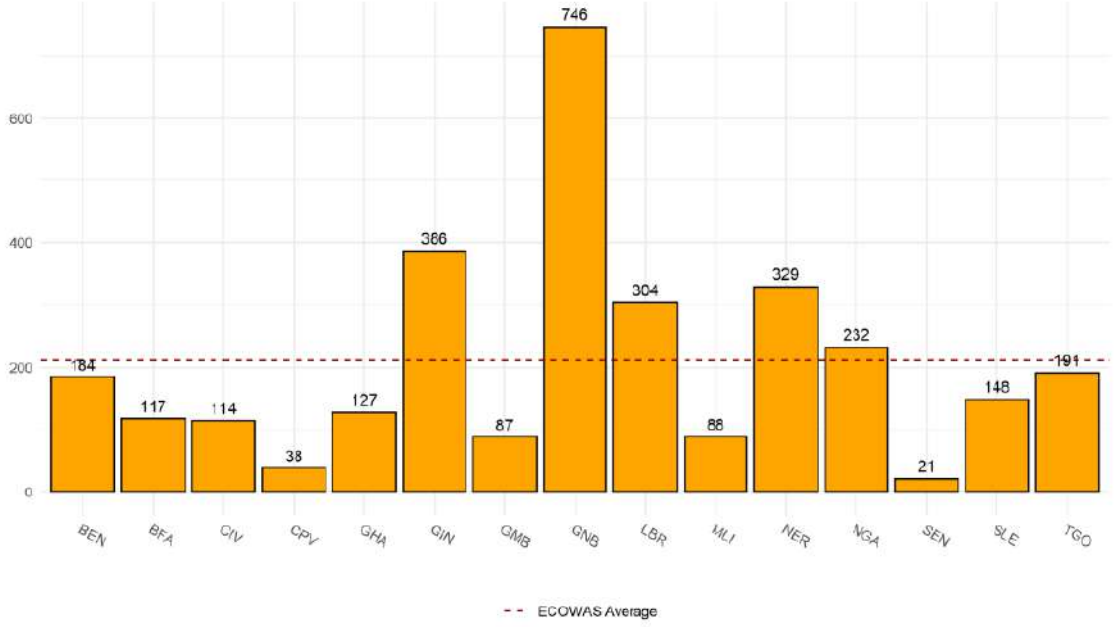



*Figure 10: In-hospital maternal mortality ratio (per 100,000 live births)*

***"The number of maternal deaths in health facilities is estimated at 211.43 women per 100,000 live births in the ECOWAS region"***

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.2. Maternal mortality in health facilities*

### 6.2.3. Five (5) major causes of maternal death

Among the 18,373 recorded maternal deaths, 14,178 (77.2%) could be classified per cause.

Figure 11 presents the distribution of deaths per cause. The five most common causes are hemorrhage (24.60%), eclampsia (17.52%), abortion complications (10.41%), infections (8.20%) and anaemia (1.17%).

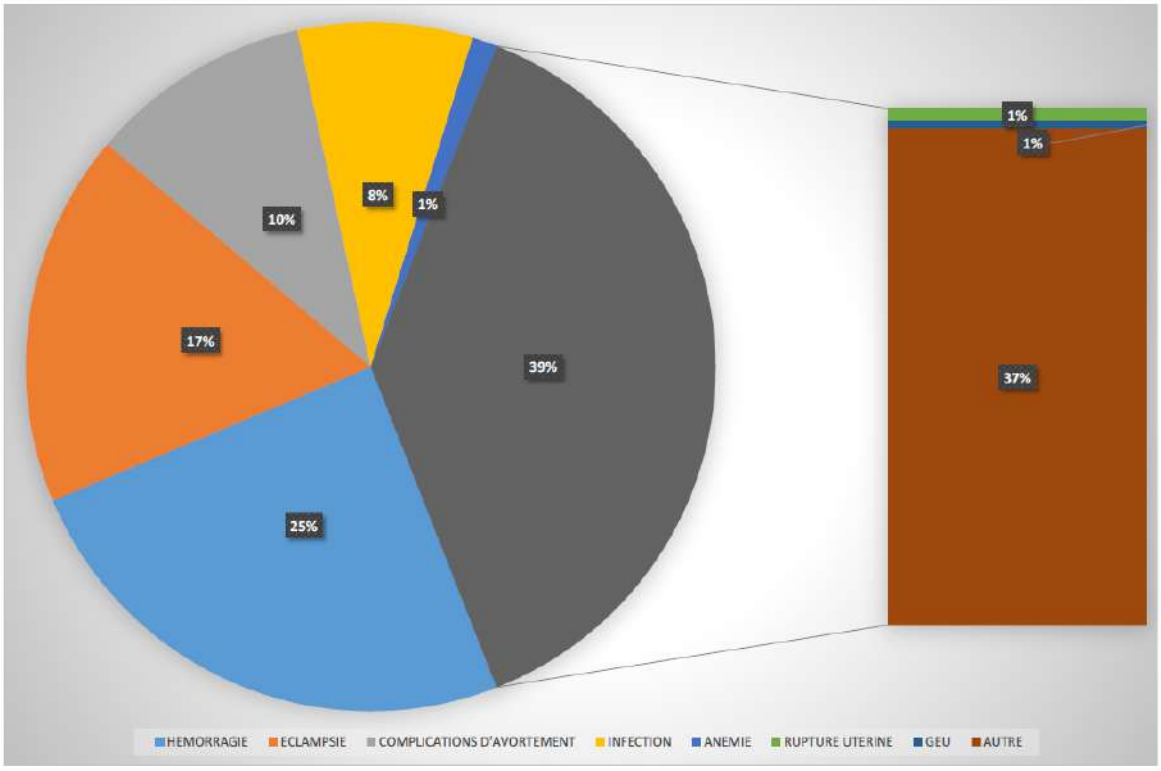



*Figure 11: Distribution of maternal death causes in health facilities in 2018*

***"The five most common causes are hemorrhage (24.60%), eclampsia (17.52%), abortion complications (10.41%), infections (8.20%) and anaemia (1.17%)."***

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.3. Overall stillbirths in health facilities*

All 15 ECOWAS countries reported a total of 110,611 stillbirths in 2018. They were equally divided between fresh stillbirths and macerated stillbirths (Table 12). However, Cabo Verde classified all of its stillbirths as fresh.

Cote d'Ivoire also had over 60% of fresh stillbirths. Nigeria, on the hand, reported very few stillbirths compared to other countries.
This data was obtained from their maternal and perinatal death monitoring platforms.

*Table 12: Number and nature of stillbirths reported by countries in 2018*

| PAYS | Nombres de mort nés | Mort-nés frais (%) | Mort-nés macérés (%) |
|---|---|---|---|
| BENIN | 7,181 | NA | NA |
| BURKINA FASO | 15,330 | 39.92 | 60.08 |
| CABO VERDE | 135 | 100.00 | 0.00 |
| COTE D'IVOIRE | 23,519 | 61.01 | 38.99 |
| The GAMBIA | 2,369 | 50.40 | 49.60 |
| GHANA | 9,645 | 40.40 | 59.60 |
| GUINEE | 6,930 | 47.60 | 52.40 |
| GUINEE BISSAU | 1,842 | NA | NA |
| LIBERIA | 91 | NA | NA |
| MALI | 11,961 | 52.00 | 48.00 |
| NIGER | 11,187 | 57.11 | 42.89 |
| NIGERIA | 8,133 | 46.70 | 53.30 |
| SENEGAL | 172 | 45.35 | 54.65 |
| SIERRA LEONE | 8,517 | 34.34 | 65.66 |
| TOGO | 3,599 | 44.15 | 55.85 |
| **ENSEMBLE** | **110,611** | **49.25** | **50.75** |

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.4. Low birth weight in health facilities*

Figure 12 shows the average levels of low birth weight in the region. The regional average is 9.49%, with Liberia (3.20%) and Niger (4.60%) standing out as the better-off countries with less than 5% of cases. The highest levels are found in Guinea Bissau and The Gambia.

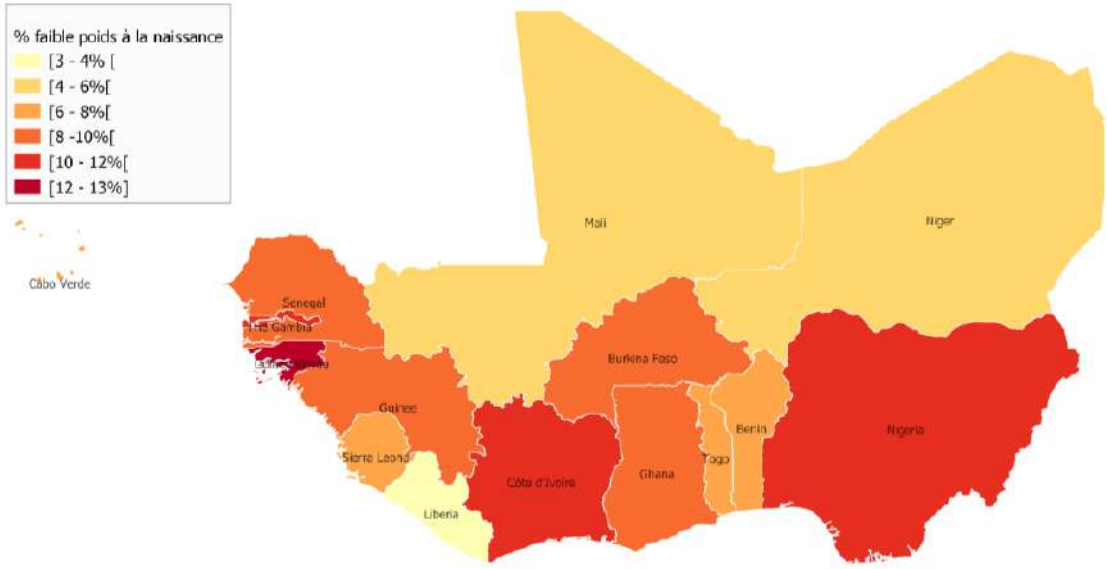



*Figure 12: Low birth weight in public health facilities in 2018 (%)*

***"The regional average is 9.49%, with Liberia (3.20%) and Niger (4.60%) standing out as the better-off countries with less than 5% of cases. The highest levels are found in Guinea Bissau and The Gambia."***

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.5. Malnutrition in children under 5*

Data on malnutrition could not be collected for Cabo Verde and Nigeria.

