

**Flygtningenævnets baggrundsmateriale**

<b>Bilagsnr.:</b>	<b>661</b>
Land:	Den Demokratiske Republik Congo
Kilde:	EASO
Titel:	Medical Country of Origin Information Report on the Democratic Republic of Congo
Udgivet:	11. december 2020
Optaget på baggrundsmaterialet:	25. maj 2021



# EASO

## Democratic Republic of Congo (DRC)

*Medical Country of Origin Information  
Report*

December 2020



More information on the European Union is available on the Internet (<http://europa.eu>)

PDF ISBN: 978-92-9485-769-9 doi: 10.2847/40625 BZ-06-20-137-EN-N

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# Acknowledgements

EASO acknowledges International SOS (Intl.SOS) as the drafter of this report.

The following departments and organisations have reviewed the report:

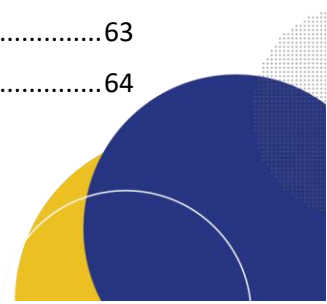
- EASO, MedCOI Sector, Third Country Research Unit, Asylum Knowledge Centre,
- Belgian Desk on Accessibility (BDA) at the Belgian Immigration Department,
- Department for Asylum and Migration Policy at the International and European Affairs Unit within the Ministry of the Interior of the Czech Republic,
- Country of Origin Information (COI) Unit at the Ministry of Immigration and Integration within the Danish Immigration Service, and
- COI Information Desk / Documentation of COI documents and case law at the German Federal Office for Migration and Refugees.

It must be noted that the review carried out by the mentioned departments, experts or organisations contributes to the overall quality of the report, but does not necessarily imply their formal endorsement of the final report, which is the full responsibility of EASO.

# Contents

Acknowledgements.....	3
Contents.....	4
Disclaimer.....	8
Glossary and Abbreviations .....	9
Introduction .....	11
Methodology .....	11
Defining the terms of reference.....	11
Collecting information.....	11
Quality control.....	12
Structure and use of the report.....	12
Referencing.....	13
Map .....	14
1. General Information .....	15
1.1 Geography and Demographics .....	15
1.2 Political Context.....	16
1.3 Economic Context.....	17
1.4 Historical Background.....	17
2 Health System Organisation.....	18
2.1 Impact of COVID-19 .....	18
2.2 Overview.....	18
2.3 Public Healthcare.....	22
2.4 Private Healthcare .....	24
3 Healthcare Human Resources.....	26
4 Pharmaceutical Sector .....	28
5 National Policy on Blood Transfusion and Related Services Organisation .....	30
6 Patient Pathways .....	31
7 Risk-Pooling Mechanism .....	32
7.1 Health Services Provided by the State / Public Authorities.....	32
7.2 Public Health Insurance .....	32
7.3 Community-Based Health Insurance Schemes.....	33
7.4 Private Health Insurance Schemes .....	34
7.5 Other Social Security Plans .....	34

7.6 Work Injury .....	35
7.7 Minimum Wage .....	35
7.8 Poverty Alleviation Measures .....	35
8 Out-of-Pocket Health Expenditure .....	36
8.1 Cost of Consultations .....	36
8.2 Treatment Cost .....	37
8.3 Cost of Medication .....	37
9 Cardiovascular Diseases .....	38
9.1 General Information .....	38
9.1.1 Epidemiological context .....	38
9.1.2 Strategies and policies for treatment and management of CVD .....	38
9.1.3 Healthcare provisions for treatment and management of CVD .....	39
9.2 Access to Treatment .....	40
9.3 Cost of Treatment .....	41
9.4 Cost of Medication .....	43
9.5 NGOs .....	45
10 Diabetes .....	47
10.1 General Information .....	47
10.1.1 Epidemiological context .....	47
10.1.2 Strategy and policies for treatment and management of diabetes .....	47
10.1.3 Healthcare provisions for treatment and management of diabetes .....	47
10.2 Access to Treatment .....	48
10.3 Cost of Treatment .....	49
10.4 Cost of Medication .....	51
10.5 NGOs .....	54
11 Haematology: Anaemia and Blood Clotting Disorders .....	55
11.1 General Information .....	55
11.1.1 Epidemiological context .....	55
11.1.2 Strategy and policies for treatment and management of haematological disorders .....	56
11.1.3 Healthcare provisions for treatment and management of haematological disorders .....	57
11.1.4 Human resources .....	57
11.2 Access to Treatment .....	57
11.3 Cost of Treatment .....	59
11.4 Cost of Medication .....	61
11.5 NGOs .....	63
12 Hepatitis B and C .....	64