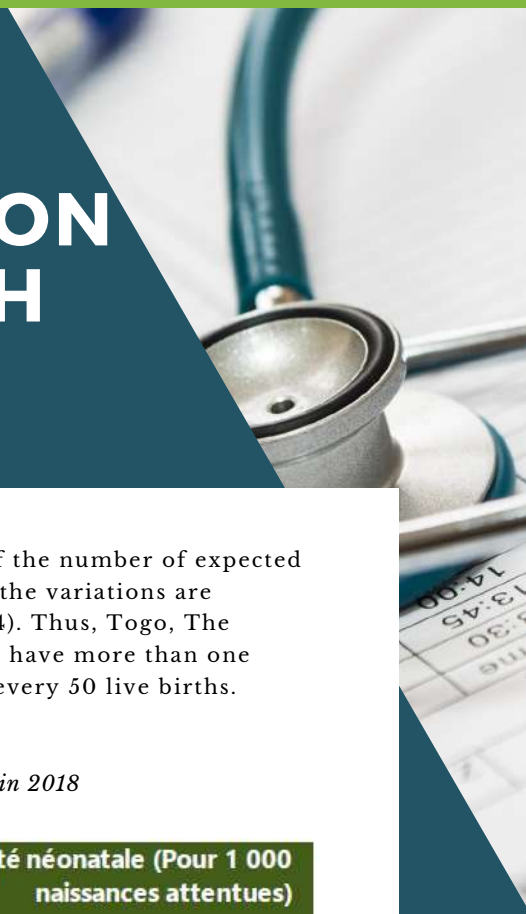
Aside from these countries, the 13 others reported 1,805,715 cases of malnutrition treated in health facilities in the region in 2018 (Table 13).

Of these cases, 879,120, i.e. 48.69% were cases of severe acute malnutrition. Togo reported only severe malnutrition and, in addition to this country, the countries with the highest proportions of severe malnutrition were Benin (82.01%), Niger (60.01%) and The Gambia (57.07%).

*Table 13: Number of malnutrition cases in ECOWAS health facilities in 2018*

| COUNTRY | Malnutrition | Malnutrition Aigüe Modérée (%) | Malnutrition Aigüe Sévère (%) |
|---|---|---|---|
| BENIN | 24 607 | 4 426 (17.99) | 20 181 (82.01) |
| BURKINA FASO | 219 760 | 127 681 (58.10) | 92 079 (41.90) |
| CAP VERT | *NA* | *NA* | *NA* |
| COTE D'IVOIRE | 42 284 | 25 210 (59.62) | 17 074 (40.38) |
| The GAMBIA | 1 216 | 567 (46.63) | 694 (57.07) |
| GHANA | 70 500 | 66 222 (93.93) | 4 278 (06.07) |
| GUINEE | 37 605 | 28 797 (76.58) | 8 808 (23.42) |
| GUINEE BISSAU | 4 073 | 3124 (76.7) | 949 (23.30) |
| LIBERIA | 20 789 | 18 499 (88.98) | 2 290 (11.02) |
| MALI | 310 667 | 151 909 (48.9) | 158 758 (51.10) |
| NIGER | 866 561 | 346 540 (39.99) | 520 021 (60.01) |
| NIGERIA | *NA* | *NA* | *NA* |
| SENEGAL | 65 467 | 62 479 (95.44) | 2 988 (04.56) |
| SIERRA LEONE | 134 966 | 91 186 (67.56) | 43 780 (32.44) |
| TOGO | 7 220 | NA(NA) | 7 220 (100.0) |
| **ENSEMBLE** | **1 805 715** | **926 640 (51.32)** | **879 120 (48.69)** |

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH



## 6.6. *Neonatal mortality in health facilities*

### 6.6.1. *Total number*

Three countries (Burkina Faso, Guinea Bissau and Mali) were unable to provide data on neonatal mortality in 2018. As a result, it was impossible to estimate the total number of neonatal deaths in the region.

However, in view of the number of expected births per country, the variations are significant (Table 14). Thus, Togo, The Gambia and Liberia have more than one neonatal death for every 50 live births.

*Table 14: Number of neonatal deaths and mortality in ECOWAS health facilities in 2018*

| COUNTRY | Décès néonataux | Mortalité néonatale (Pour 1 000 naissances attentues) |
|---|---|---|
| BENIN | 1 296 | 3,01 |
| BURKINA FASO | *NA* | *NA* |
| CAP VERT | 90 | 8,54 |
| COTE D'IVOIRE | 2 242 | 2,55 |
| The GAMBIA | 382 | 4,14 |
| GHANA | 5 834 | 4,94 |
| GUINEE | 5 315 | 11,18 |
| GUINEE BISSAU | *NA* | *NA* |
| LIBERIA | 847 | 21,29 |
| MALI | *NA* | *NA* |
| NIGER | 1 395 | 1,79 |
| NIGERIA | 7 438 | 0,80 |
| SENEGAL | 696 | 1,20 |
| SIERRA LEONE | 671 | 1,23 |
| TOGO | 10 567 | 43,04 |
| **ENSEMBLE** | **36 773** | **2,22** |

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.6. Neonatal mortality in health facilities*

### *6.6.2. Five (5) LEADING causes of neonatal death*

Of the 36,773 neonatal deaths, 10,441 could be classified per cause.

Figure 14 presents the distribution of deaths per cause, with the five most common causes being prematurity (28.83%), asphyxia (20.16%), neonatal infections (10.41%), congenital anomalies (7.56%) and neonatal tetanus (7.23%).

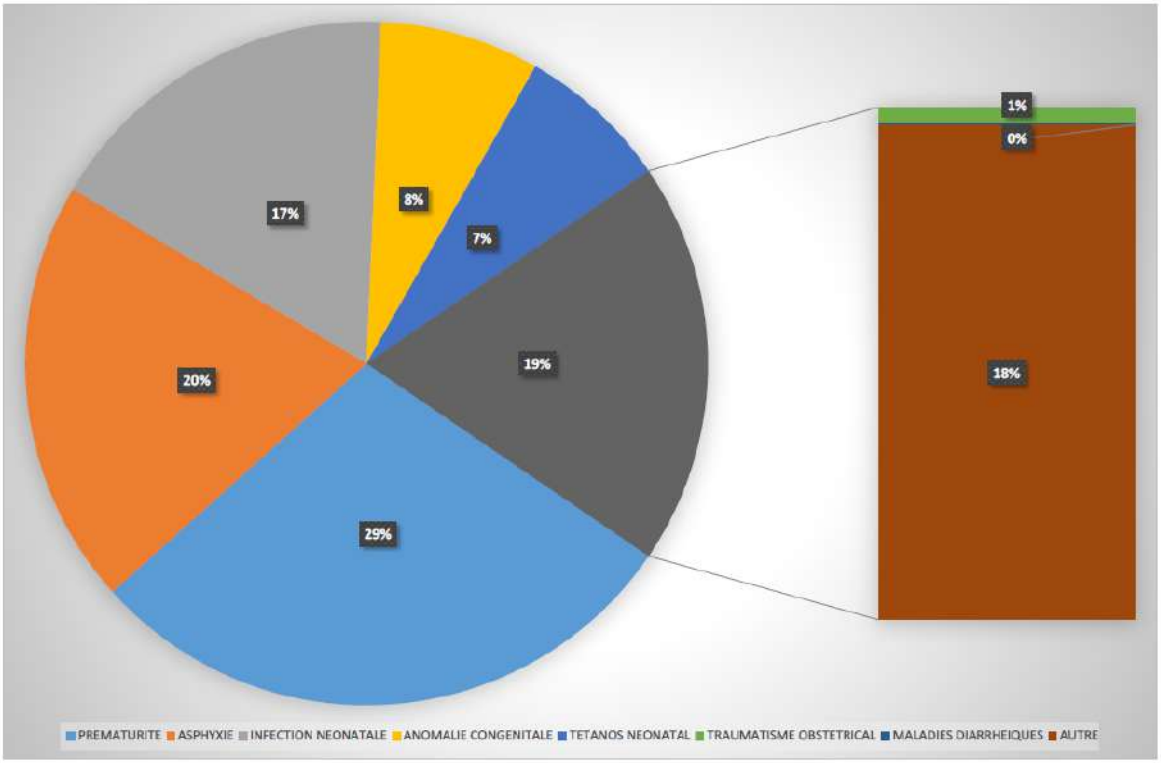
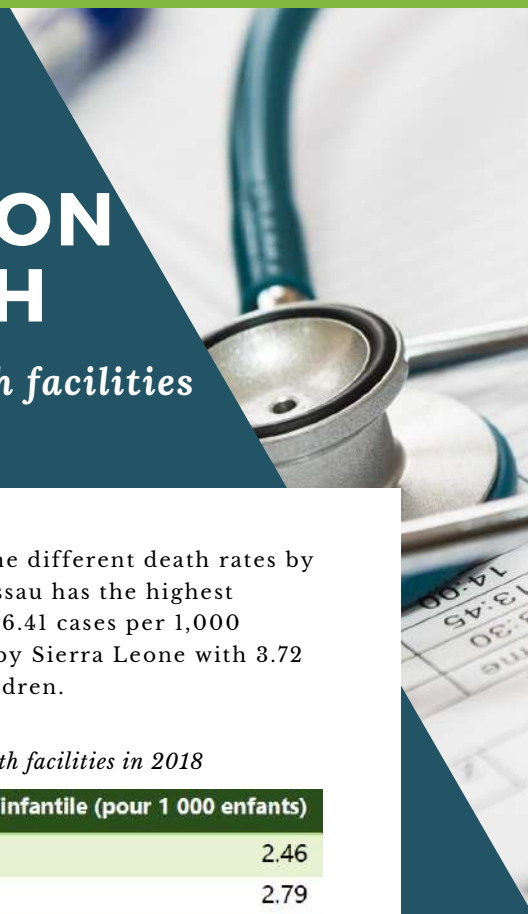



*Figure 13: Distribution of neonatal death causes in 2018*

***"Of the 36,773 neonatal deaths, 10,441 could be classified per cause."***



# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.7. Mortality among children under five in health facilities*

### *6.7.1. Total number*

In 2018, a total of 72,448 cases of death among children under five (5) years old were reported in health facilities in the region. The estimated mortality was 1.15 cases per 1,000 children.

Table 15 presents the different death rates by country. Guinea Bissau has the highest mortality rate with 6.41 cases per 1,000 children, followed by Sierra Leone with 3.72 cases per 1,000 children.

*Table 15: Number of deaths among children under 5 and infant mortality in health facilities in 2018*

| COUNTRY | Nombre de décès d'enfants de moins de 5 ans | Mortalité infantile (pour 1 000 enfants) |
|---|---|---|
| BENIN | 4 832 | 2.46 |
| BURKINA FASO | 10 058 | 2.79 |
| CAP VERT | 154 | 2.94 |
| COTE D'IVOIRE | 3 771 | 0.92 |
| The GAMBIA | 466 | 1.33 |
| GHANA | 6 724 | 1.23 |
| GUINEE | 2 317 | 1.15 |
| GUINEE BISSAU | 2 044 | 6.41 |
| LIBERIA | 2 024 | 2.25 |
| MALI | 1 336 | 0.38 |
| NIGER | 4 684 | 1.07 |
| NIGERIA | 26 018 | 0.78 |
| SENEGAL | 630 | 1.18 |
| SIERRA LEONE | 5 072 | 3.72 |
| TOGO | 2 318 | 2.13 |
| ENSEMBLEE | 72 448 | 1.15 |

***"In 2018, a total of 72,448 cases of death among children under five (5) years old were reported in health facilities in the region."***

# 6. REASONS FOR MEDICAL CONSULTATION AND CAUSES OF DEATH

## *6.7. Mortality among children under five in health facilities*

### *6.7.2. Five (5) main causes of death in children under five*

A total of 60,644 deaths of children below 5, representing 83.7% of the total deaths reported in health facilities for the year 2018, could be classified per cause (60,644/72,448).

Figure 15 presents the distribution of deaths per cause. The five most common causes are malaria (23.35%), HIV/AIDS (9.00%), pneumonia (post neonatal) (8.96%), neonatal deaths (8.30%) and diarrhea (6.75%).

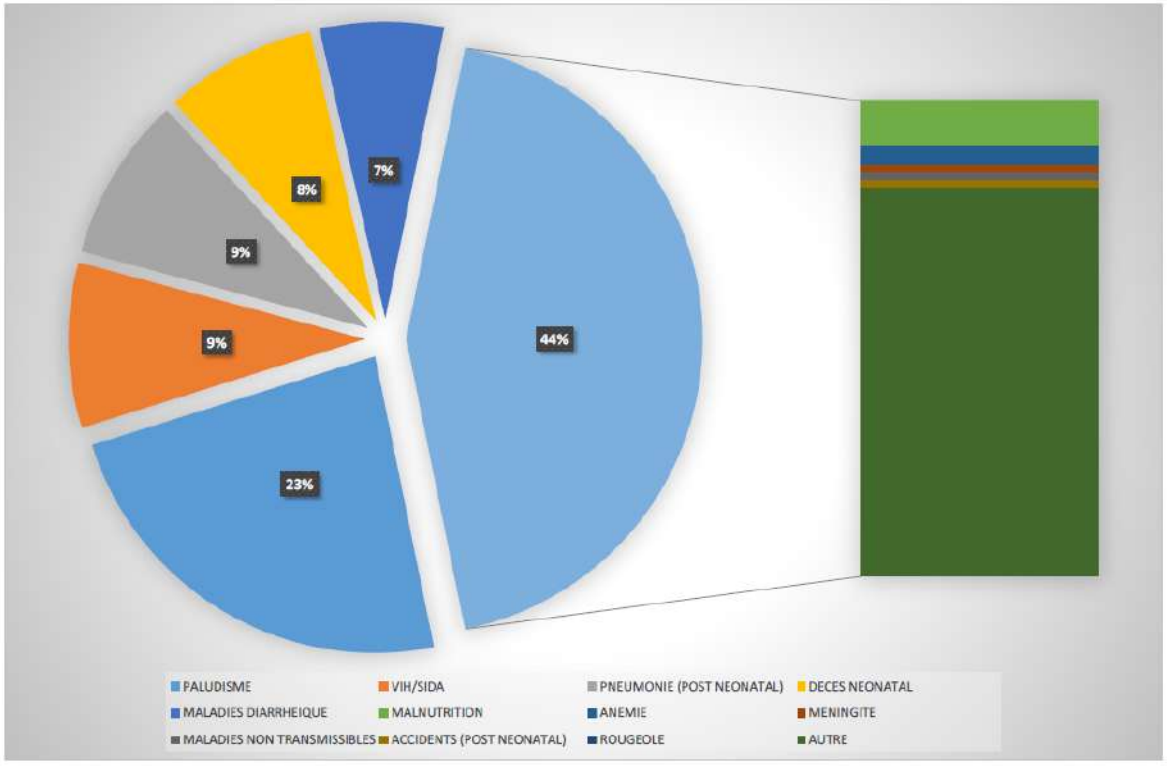



*Figure 14: Distribution of death causes among children under 5 in 2018*

***"The five most common causes are malaria (23.35%), HIV/AIDS (9.00%), pneumonia (post neonatal) (8.96%), neonatal deaths (8.30%) and diarrhea (6.75%)."***

# 7. EPIDEMIC-PRONE DISEASES

## 7.1. Epidemic-prone diseases in 2019

The year 2019 was marked by successive epidemic outbreaks. A total of 32 new epidemic outbreaks affected 11 of 15 countries (Table 16).

Only 4 countries in the region did not record a single epidemic episode (Burkina Faso, Cabo Verde, The Gambia and Guinea Bissau). In contrast, Nigeria, Benin, Senegal and Sierra Leone are the countries that most repeatedly experienced epidemic outbreaks during the year, Nigeria with 6 new outbreaks, Benin with 5, Senegal and Sierra Leone with 4 each.

One of the most striking facts is the resurgence of vaccine-derived poliovirus affecting 4 countries. Despite being a vaccine-derived virus, the emergence and circulation of the disease in 4 countries of the region has generated major concerns.

*Table 16: Summary table of epidemic outbreaks in the ECOWAS in 2019 (number of epidemic outbreaks per disease and per country)*

| | Maladies / Diseases | Bénin | Burkina Faso | Cabo Verde | Côte d'Ivoire | Gambie | Ghana | Guinée | Guiné Bissau | Liberia | Mali | Niger | Nigeria | Sénégal | Sierra Leone | Togo | Nombre d'événements |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fièvre de Lassa<br>Lassa Fever | | | | | | | | | | | | | | | | 7 |
| | Cholera /<br>Choléra | | | | | | | | | | | | | | | | 5 |
| | Rougeole<br>Measles | | | | | | | | | | | | | | | | 4 |
| | Poliomyélite<br>Poliomyelitis | | | | | | | | | | | | | | | | 4 |
| | Méningite<br>Meningitis | | | | | | | | | | | | | | | | 3 |
| | Fièvre de la Dengue<br>Dengue Fever | | | | | | | | | | | | | | | | 3 |
| | Fièvre Jaune<br>Yellow Fever | | | | | | | | | | | | | | | | 3 |
| | Anthrax /<br>Anthrax | | | | | | | | | | | | | | | | 1 |
| | Fièv. Hémor. de Crimé-Congo<br>/<br>Crimean-Congo Hem. Fever | | | | | | | | | | | | | | | | 1 |
| | Num. Epidemic events | 4 | 0 | 0 | 2 | 0 | 2 | 3 | 0 | 2 | 1 | 1 | 6 | 3 | 4 | 3 | 31 |

Plus d'un épisode

Un seul épisode

Aucun cas

# 7. EPIDEMIC-PRONE DISEASES

## 7.2. Diseases that were declared a public health concern in 2019 within the ECOWAS region

### 7.2.1. Lassa Fever

In 2019, the number of Lassa fever cases in the ECOWAS region rose to 895 confirmed cases and 195 deaths among the confirmed cases, i.e. a fatality rate of 21.8%. On the whole, 6 countries in the region had confirmed cases: they are Nigeria with 833 cases and 174 deaths (21% fatality), Liberia with 45 and 15 deaths (33% fatality), Benin with 10 cases and 1 death (10% fatality), and Sierra Leone with 5 cases and 3 deaths, and Togo and Guinea with 1 case each, which also led to deaths.

Between 2016 and 2019, the number of Lassa fever cases recorded in the ECOWAS region continued to increase, spiking from 129 cases in 2016 to 895 cases in 2019 (Figure 16). The fatality rate also more than doubled, from 10% to 21.8%.

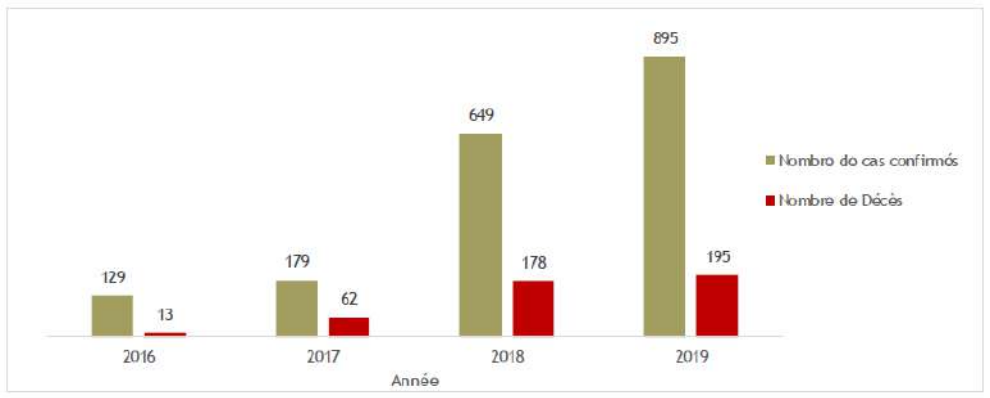



*Figure 15: Lassa fever in ECOWAS countries from 2016-2019 (Number of confirmed cases and deaths per year)*

It is worth noting the gradual increase in the number of countries affected by the disease over the years. Between 2010 and 2015, the disease was systematically reported by three countries (Liberia, Nigeria and Sierra Leone). Benin started since 2016 to record cases yearly, taking the tally of countries from 3 to 4. For 2019, there were a total of 6 countries affected by the disease.

From an epidemiological standpoint, Lassa fever remains a concern in the ECOWAS region due to the existence of several factors that help make the disease more endemic. These include, inter alia, climatic conditions conducive for the survival of the virus outside its host; the increase and spread of rodents (vectors); poverty; the low level of environmental sanitation in high population density communities; insufficient application of infection prevention and control measures in health facilities, and poor technical conditions required for proper surveillance and rapid diagnosis of suspected cases in health facilities.

# 7. EPIDEMIC-PRONE DISEASES

## 7.1. Diseases that were declared a public health concern in 2019 within the ECOWAS region

### 7.2.2. Cholera

In 2019, 2 countries (Benin and Nigeria) officially reported cholera epidemics, with a total of 614 confirmed cases (595 in Nigeria and 19 in Benin) by epidemiological, biological or clinical link, and with all 15 deaths from Nigeria among the confirmed cases. The Vibrio cholerae responsible for the cases is serotype 1.