12.1 General Information .....	64
12.1.1 Epidemiological context .....	64
12.1.2 Strategies and policies for treatment and management of hepatitis.....	64
12.1.3 Healthcare provisions for treatment and management of hepatitis.....	65
12.2 Access to Treatment.....	66
12.3 Cost of Treatment.....	66
12.4 Cost of Medication .....	68
12.5 NGOs.....	69
13 HIV/AIDS.....	70
13.1 General Information .....	70
13.1.1 Epidemiological context .....	70
13.1.2 Strategies and policies for treatment and management of HIV/AIDS.....	70
13.1.3 Healthcare provisions for treatment and management of HIV/AIDS .....	71
13.2 Access to Treatment.....	71
13.3 Cost of Treatment.....	72
13.4 Cost of Medication .....	73
13.5 NGOs.....	76
14 Nephrology.....	77
14.1 General Information .....	77
14.1.1 Epidemiological context .....	77
14.1.2 Strategies and policies for treatment and management of kidney disease .....	77
14.1.3 Healthcare provisions for treatment and management of kidney disease .....	77
14.2 Access to Treatment.....	78
14.3 Cost of Treatment.....	79
14.4 Cost of Medication .....	81
14.5 NGOs.....	82
15 Neurology: Epilepsy and Cerebrovascular Accident (Stroke) .....	83
15.1 General Information .....	83
15.1.1 Epidemiological context .....	83
15.1.2 Strategies and policies for treatment and management of CVD .....	83
15.1.3 Healthcare provisions for neurology.....	84
15.2 Access to Treatment.....	84
15.3 Cost of Treatment.....	85
15.4 Cost of Medication .....	86
15.5 NGOs.....	89
16 Psychiatry.....	91

16.1 General Information .....	91
16.1.1 Epidemiological context .....	91
16.1.2 Strategies and policies for psychiatry .....	92
16.1.3 Healthcare provisions for psychiatry.....	92
16.1.4 Human resources .....	93
16.2 Access to Treatment .....	93
16.3 Cost of Treatment.....	94
16.4 Cost of Medication .....	95
16.5 NGOs.....	99
17 Pulmonology: Asthma, Chronic Obstructive Pulmonary Disease and Obstructive Sleep Apnoea	100
17.1 General Information .....	100
17.1.1 Epidemiological context .....	100
17.1.2 Strategies and policies for treatment and management of respiratory illness .....	101
17.1.3 Healthcare provisions for treatment and management of respiratory illness .....	102
17.2 Access to Treatment .....	102
17.3 Cost of Treatment.....	103
17.4 Cost of Medication .....	104
17.5 NGOs.....	106
18 Tuberculosis .....	107
18.1 General Information .....	107
18.1.1 Epidemiology.....	107
18.1.2 Policies and strategies.....	107
18.1.3 The National Response.....	108
18.2 Access to Treatment .....	109
18.3 Cost of Treatment.....	110
18.4 Cost of Medication .....	111
18.5 NGOs.....	113
Annex 1: Core Medicines Price List.....	114
Annex 2: Bibliography .....	118
Annex 3: Terms of Reference for the MedCOI report on the Democratic Republic of Congo (DRC) .	129
Topical reports: .....	129
Detailed content instructions topical reports: .....	129
General information.....	129
Access to treatment: .....	129





## Disclaimer

This report was written according to the EASO COI Report Methodology (2019).<sup>1</sup> The report is based on carefully selected sources of information. All sources used are referenced.

The information contained in this report has been researched, evaluated and analysed with utmost care. However, this document does not claim to be exhaustive. If a particular event, person or organisation is not mentioned in the report, this does not mean that the event has not taken place or that the person or organisation does not exist.

Furthermore, this report is not conclusive as to the determination or merit of any particular application for international protection. Terminology used should not be regarded as indicative of a particular legal position.