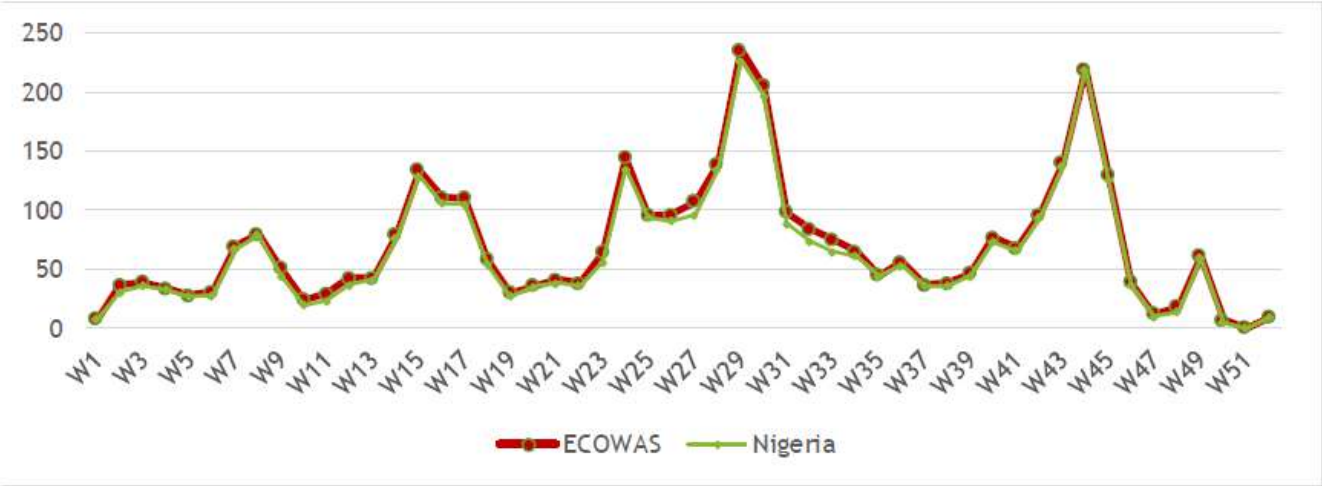



*Figure 16: Weekly reported cases of cholera in Nigeria and ECOWAS in 2019 (Source - WAHO regional sharing platform)*

In all, the surveillance systems of ECOWAS countries reported 3,651 suspected cases of cholera, with 3,463 in Nigeria. The other countries that reported the cases are Benin, Liberia and Sierra Leone. Figure 17 shows the weekly evolution of suspected cholera cases in Nigeria.

In 2018, Nigeria had a large cholera epidemic, accounting for 93% of the region's total 54,581 cases. In general, 2019 was the year with fewest reported cases of the disease within the last 3 years (Figure 18).

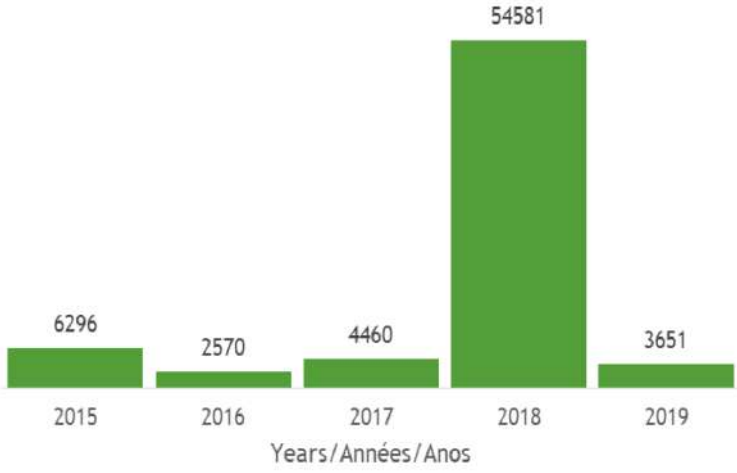



*Figure 17: Comparative evolution of number of cases (suspected and/or confirmed) within the ECOWAS region between 2015 and 2019*

# 7. EPIDEMIC-PRONE DISEASES

## 7.1. Diseases that were declared a public health concern in 2019 within the ECOWAS region

### 7.2.3. Measles

In 2019, a total of 37,171 confirmed measles cases and 256 deaths were reported in 14 ECOWAS countries (all except Guinea-Bissau which remained silent). The countries with the most confirmed cases were Nigeria (75.3%), Niger (7%), Ghana (3.5%), Liberia (3%) and Guinea (3%).

During the same 2018 period, 17,308 confirmed cases and 188 deaths were reported (representing an increase of 209% in 2019). The most affected countries at that time were Nigeria (39.6%), Liberia (19%), Burkina Faso (9.4%), Niger (8.35%) and Ghana (6.2%).

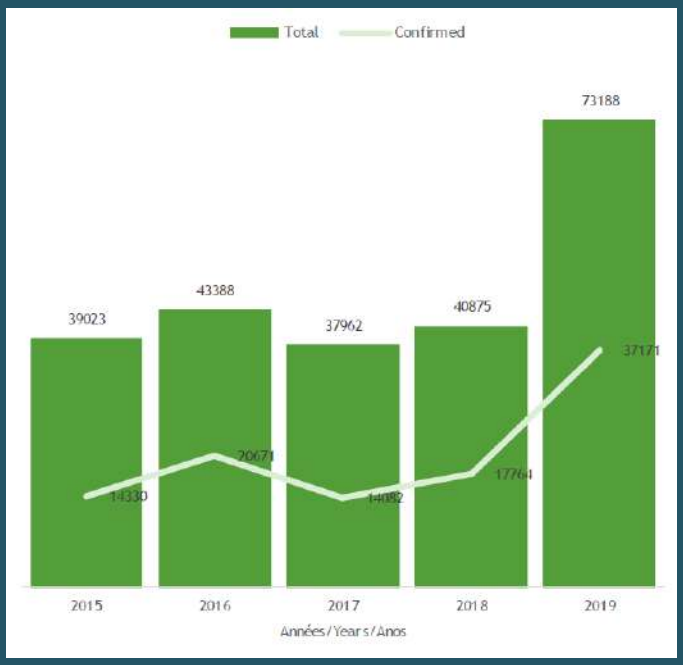



*Figure 18: Evolution du nombre de cas (suspects et confirmés) de rougeole dans l'espace CEDEAO entre 2015 et 2019*

***A sharp increase in cases of the disease can be observed in 2019 compared to previous years (Figure 19 and this increase in cases occurred in all countries.***

***Even Cabo Verde, which for the past 4 years no longer reported cases of measles, had it in 2019. Nevertheless, no increase in fatality from the disease is observed.***

# 7. EPIDEMIC-PRONE DISEASES

## *7.1. Diseases that were declared a public health concern in 2019 within the ECOWAS region*

### *7.2.4. Poliomyelitis*

The spread of circulating vaccine-derived polio virus (cVDPV) cases in the region requires the special attention of health authorities at all levels. It is imperative to undertake proactive and containment measures in all ECOWAS Member States.

In 2016, only one case of cVDPV was identified in Nigeria.

In 2018, an epidemic (with its epicentre in Jigawa, Nigeria) led to 44 cases of cVDPV 2 in 2 Member States (34 cases in Nigeria and 10 in Niger), while in 2019, our region recorded 40 cases of circulating vaccine-derived poliovirus - type 2 (cVDPV 2) in 5 Member States (18 cases in Nigeria, 11 in Ghana, 6 in Benin, 4 in Togo and 1 in Niger).

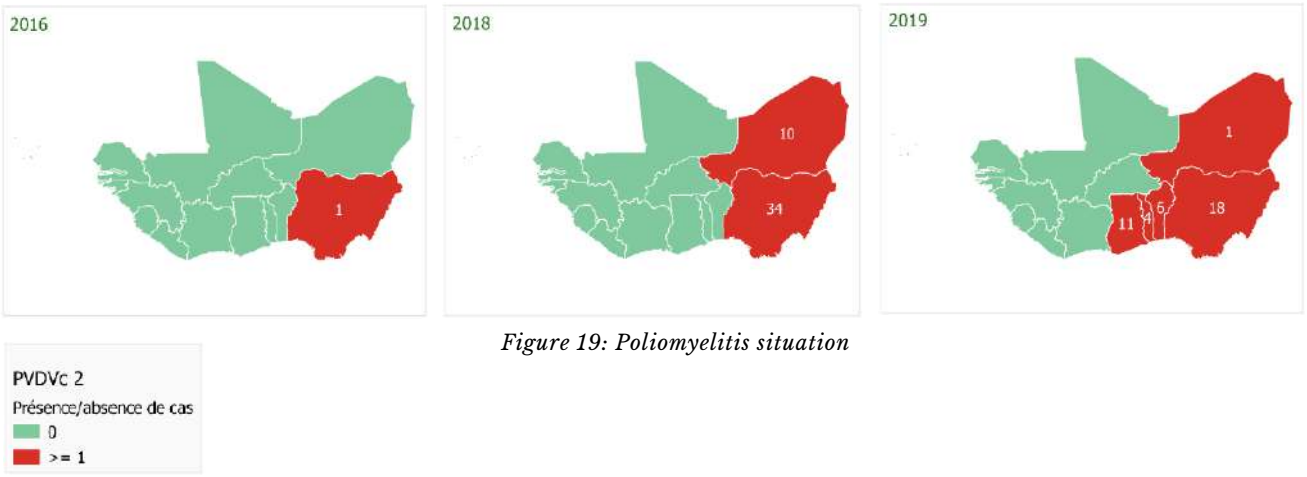



*Figure 19: Poliomyelitis situation*

In the fight against polio, the global goals are the eradication of wild polioviruses and the interruption of circulating polioviruses derived from vaccine strains. Two of the three strains of wild polio are now eradicated: type 2 (September 20, 2015, last cases were in 1999 in India) and type 3 (October 17, 2019, last case was in 2012 in Nigeria).

Nonetheless, over 90% of cVDPV cases are due to the type2 component present in Trivalent Oral Polio Vaccine (tOPV). Consequently, WHO in 2016 recommended replacing tOPV in routine immunisation programmes and supplementary immunisation activities (SIAs) with bivalent OPV containing only types 1 (the most common strain) and 3.

# 7. EPIDEMIC-PRONE DISEASES

## *7.1. Diseases that were declared a public health concern in 2019 within the ECOWAS region*

### 7.2.5. *Meningitis*

In 2019, a total of 9,097 cases of meningitis and 453 deaths (5% fatality) were reported in the ECOWAS region compared to 11,259 suspected cases and 794 deaths (7% fatality) in 2018.

All Member States reported cases, but the most affected were Nigeria (n = 2,102, 23.1%), Burkina-Faso (n = 1,841, 20.2%), Niger (n = 1,172, 13%), Ghana (n = 953, 10.5%) and Mali (n = 654, 7.2%). These 5 countries account for 74% of the cases identified in 2019 within ECOWAS.

However, the highest fatality rates were reported in Sierra Leone, 17.5% (7 deaths in 40 cases), Liberia, 10% (6 deaths in 60 cases) and Benin, 7.5% (30 deaths in 401 cases). During the meningitis epidemic season (January-June), Ghana, Nigeria and Togo had districts that had exceeded the epidemic threshold, while the alert threshold was exceeded in districts of 9 Member States (Benin, Burkina-Faso, Gambia, Ghana, Guinea, Niger, Nigeria, Senegal and Togo).

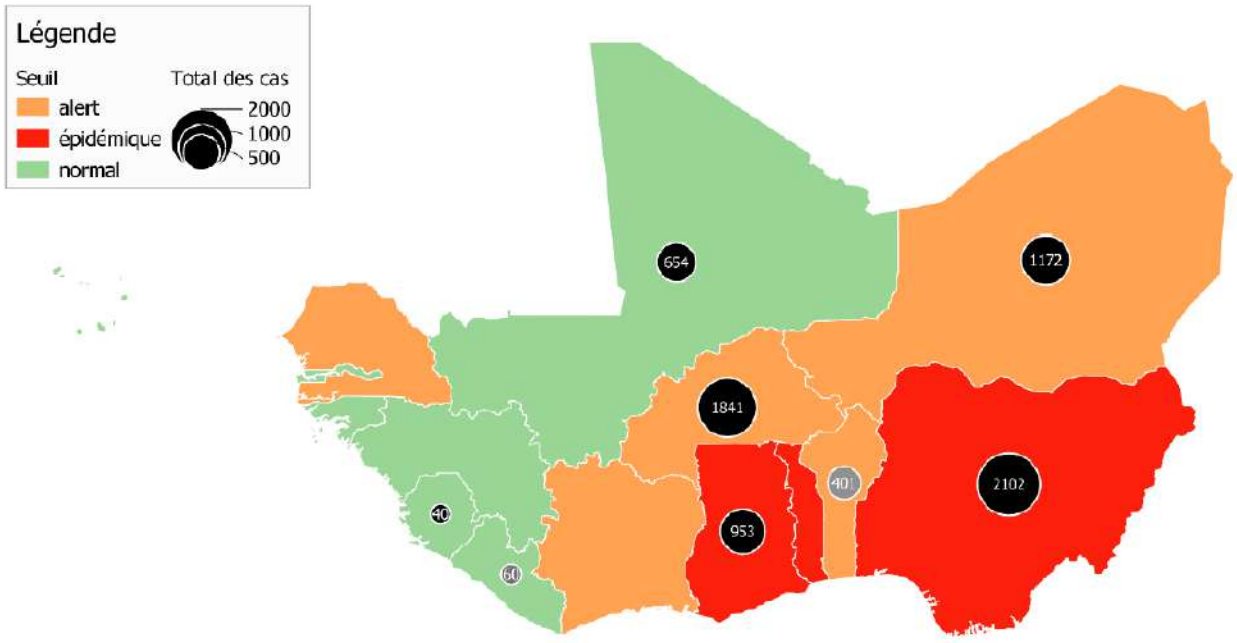



*Figure 20: Meningitis situation*

It should be noted that year 2019 saw the lowest number of suspected and/or confirmed cases of meningitis compared to the previous 5 years (Figure 21)

# 7. EPIDEMIC-PRONE DISEASES

## 7.1. Diseases that were declared a public health concern in 2019 within the ECOWAS region

### 7.2.5. Meningitis

51% of the pathogens identified in 2019 were made up of serogroups of the Nm species; 37% by Streptococcus pneumoniae (Spn); 7% by Haemophilus influenzae type B, and 6% by other germs. In the Nm species, serogroup C was predominant (74%), followed by serogroup X (21%) and serogroup W135 (5%).

Unlike other regions of the world where meningitis occurs mostly sporadically in small clusters of cases, sub-Saharan Africa has suffered from explosive and repeated meningitis epidemics for several decades. Between 1998 and 2009, more than one million cases were identified in the African meningitis belt, first described as such in 1963. The largest meningitis outbreak in history took place in 1996-1997, with more than 250,000 cases and 25,000 deaths reported on the African continent.

Since the 1940s, epidemic waves have occurred every 8 to 12 years, but two disturbing phenomena have been observed since the early 1980s: the intervals between epidemics have become shorter and more irregular, and the meningitis belt appears to extend southwards to affect regions which had so far been spared.

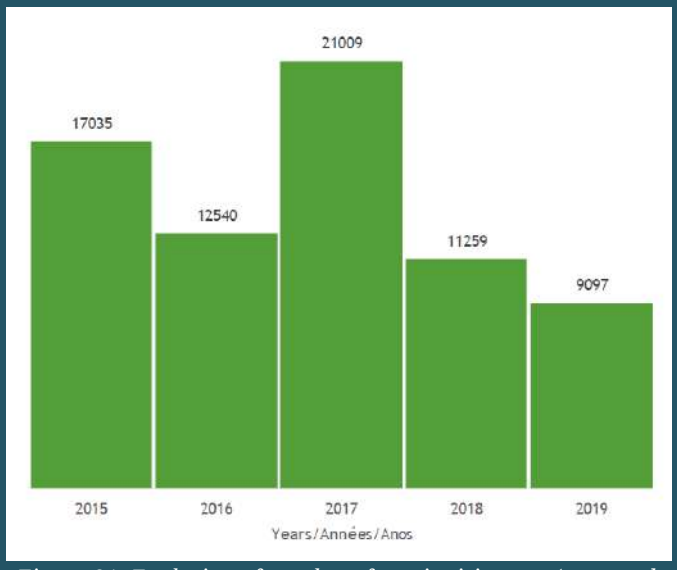



*Figure 21: Evolution of number of meningitis cases (suspected and confirmed) in the ECOWAS region between 2014 and 2018*

***"Unlike other regions of the world where meningitis occurs mostly sporadically in small clusters of cases, sub-Saharan Africa has suffered from explosive and repeated meningitis epidemics for several decades."***

# 7. EPIDEMIC-PRONE DISEASES

## 7.1. Diseases that were declared a public health concern in 2019 within the ECOWAS region

### 7.2.6. Dengue fever

In 2019, the number of confirmed cases of dengue reported in the ECOWAS region was 372, including a haemorrhagic type (347 in Côte d'Ivoire, 14 in Benin, 9 in Mali and 2 in Senegal), with 4 deaths among the confirmed cases, including the haemorrhagic case (2 in Benin and 2 in Côte d'Ivoire), i.e. a fatality of 1.1%.

Against the backdrop of a global spread of dengue, the West African region has been experiencing increasing epidemic outbreaks with new areas affected, and an increase in the number of reported cases. The ECOWAS region recorded dengue epidemics in 2009 in Cabo Verde (1st epidemic in the country), in 2016 in Burkina Faso (273 confirmed cases), in 2017 in Côte d'Ivoire (282 confirmed cases) and in 2018 in Senegal (338 confirmed cases).

The clinical manifestations of the aforementioned epidemics remained predominantly those of the "classic dengue" (with little or no hemorrhagic cases), and this has created the perception among people (even some health professionals) that dengue is a mild illness. However, this notion was disproved when 1 fatal hemorrhagic case was recorded in Benin and the 4 serotypes of the virus were found.

This has been shown to increase the risk of having hemorrhagic forms through the "immunological facilitation" phenomenon.

Indeed, the first infection, benign (CD), constituted a risk factor by conferring an immunological status facilitating the development, during a heterologous secondary infection, of a very strong vireamia, significant hemoconcentration, and oftentimes haemorrhages.

***"The most effective and accessible method of preventing or controlling the transmission of the dengue virus in the region is through vector control interventions, using the integrated vector management approach recommended by WHO."***

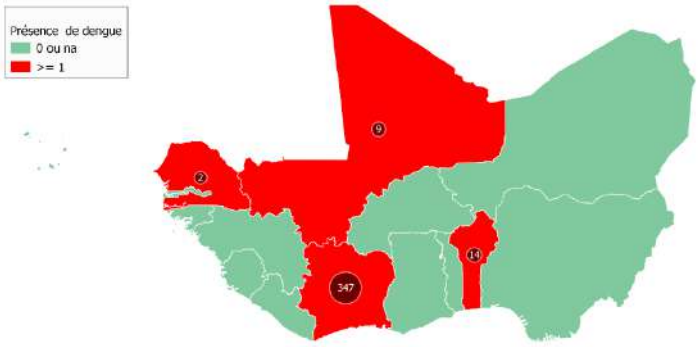



*Figure 22: Dengue situation*

# 7. EPIDEMIC-PRONE DISEASES

## 7.1. Diseases that were declared a public health concern in 2019 within the ECOWAS region

### 7.2.7. Yellow fever

In 2019, the region experienced outbreaks of yellow fever in Nigeria and Mali. A total of 200 confirmed cases (197 in Nigeria and 3 in Mali) and 26 deaths among them (24 in Nigeria and 2 in Mali), representing a fatality rate of 13%. However, investigations revealed many likely cases (deaths in symptomatic people who were not tested).

Figure 24 shows the weekly evolution of the number of suspected cases of yellow fever (febrile jaundice) reported by epidemiological surveillance systems in all ECOWAS countries, compared to suspected cases reported in Nigeria and Mali.

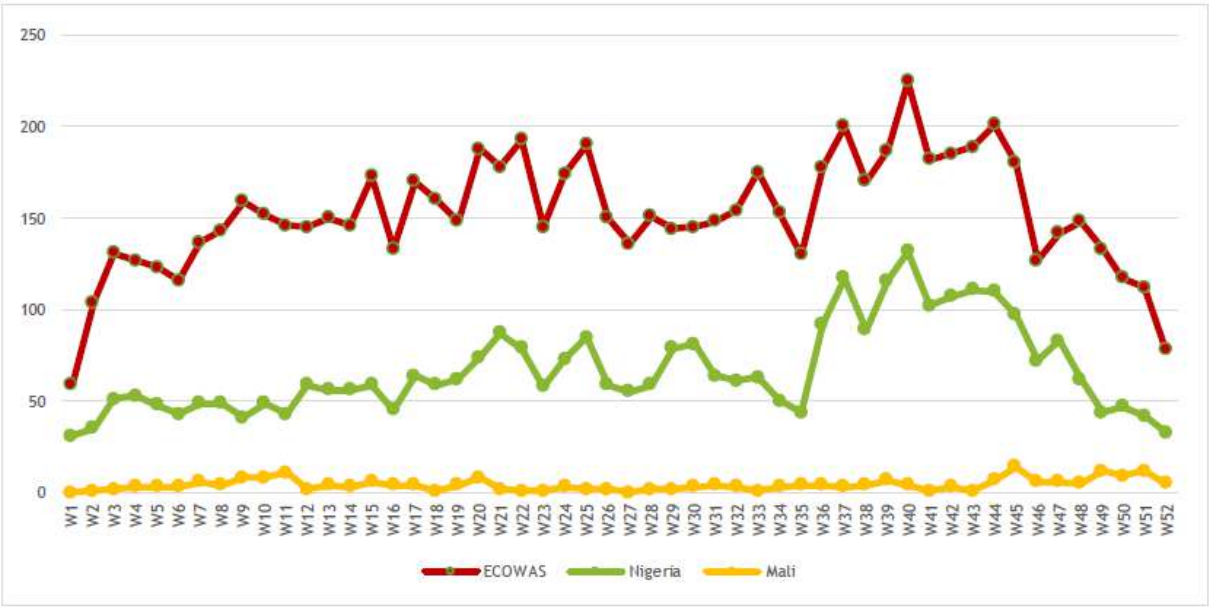



*Figure 23: Weekly evolution of the number of yellow fever cases (suspected and confirmed) in the ECOWAS region in 2019*

All ECOWAS Member States are among the countries in Africa where the risk is high and the disease endemic. Peri-urban epidemics, occurring in towns of small to medium population density, were largely recorded in the countries. Between 2012 (last epidemic in Ghana) and September 2017 (resurgence of the outbreak in Nigeria), no other epidemic was reported in the ECOWAS region.