'Refugee', 'risk' and similar terminology are used as generic terminology and not in the legal sense as applied in the EU Asylum Acquis, the 1951 Refugee Convention and the 1967 Protocol relating to the Status of Refugees.

Neither EASO nor any person acting on its behalf may be held responsible for the use which may be made of the information contained in this report.

The drafting of this report was finalised in November 2020. Any event taking place after this date is not included in this report. More information on the reference period for this report can be found in the methodology section of the [Introduction](#).

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<sup>1</sup> The 2019 EASO COI Report Methodology can be downloaded from the EASO COI Portal [url](#)

# Glossary and Abbreviations

<b>Abbrev.</b>	<b>Explanation</b>
ART	Antiretroviral Therapy
BDOM	Bureau Diocésain des Oeuvres Médicales
CHW	Community Health Worker
CT	Computerised Tomography
CKD	Chronic Kidney Disease
CNPP	Centre Neuro-Psycho-Pathologique
COPD	Chronic Obstructive Pulmonary Disease
CPLT	Coordinations Provinciales Lèpre et Tuberculose
CVD	Cardiovascular Disease
COI	Country of Origin
DHS	Demographic Health Survey
DOTS	Directly Observed Treatment Short Course
DRC	Democratic Republic of the Congo
EEG	Electroencephalography
GDF	Global Drug Facility
GDP	Gross Domestic Product
HRW	Human Rights Watch
IDP	Internally Displaced Population
INGO	International Non-Government Organisation
Intl.SOS	International SOS
MDR-TB	Multidrug-Resistant Tuberculosis
MESP	Mutuelle de Santé des Enseignants des Écoles Catholiques du Congo
MHO	Mutual Health Organisation
MSF	Médecins Sans Frontières
NGO	Non-Government Organisation
PEPFAR	President's Emergency Plan for AIDS Relief
PNDS	Plan National de Développement Sanitaire
PNLT	Plan Stratégique National de Lutte Contre La Tuberculose
PNSM	Programme National de Santé Mentale
POMUCO	Plateforme des Organisations Promotrices des Mutuelles de Santé du Congo
PSNHIV	Plan Stratégique National de Lutte contre le VIH

SCD	Sickle Cell Disease
TB	Tuberculosis
UN	United Nations
WHO	World Health Organization

# Introduction

The purpose of the report is to provide information on access to healthcare in the Democratic Republic of the Congo (DRC). This information is relevant to the enforcement of EU+ countries' immigration legislation and to the international protection status determination (refugee status and subsidiary protection).

## Methodology

### Defining the terms of reference

The terms of reference for this Medical Country of Origin Information Report are based on the Belgian Desk of Accessibility's "Researcher's guide", developed in the framework of the MedCOI4 project. The guide includes a list of questions to be addressed in the report. This was used to develop a "Questionnaire on access to healthcare," which included a medication and consultation price list containing common treatment and medication questions. This report is produced in line with the [EASO COI Report Methodology \(2019\)](#) and the [EASO COI Writing and Referencing Style Guide \(2019\)](#).

For the specific terms of reference see [Annex 3](#) of this report.

### Collecting information

The European Asylum Support Office (EASO) contracted Intl.SOS to manage the report delivery including data collection. Intl.SOS recruited and managed a public health lead to author the report and a local consultant to collect data. The public health lead was selected from Intl.SOS' existing pool of consultants. The consultant was selected based on their experience in leading comparable projects and on their experience working in DRC.

### Key Informant Interviews

Key informant interviews were carried out by the local consultant in Kinshasa, during August and September 2020. Interviews were conducted with five medical doctors who work in varied roles related to healthcare delivery. This included individuals within the Ministry of Health, as well as Clinic managers. An anonymised list of interviewees is given in table 1 which describes the core functions of their roles.

Key Informant Code	Role Description
EASO1	Medical Doctor and local consultant responsible for in-country data collection of the report.
EASO2	Director of a national programme within the Ministry of Health. Responsible for national implementation of the strategy. Medical Director and Head of Cardiology at prominent Kinshasa-based facility.
EASO3	Deputy Manager of a priority national programme. Responsible for national implementation of the strategy.
EASO4	Medical Doctor and Monitoring and Evaluation officer in the Ministry of Health.
EASO5	Medical Director of a prominent Kinshasa-based clinic.
EASO6	Senior Medical Advisor of an international healthcare company.