And since then, Nigeria has responded successively to outbreaks of yellow fever. In 2018, the Nigerian Centre for Disease Control (NCDC) reported 139 confirmed cases (Dakar Institut Pasteur), including 29 deaths, in 17 states of the country.

# 7. EPIDEMIC-PRONE DISEASES

## *7.1. Diseases that were declared a public health concern in 2019 within the ECOWAS region*

### 7.2.7. Yellow fever

Recently, the determinants of yellow fever epidemics in the ECOWAS region have evolved significantly: urbanisation and wild peri-urbanization; the ease and speed of human movements; West African cities linked to peri-urban areas with a high prevalence of vectors having a resurgence of the Aedes aegypti mosquitoes (main vectors of urban outbreaks in Africa); and climate change with increased exposure of people to infected mosquitoes.

And all these, combined with the persistent detection of yellow fever cases in the region, increase the risk of urban outbreaks in major cities of the ECOWAS region.

Prevention remains the best option and is essentially based on routine vaccination (of infants and travellers going to endemic areas, catch-up campaigns), laboratory surveillance and confirmation of cases, communication, vector surveillance and control.

### 7.2.8. Anthrax

In 2019, five human cases of anthrax (skin manifestation), including one death (20% fatality rate), were reported in Guinea. Niger also reported 3 outbreaks of anthrax in animals (37 sheep and 114 cattle all dead) between September 23 and October 11, 2019.

Anthrax is endemic, particularly in the tropical forests of sub-Saharan Africa where it is widespread. Anthrax outbreaks are common in animals in West Africa where soils are alkaline, rich in calcium and other minerals, with the risk of transmission to humans higher.

### 7.2.9. Crimean-Congo Hemorrhagic Fever

In 2019, the ECOWAS region identified 2 confirmed cases of Crimean-Congo Hemorrhagic Fever (CCHF) in Senegal. The last cases recorded in the region date back to July 2017 with 3 cases, still in Senegal (2 cases imported from Mauritania and 1 indigenous case).

Mauritania, a country in West Africa and neighbor to Senegal, reports cases of CCHF each year and is a source of the disease's spread in West Africa.

APPENDIX

# 10 LEADING CAUSES OF CONSULTATION BY COUNTRY

*Table 17: 5 leading causes of consultation among children under 5 in health facilities in 2018*

| Country | Cause 1 | | Cause 2 | | Cause 3 | | Cause 4 | | Cause 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) |
| Benin | MALARIA | 2048584 (45.80) | ACUTE RESPIRATORY INFECTIONS | 567221 (12.68) | DIARRHEA | 251703 (5.63) | TRAUMA | 176240 (3.94) | ANEMIA | 107762 (2.41) |
| Burkina Faso | MALARIA | 10897201 (44.29) | ACUTE RESPIRATORY INFECTIONS | 7018769 (28.52) | DIARRHEA | 1588640 (6.46) | DIARRHEA | 608406 (2.47) | SKIN DISEASES | 555529 (2.26) |
| Cote d'Ivoire | MALARIA | 5297926 (40.62) | ACUTE RESPIRATORY INFECTIONS | 1323895 (10.15) | ANEMIA | 924576 (7.09) | DIARRHEA | 572123 (4.39) | STIs/HIV/AIDS | 378713 (2.90) |
| The Gambia | ACUTE RESPIRATORY INFECTIONS | 134152 (8.29) | SKIN DISEASES | 101457 (6.27) | NON-COMMUNICABLE DISEASES | 98454 (6.09) | MALARIA | 88568 (5.47) | NON-COMMUNICABLE DISEASES | 75095 (4.64) |
| Ghana | MALARIA | 6513251 (21.11) | ACUTE RESPIRATORY INFECTIONS | 3824065 (12.39) | NON-COMMUNICABLE DISEASES | 1730414 (5.61) | DIARRHEA | 1466956 (4.75) | ANEMIA | 1149829 (3.73) |
| Guinea-Bissau | MALARIA | 171075 (24.34) | DIARRHEA | 37537 (5.34) | ACUTE RESPIRATORY INFECTIONS | 19737 (2.81) | ACUTE RESPIRATORY INFECTIONS | 11249 (1.60) | STIs/HIV/AIDS | 6555 (0.93) |
| Guinea | MALARIA | 1215066 (30.67) | ACUTE RESPIRATORY INFECTIONS | 339743 (8.58) | DIARRHEA | 244868 (6.18) | DIARRHEA | 161351 (4.07) | STIs/HIV/AIDS | 132686 (3.35) |
| Liberia | MALARIA | 17630492 (41.00) | UNCLASSIFIED | 645018 (15.00) | ACUTE RESPIRATORY INFECTIONS | 339709.48 (7.90) | DIARRHEA | 124703.48 (2.90) | STIs/HIV/AIDS | 111803.12 (2.60) |
| Mali | MALARIA | 3390981 (40.12) | ACUTE RESPIRATORY INFECTIONS | 1032872 (12.22) | DIARRHEA | 304116 (3.60) | NON-COMMUNICABLE DISEASES | 244316 (2.89) | DIARRHEA | 203511 (2.41) |
| Niger | MALARIA | 2048584 (45.80) | ACUTE RESPIRATORY INFECTIONS | 567221 (12.68) | DIARRHEA | 251703 (5.63) | TRAUMA | 176240 (3.94) | ANEMIA | 107762 (2.41) |
| Sierra Leone | MALARIA | 2896181 (66.76) | ACUTE RESPIRATORY INFECTIONS | 1093966 (25.22) | DIARRHEA | 259148 (5.97) | STIs/HIV/AIDS | 176759 (4.07) | SKIN DISEASES | 171730 (3.96) |
| Togo | MALARIA | 1374028 (36.00) | ACUTE RESPIRATORY INFECTIONS | 342751 (8.98) | TRAUMA | 207479 (5.44) | ANEMIA | 93472 (2.45) | DIARRHEA | 91192 (2.39) |

APPENDIX

# 10 LEADING CAUSES OF CONSULTATION BY COUNTRY

*Table 18: 6th to 10th leading causes of consultation among children under 5 in health facilities in 2018*

| Country | Cause 6 | | Cause 7 | | Cause 8 | | Cause 9 | | Cause 10 | | Others | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | n (%) | |
| Benin | DIARRHEA | 100844 (2.25) | SKIN DISEASES | 66360 (1.48) | UNCLASSIFIED | 61118 (1.37) | NON-COMMUNICABLE DISEASES | 60592 (1.35) | NON-COMMUNICABLE DISEASES | 36287 (0.81) | 996162 (22.27) | |
| Burkina Faso | TRAUMA | 531959 (2.16) | DIARRHEA | 484409 (1.97) | STOMACH ULCER | 318216 (1.29) | EYE DISEASES | 305397 (1.24) | STIs/HIV/AIDS | 258847 (1.05) | 2038056 (8.29) | |
| Cote d'Ivoire | SKIN DISEASES | 351061 (2.69) | NON-COMMUNICABLE DISEASES | 151928 (1.16) | DIARRHEA | 142464 (1.09) | UNCLASSIFIED | 759720 (5.83) | UNCLASSIFIED | 725086 (5.56) | 2413839 (18.51) | |
| The Gambia | ORAL AND DENTAL DISEASES | 38369 (2.37) | EYE DISEASES | 30161 (1.86) | ANEMIA | 27969 (1.73) | TRAUMA | 21356 (1.32) | UNCLASSIFIED | 19878 (1.23) | (0.00) | |
| Ghana | SKIN DISEASES | 963629 (3.12) | DIARRHEA | 859258 (2.79) | URINARY INFECTION | 818973 (2.65) | NON-COMMUNICABLE DISEASES | 617569 (2.00) | EYE DISEASES | 490429 (1.59) | 12418203 (40.25) | |
| Guinea-Bissau | ACUTE RESPIRATORY INFECTIONS | 2680 (0.38) | EYE DISEASES | 2556 (0.36) | TUBERCULOSIS | 2031 (0.29) | UNCLASSIFIED | 0 (0.00) | UNCLASSIFIED | 0 (0.00) | (0.00) | |
| Guinea | NEGLECTED TROPICAL DISEASES | 59896 (1.51) | NON-COMMUNICABLE DISEASES | 54633 (1.38) | MALNUTRITION | 47477 (1.20) | TRAUMA | 13666 (0.34) | UNCLASSIFIED | 3622 (0.09) | 304781 (7.69) | |
| Liberia | ACUTE RESPIRATORY INFECTIONS | 73102.04 (1.70) | DIARRHEA | 60201.68 (1.40) | NON-COMMUNICABLE DISEASES | 60201.68 (1.40) | ANEMIA | 60201.68 (1.40) | TUBERCULOSIS | 8600.24 (0.20) | 1027728.68 (23.90) | |
| Mali | UNCLASSIFIED | 136134 (1.61) | TRAUMA | 132617 (1.57) | TRAUMA | 110118 (1.30) | STIs/HIV/AIDS | 109807 (1.30) | ORAL AND DENTAL DISEASES | 102130 (1.21) | 86357 (1.02) | |
| Niger | DIARRHEA | 100844 (2.25) | SKIN DISEASES | 66360 (1.48) | UNCLASSIFIED | 61118 (1.37) | NON-COMMUNICABLE DISEASES | 60592 (1.35) | NON-COMMUNICABLE DISEASES | 36287 (0.81) | 996162 (22.27) | |
| Sierra Leone | DIARRHEA | 167790 (3.87) | ANEMIA | 129791 (2.99) | MALNUTRITION | 103868 (2.39) | TRAUMA | 51126 (1.18) | MALNUTRITION | 45971 (1.06) | 0 (0.00) | |
| Togo | DIARRHEA | 90060 (2.36) | STIs/HIV/AIDS | 81600 (2.14) | TRAUMA | 64139 (1.68) | NON-COMMUNICABLE DISEASES | 58293 (1.53) | EYE DISEASES | 27950 (0.73) | 1386089 (36.31) | |

APPENDIX

# 10 LEADING CAUSES OF CONSULTATION BY COUNTRY

*Table 19: 5 leading causes of consultation among children under 5 in health facilities in 2018*

| Country | Cause 1 | | Cause 2 | | Cause 3 | | Cause 4 | | Cause 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) |
| Benin | MALARIA | 766330 (17.13) | ACUTE RESPIRATORY INFECTIONS | 276858 (6.19) | DIARRHEA | 85587 (1.91) | TRAUMA | 75512 (1.69) | ANEMIA | 63317 (1.42) |
| Burkina Faso | MALARIA | 5400070 (21.95) | ACUTE RESPIRATORY INFECTIONS | 4280732 (17.40) | DIARRHEA | 840877 (3.42) | SKIN DISEASES | 310228 (1.26) | DIARRHEA | 251203 (1.02) |
| Cote d'Ivoire | MALARIA | 2270328 (17.41) | ACUTE RESPIRATORY INFECTIONS | 672850 (5.16) | ANEMIA | 597003 (4.58) | DIARRHEA | 266702 (2.05) | SKIN DISEASES | 128189 (0.98) |
| The Gambia | ACUTE RESPIRATORY INFECTIONS | 134152 (8.29) | DIARRHEA | 45490 (2.81) | ACUTE RESPIRATORY INFECTIONS | 11530 (0.71) | ANEMIA | 9408 (0.58) | MALARIA | 8086 (0.50) |
| Ghana | MALARIA | 1984086 (6.43) | ACUTE RESPIRATORY INFECTIONS | 1419015 (4.60) | DIARRHEA | 623401 (2.02) | SKIN DISEASES | 333423 (1.08) | ANEMIA | 303832 (0.98) |
| Guinea-Bissau | MALARIA | 28581 (4.07) | DIARRHEA | 29442 (4.19) | ACUTE RESPIRATORY INFECTIONS | 15227 (2.17) | ACUTE RESPIRATORY INFECTIONS | 40421 (5.75) | ACUTE RESPIRATORY INFECTIONS | 8941 (1.27) |
| Guinea | MALARIA | 436809 (11.03) | ACUTE RESPIRATORY INFECTIONS | 184598 (4.66) | DIARRHEA | 83754 (2.11) | DIARRHEA | 61544 (1.55) | SEXUALLY TRANSMITTED INFECTIONS | 491 (0.01) |
| Liberia | MALARIA | 2092655 (48.67) | ACUTE RESPIRATORY INFECTIONS | 561978 (13.07) | UNCLASSIFIED | 553553 (12.87) | ACUTE RESPIRATORY INFECTIONS | 192775 (4.48) | ANEMIA | 107617 (2.50) |
| Mali | MALARIA | 1126042 (13.32) | ACUTE RESPIRATORY INFECTIONS | 861128 (10.19) | DIARRHEA | 189633 (2.24) | SKIN DISEASES | 41392 (0.49) | MALNUTRITION | 28733 (0.34) |
| Niger | MALARIA | 766330 (17.13) | ACUTE RESPIRATORY INFECTIONS | 276858 (6.19) | DIARRHEA | 85587 (1.91) | TRAUMA | 75512 (1.69) | ANEMIA | 63317 (1.42) |
| Sierra Leone | MALARIA | 1660545 (38.28) | ACUTE RESPIRATORY INFECTIONS | 801377 (18.47) | DIARRHEA | 190938 (4.40) | SKIN DISEASES | 126978 (2.93) | MALNUTRITION | 91186 (2.10) |
| Togo | MALARIA | 13917 (0.36) | ACUTE RESPIRATORY INFECTIONS | 2193 (0.06) | DIARRHEA | 704 (0.02) | ANEMIA | 390 (0.01) | TRAUMA | 356 (0.01) |

APPENDIX

# 10 LEADING CAUSES OF CONSULTATION BY COUNTRY

*Table 20: 6th to 10th leading causes of consultation among children under 5in health facilities in 2018*

| Country | Cause 6 | | Cause 7 | | Cause 8 | | Cause 9 | | Cause 10 | | Others | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | n (%) | |
| Benin | DIARRHEA | 21567 (0.48) | SKIN DISEASES | 20417 (0.46) | UNCLASSIFIED | 15620 (0.35) | NON-COMMUNICABLE DISEASES | 14108 (0.32) | NON-COMMUNICABLE DISEASES | 4920 (0.11) | 198842 (4.45) | |
| Burkina Faso | DIARRHEA | 216927 (0.88) | EYE DISEASES | 189535 (0.77) | TRAUMA | 118197 (0.48) | SKIN DISEASES | 117360 (0.48) | MALNUTRITION | 73591 (0.30) | 388908 (1.58) | |
| Cote d'Ivoire | MALNUTRITION | 47169 (0.36) | UNCLASSIFIED | 201237 (1.54) | UNCLASSIFIED | 95791 (0.73) | UNCLASSIFIED | (0.00) | UNCLASSIFIED | (0.00) | (0.00) | |
| The Gambia | EYE DISEASES | 7502 (0.46) | EYE DISEASES | 5463 (0.34) | DIARRHEA | 1466 (0.09) | EAR INFECTIONS | 1315 (0.08) | MALNUTRITION | 567 (8.0.04) | 545 (0.03) | |
| Ghana | DIARRHEA | 150182 (0.49) | ACUTE RESPIRATORY INFECTIONS | 113798 (0.37) | UNCLASSIFIED | 98573 (0.32) | EYE DISEASES | 81493 (0.26) | URINARY INFECTION | 62153 (0.20) | 2504597 (8.12) | |
| Guinea-Bissau | EYE DISEASES | 2678 (0.38) | TUBERCULOSIS | 62 (0.01) | STIs/HIV/AIDS | (0.00) | UNCLASSIFIED | (0.00) | UNCLASSIFIED | (0.00) | (0.00) | |
| Guinea | UNCLASSIFIED | 1825 (0.05) | NEGLECTED TROPICAL DISEASES | 85 (0.00) | MALNUTRITION | 37905 (0.96) | NON-COMMUNICABLE DISEASES | 321 (0.01) | TRAUMA | 1012 (0.03) | 62436 (1.58) | |
| Liberia | MALNUTRITION | 84911 (1.97) | DIARRHEA | 71963 (1.67) | ORAL AND DENTAL DISEASES | 71550 (1.66) | DIARRHEA | 65960 (1.53) | ACUTE RESPIRATORY INFECTIONS | 60952 (1.42) | 434312 (10.10) | |
| Mali | TRAUMA | 247226 (2.93) | EYE DISEASES | 20410 (0.24) | ANEMIA | 15427 (0.18) | DIARRHEA | 13323 (0.16) | SKIN DISEASES | 12429 (0.15) | (0.00) | |
| Niger | DIARRHEA | 21567 (0.48) | SKIN DISEASES | 20417 (0.46) | UNCLASSIFIED | 15620 (0.35) | NON-COMMUNICABLE DISEASES | 14108 (0.32) | NON-COMMUNICABLE DISEASES | 4920 (0.11) | 198842 (4.45) | |
| Sierra Leone | DIARRHEA | 85879 (1.98) | ANEMIA | 75796 (1.75) | MALNUTRITION | 43780 (1.01) | EYE DISEASES | 22834 (0.53) | TRAUMA | 8376 (0.19) | 1230439 (28.36) | |
| Togo | DIARRHEA | 345 (0.01) | EYE DISEASES | 97 (0.00) | EAR INFECTIONS | 64 (0.00) | EAR INFECTIONS | 61 (0.00) | TRAUMA | 50 (0.00) | 16541 (0.43) | |

APPENDIX

# 10 LEADING CAUSES OF CONSULTATION BY COUNTRY

*Table 21: 5 leading causes of consultation among adults over 25 in 2018*

| Country | Cause 1 | | Cause 2 | | Cause 3 | | Cause 4 | | Cause 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) |
| The Gambia | ACUTE RESPIRATORY INFECTION | 134184 (18.84) | SKIN DISEASES | 101517 (14.25) | NON-COMMUNICABLE DISEASES | 98454 (13.82) | NON-COMMUNICABLE DISEASES | 75234 (10.56) | ORAL AND DENTAL DISEASES | 38367 (5.39) |
| Ghana | MALARIA | 4529165 (19.54) | NON-COMMUNICABLE DISEASES | 1710019 (7.38) | ACUTE RESPIRATORY INFECTION | 2405050 (10.38) | NON-COMMUNICABLE DISEASES | 616718 (2.66) | URINARY INFECTION | 756820 (3.27) |
| Guinea-Bissau | MALARIA | 138176 (37.76) | DIARRHEA | 8095 (2.21) | ACUTE RESPIRATORY INFECTION | 4510 (1.23) | ACUTE RESPIRATORY INFECTION | 21803 (5.96) | ACUTE RESPIRATORY INFECTION | 4729 (1.29) |
| Guinea | MALARIA | 772326 (45.40) | ACUTE RESPIRATORY INFECTION | 155145 (9.12) | DIARRHEA | 183324 (10.78) | STIs/HIV/AIDS | 132195 (7.77) | DIARRHEA | 77597 (4.56) |
| Liberia | MALARIA | 983443 (34.66) | UNCLASSIFIED | 481286 (16.96) | ACUTE RESPIRATORY INFECTION | 166576 (5.87) | MALARIA | 132123 (4.66) | DIARRHEA | 118274 (4.17) |
| Mali | MALARIA | 1479732 (51.04) | ACUTE RESPIRATORY INFECTION | 337515 (11.64) | NON-COMMUNICABLE DISEASES | 242839 (8.38) | ACUTE RESPIRATORY INFECTION | 217201 (7.49) | DIARRHEA | 156072 (5.38) |
| Niger | MALARIA | 406358 (24.71) | ACUTE RESPIRATORY INFECTION | 254710 (15.49) | MALARIA | 181923 (11.06) | DIARRHEA | 123982 (7.54) | ACUTE RESPIRATORY INFECTION | 107877 (6.56) |
| Sierra Leone | MALARIA | 17889 (20.23) | EYE DISEASES | 11237 (12.71) | NON-COMMUNICABLE DISEASES | 6164 (6.97) | URINARY INFECTIONS | 4798 (5.42) | TUBERCULOSIS | 2890 (3.27) |
| Togo | MALARIA | 1360111 (35.96) | ACUTE RESPIRATORY INFECTION | 340558 (9.00) | NON-COMMUNICABLE DISEASES | 217153 (5.74) | TRAUMA | 207123 (5.48) | ANEMIA | 93082 (2.46) |