Table 1: Anonymised key informants

## Literature review

The local consultant collected documents and strategies to populate the questionnaire with additional findings. Supplementary information was gathered from publicly available resources, by the report author. Resources included national strategies, policies, grey literature and journal articles. Sources were carefully selected following the EASO Country of Origin Information (COI) Report Methodology (2019) and are referenced in footnotes on each page and included in the bibliography.

## Medication and treatment prices

A comprehensive, although non-exhaustive, list of medication prices is given in the Annex I to this report and in each of the chapters on individual diseases. The data presented in these were collected by the local consultant between August and November 2020. Price of medications was gathered from eight pharmacies in Kinshasa. The prices of medicines in Kinshasa are comparable with other cities.<sup>2</sup>

The costs of treatments and medical examinations were drawn from price lists of the major public and private hospitals in Kinshasa (Clinique Ngaliema, Centre Médical de Kinshasa, Centre Médical Diamant and Hôpital Biamba Marie Mutombo). The cost of treatments in Kinshasa can be considered indicative of the national prices, particularly as many specialised treatments are only available in Kinshasa-based facilities. However, there may nonetheless be some regional variation in prices for some treatments that has not been captured.<sup>3</sup>

Due to the variable value of the Congolese Francs, health facilities typically price medications and treatments in United States dollar (USD). As such, all prices have been provided in USD. Of note, community members can pay in either currency.<sup>4</sup>

More information on the working method can be found in the Standard Operating Procedures (SOP) and the Accessibility Guidelines published on the MedCOI website<sup>5</sup> and in the EASO COI Report Methodology.<sup>6</sup>

## Quality control

Quality control of the report was carried out both on content and form.

The accuracy of information included in the report was reviewed, to the extent possible, using information provided by the local expert through other contacts, reports, scientific publications and articles.

Form and content were reviewed by various partners (see [Acknowledgements](#) section).

## Structure and use of the report

The report starts with a general introduction to the country and the healthcare system organisation. Separate sections are dedicated to human resources in healthcare, the pharmaceutical sector, blood transfusion policies, patient pathways, insurance aspects and out-of-pocket expenditure. Lastly,

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<sup>2</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>3</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>4</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>5</sup> EASO MedCOI, [url](#)

<sup>6</sup> EASO, European Asylum Support Office, Country of Origin Information (COI) Report Methodology, June 2019, [url](#)

separate chapters contain accessibility information on specific disease groups: cardiovascular diseases, diabetes, haematology, hepatitis, HIV/AIDS, nephrology, neurology, psychiatry, pulmonology, and finally tuberculosis.

## Referencing

Recommended referencing for this report: 'EASO MedCOI, Medical Country of Origin Information Report: Democratic Republic of Congo (DRC), December 2020, [hyperlink].'

# Map



Figure 1: Map of the Democratic Republic of Congo <sup>1</sup>



# 1. General Information

## 1.1 Geography and Demographics

The Democratic Republic of the Congo (DRC) is situated in Central Africa. It is the second largest country in Africa covering a total area of 2 344 858 square kilometres, equivalent to that of Western Europe.<sup>7</sup> DRC has land borders with eight countries, the Republic of the Congo to the West, the Central African Republic and South Sudan to the North, Uganda, Rwanda, Burundi and Tanzania to the East and Zambia, and Angola to the south.

DRC is almost entirely landlocked except for a small area of coastline located in the West, measuring 37 kilometres.<sup>8</sup> In spite of this limited access to sea resources, DRC has vast sources of freshwater. The Congo River is the second largest river in the world by discharge volume. The river and its tributaries spread throughout the country. Eastern provinces form part of Africa's Great Lakes region. DRC is also rich in vegetation and natural resources; the Congo Rainforest is the second largest rainforest in the world after the Amazon.<sup>9</sup>