APPENDIX

# 10 LEADING CAUSES OF CONSULTATION BY COUNTRY

*Table 22: 6th to 10th leading causes of consultation among adults over 25 in 2018*

| Country | Cause 6 | | Cause 7 | | Cause 8 | | Cause 9 | | Cause 10 | | Others | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | n (%) | |
| The Gambia | EYE DISEASES | 30165 (4.23) | ANEMIA | 28027 (3.93) | TRAUMA | 21358 (3.00) | UNCLASSIFIED | 19885 (2.79) | SEXUALLY TRANSMITTED INFECTIONS | 17297 (2.43) | 147821 (20.75) | |
| Ghana | STIs/HIV/AIDS | 575660 (2.48) | ANEMIA | 846197 (3.65) | DIARRHEA | 843555 (3.64) | DIARRHEA | 709076 (3.06) | SKIN DISEASES | 630206 (2.72) | 9555755 (41.23) | |
| Guinea-Bissau | EYE DISEASES | 3642 (1.00) | TUBERCULOSIS | 1969 (0.54) | STIs/HIV/AIDS | (0.00) | UNCLASSIFIED | (0.00) | UNCLASSIFIED | (0.00) | (0.00) | |
| Guinea | NEGLECTED TROPICAL DISEASES | 59811 (3.52) | STIs/HIV/AIDS | 54312 (3.19) | UNCLASSIFIED | 1797 (0.11) | MALNUTRITION | 9572 (0.56) | TRAUMA | 12654 (0.74) | 242345 (14.25) | |
| Liberia | SEXUALLY TRANSMITTED INFECTIONS | 104431 (3.68) | STIs/HIV/AIDS | 61649 (2.17) | DIARRHEA | 55831 (1.97) | URINARY INFECTIONS | 52376 (1.85) | URINARY INFECTIONS | 37917 (1.34) | 644103 (22.70) | |
| Mali | UNCLASSIFIED | 117201 (4.04) | DIARRHEA | 80441 (2.77) | ORAL AND DENTAL DISEASES | 76052 (2.62) | TRAUMA | 148830 (5.13) | EYE DISEASES | 43353 (1.50) | (0.00) | |
| Niger | UNCLASSIFIED | 63370 (3.85) | DIARRHEA | 54209 (3.30) | SKIN DISEASES | 41849 (2.54) | MALNUTRITION | 33398 (2.03) | MALNUTRITION | 30899 (1.88) | 345909 (21.03) | |
| Sierra Leone | STIs/HIV/AIDS | 2581 (2.92) | TRAUMA | 2135 (2.41) | ACUTE RESPIRATORY INFECTION | 1972 (2.23) | DIARRHEA | 1861 (2.10) | TRAUMA | 1558 (1.76) | 35360 (39.98) | |
| Togo | DIARRHEA | 90488 (2.39) | DIARRHEA | 89715 (2.37) | STIs/HIV/AIDS | 81599 (2.16) | TRAUMA | 64089 (1.69) | NON-COMMUNICABLE DISEASES | 58293 (1.54) | 1180124 (31.20) | |

# APPENDIX

## 5 LEADING CAUSES OF DEATH BY COUNTRY

*Table 23: 5 leading causes of maternal death in the region in 2018*

| Country | Cause 1 | | Cause 2 | | Cause 3 | | Cause 4 | | Cause 5 | | Others |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | n (%) |
| Burkina Faso | HAEMORRHAGE | 252 (28.31) | INFECTIONS | 96 (10.79) | ECLAMPSIA | 74 (8.31) | UTERINE RUPTURE | 37 (4.16) | ABORTION COMPLICATIONS | 34 (3.82) | 397 (44.61) |
| Cabo Verde | UNCLASSIFIED | 1 (25.00) | ECLAMPSIA | 1 (25.00) | UNCLASSIFIED | 1 (25.00) | UNCLASSIFIED | 1 (25.00) | UNCLASSIFIED | 0 (0.00) | 0 (0.00) |
| Cote d'Ivoire | ANEMIA | 166 (22.05) | HAEMORRHAGE | 105 (13.94) | EP (Ectopic Pregnancy) | 83 (11.02) | UNCLASSIFIED | 60 (7.97) | ECLAMPSIA | 53 (7.04) | 286 (37.98) |
| Guinea | HAEMORRHAGE | 230 (24.76) | ECLAMPSIA | 202 (21.74) | INFECTIONS | 101 (10.87) | UTERINE RUPTURE | 97 (10.44) | UNCLASSIFIED | 113 (12.16) | 186 (20.02) |
| Mali | HAEMORRHAGE | 235 (45.99) | ECLAMPSIA | 123 (24.07) | INFECTIONS | 31 (6.07) | ABORTION COMPLICATIONS | 15 (2.94) | UNCLASSIFIED | 10 (1.96) | 97 (18.98) |
| Nigeria | HAEMORRHAGE | 2377 (22.00) | ECLAMPSIA | 1945 (18.00) | ABORTION COMPLICATIONS | 1405 (13.00) | INFECTIONS | 864 (8.00) | OTHERS | 432 (4.00) | 3674 (34.00) |
| Sierra Leone | HAEMORRHAGE | 294 (49.08) | ECLAMPSIA | 90 (15.03) | INFECTIONS | 72 (12.02) | ABORTION COMPLICATIONS | 24 (4.01) | OTHERS | 48 (8.01) | 72 (12.02) |

*Table 24: 5 leading causes of neonatal death in the region in 2018*

| Country | Cause 1 | | Cause 2 | | Cause 3 | | Cause 4 | | Cause 5 | | Others |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | n (%) |
| Cabo Verde | NEONATAL INFECTION | 68 (75.56) | CONGENITAL ANOMALY | 8 (8.89) | DIARRHEA | 3 (3.33) | ASPHYXIA | 2 (2.22) | UNCLASSIFIED | 1 (1.11) | 8 (8.89) |
| Cote d'Ivoire | NEONATAL INFECTION | 740 (33.01) | PREMATURITY | 381 (16.99) | ASPHYXIA | 359 (16.01) | CONGENITAL ANOMALY | 112 (5.00) | OBSTETRIC TRAUMA | 67 (2.99) | 583 (26.00) |
| Nigeria | PREMATURITY | 2603 (35.00) | ASPHYXIA | 1711 (23.00) | NEONATAL INFECTION | 967 (13.00) | NEONATAL TETANUS | 744 (10.00) | CONGENITAL ANOMALY | 669 (8.99) | 744 (10.00) |
| Sierra Leone | ASPHYXIA | 33 (4.92) | PREMATURITY | 26 (3.87) | NEONATAL TETANUS | 11 (1.64) | NEONATAL INFECTION | 10 (1.49) | NEONATAL INFECTION | 7 (1.04) | 584 (87.03) |

APPENDIX

# 5 LEADING CAUSES OF DEATH BY COUNTRY

*Table 25: 5 leading causes of infant deaths in the region in 2018*

| Country | Cause 1 | | Cause 2 | | Cause 3 | | Cause 4 | | Cause 5 | | Others | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | Name | n (%) | n (%) |
| Benin | MALARIA | 1773 (36.69) | MALNUTRITION | 309 (6.39) | ANEMIA | 188 (3.89) | DIARRHEA | 121 (2.50) | PNEUMONIA (POST NEONATAL) | 101 (2.09) | 2340 (48.43) |
| Burkina Faso | MALARIA | 2789 (27.73) | NEONATAL DEATH | 1465 (14.57) | NEONATAL DEATH | 1314 (13.06) | MALNUTRITION | 898 (8.93) | NEONATAL DEATH | 820 (8.15) | 2772 (27.56) |
| Cabo Verde | NEONATAL DEATH | 84 (54.55) | PNEUMONIA (POST NEONATAL) | 22 (14.29) | UNCLASSIFIED | 14 (9.09) | NEONATAL DEATH | 11 (7.14) | ACCIDENTS (POST NEONATAL) | 6 (3.90) | 17 (11.04) |
| Cote d'Ivoire | MALARIA | 2339 (62.03) | MALARIA | 855 (22.67) | UNCLASSIFIED | 288 (7.64) | MALNUTRITION | 75 (1.99) | PNEUMONIA (POST NEONATAL) | 75 (1.99) | 139 (3.69) |
| The Gambia | PNEUMONIA (POST NEONATAL) | 288 (61.80) | MALNUTRITION | 59 (12.66) | ANEMIA | 42 (9.01) | ANEMIA | 35 (7.51) | MALNUTRITION | 30 (6.44) | 12 (2.58) |
| Ghana | NEONATAL DEATH | 458 (6.81) | PNEUMONIA (POST NEONATAL) | 316 (4.70) | PNEUMONIA (POST NEONATAL) | 257 (3.82) | NEONATAL DEATH | 241 (3.58) | NEONATAL DEATH | 221 (3.29) | 5231 (77.80) |
| Guinea-Bissau | MALARIA | 80 (3.91) | DIARRHEA | 2 (0.10) | MEASLES | (0.00) | PNEUMONIA (POST NEONATAL) | 138 (6.75) | HIV/AIDS | 660 (32.29) | 1164 (56.95) |
| Guinea | MALARIA | 1043 (45.02) | UNCLASSIFIED | 579 (24.99) | UNCLASSIFIED | 278 (12.00) | UNCLASSIFIED | 278 (12.00) | NON-COMMUNICABLE DISEASES | 70 (3.02) | 69 (2.98) |
| Liberia | OTHERS | 931 (46.00) | MALNUTRITION | 546 (26.98) | ANEMIA | 364 (17.98) | PNEUMONIA (POST NEONATAL) | 47 (2.32) | NEONATAL DEATH | 40 (1.98) | 96 (4.74) |
| Mali | MALARIA | 735 (55.01) | MALARIA | 120 (8.98) | MALNUTRITION | (0.00) | DIARRHEA | (0.00) | UNCLASSIFIED | (0.00) | 481 (36.00) |
| Niger | MALARIA | 1719 (36.70) | MALNUTRITION | 300 (6.40) | ANEMIA | 183 (3.91) | DIARRHEA | 117 (2.50) | PNEUMONIA (POST NEONATAL) | 98 (2.09) | 2267 (48.40) |
| Nigeria | UNCLASSIFIED | 10667 (41.00) | HIV/AIDS | 4163 (16.00) | PNEUMONIA (POST NEONATAL) | 3643 (14.00) | DIARRHEA | 3643 (14.00) | MALARIA | 2081 (8.00) | 1821 (7.00) |
| Senegal | MALNUTRITION | 248 (39.37) | PNEUMONIA (POST NEONATAL) | 234 (37.14) | DIARRHEA | 16 (2.54) | UNCLASSIFIED | (0.00) | UNCLASSIFIED | (0.00) | 132 (20.95) |
| Sierra Leone | MALARIA | 558 (11.00) | ANEMIA | 224 (4.42) | PNEUMONIA (POST NEONATAL) | 189 (3.73) | DIARRHEA | 176 (3.47) | MALNUTRITION | 79 (1.56) | 3846 (75.83) |
| Togo | HIV/AIDS | 607 (26.19) | MENINGITIS | 423 (18.25) | ACCIDENTS (POST NEONATAL) | 386 (16.65) | NEONATAL DEATH | 355 (15.31) | NON-COMMUNICABLE DISEASES | 343 (14.80) | 204 (8.80) |

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