The population of DRC is estimated to be around 101 million people.<sup>10</sup> DRC has a high fertility rate with an average of 4.7 live births per woman.<sup>11</sup> Current projections estimate the total population will have doubled by the year 2050.<sup>12</sup> The capital Kinshasa has a population of approximately 14 million people and is located in the West along the Congo River. Other urban clusters are located in Eastern provinces along the borders with Uganda and Rwanda. DRC is experiencing rapid rural-urban migration. Although at present 55% of the population live in rural settings, it is estimated that by 2035 the urban population will have doubled and will surpass the proportion living in rural contexts.<sup>13</sup> The life expectancy at birth in DRC is one of the lowest in the world. At 61.6 years, life expectancy is 14<sup>th</sup> worst and significantly lower than the global average of 73.2 years.<sup>14</sup> There is a small variation in life expectancy between men and women, which stand at 60.0 years and 63.2 years respectively.<sup>15</sup> Overall, DRC has a young population with an estimated 60% of the population aged under 25 years.<sup>16</sup> There is an equal ratio of men to women when the entire population is considered.<sup>17</sup> However, this varies by age categorisation with the greatest disparity in those aged over 65 years with a ratio of 0.74 males/female.<sup>18</sup>

In addition to life expectancy, DRC performs poorly across a range of other health indicators. Child mortality rates are high with DRC ranked 12<sup>th</sup> worst globally for number of deaths of children under five.<sup>19</sup> However, child mortality rate has been consistently decreasing and currently stands at 85 per 1 000 live births relative to 115 per 1 000 live births in 2010.<sup>20</sup> DRC is one of the most linguistically diverse countries in the world, with over 200 languages spoken.<sup>21</sup> French is the official administrative language widely used in education and government. The four most commonly spoken national

<sup>7</sup> World Bank, Country Overview, May 2020, [url](#)

<sup>8</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>9</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>10</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>11</sup> IHME, Institute for Health Metrics, DRC dashboard, October 2020, [url](#)

<sup>12</sup> IHME, Institute for Health Metrics, DRC dashboard, October 2020, [url](#)

<sup>13</sup> World Bank, Directions in Development, Democratic Republic of Congo Urbanization Review, 2018, [url](#), p.12

<sup>14</sup> UNDP, United Nations development programme, Human Development Report, DRC Dashboard, 2019, [url](#)

<sup>15</sup> UNDP, United Nations development programme, Human Development Report, DRC Dashboard, 2019, [url](#)

<sup>16</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>17</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>18</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>19</sup> The World Bank, Mortality rate, under-5, 2019, [url](#)

<sup>20</sup> The World Bank, Mortality rate, under-5 2019, [url](#)

<sup>21</sup> Translators Without Borders, Language data for the Democratic Republic of Congo (DRC), 2016, [url](#)



languages are Lingala, Swahili, Tshiluba and Kikongo (Kituba). There are also more than 250 ethnic groups identified in DRC. Ethnic tensions have also driven numerous periods of intercommunal violence<sup>22</sup> as discussed below.

## 1.2 Political Context

As outlined in the constitution promulgated in 2006, DRC is headed by a president that shares power with the prime minister.<sup>23</sup> Under the constitution, the president cannot run for more than two 5-year terms.<sup>24</sup> DRC is decentralised with power and governance devolved to 26 administrative provinces.<sup>25</sup> Provinces are presided over by governors and up to 10 provincial ministers.<sup>26</sup>

Since 1990, DRC has had a multi-party system elected into office by the population. In 2018, Felix Tshisekedi, leader of the Union for Democracy and Social Progress (Union pour la Démocratie et le Progrès Social, UDPS), was voted successor to Joseph Kabila. The 2018 was considered by several independent groups to have been deeply flawed with several instances of voter fraud recorded.<sup>27</sup> The leader of the main opposition party, Martin Fayulu, challenged the results in the constitutional courts.<sup>28</sup> In spite of this, many foreign leaders endorsed and praised the election results with some claiming that to reject the result could lead to more civil unrest.<sup>29</sup>

Due to what is considered to be a weak political system and broader insecurity, DRC is characterised as a fragile state.<sup>30</sup> According to the Fragile States Index which compiles 12 indicators assessing social cohesion, economic context, political context and social context, DRC is ranked as the fifth most fragile country.<sup>31</sup>

According to the United Nations High Commissioner for Refugees (UNHCR), as of September 2019, there were over 5.01 million internally displaced people across DRC. According to the same source, as of February 2020, there were over 918 000 DRC refugees and asylum seekers being hosted across African countries.<sup>32</sup> Internally displaced populations are located across the country. In eastern provinces, there are more than 100 armed groups active in the region, including the Allied Democratic Forces, the Democratic Forces for the Liberation of Rwanda, and various Mai Mai militias.<sup>33</sup> In central and southern provinces of the Kasai region, conflict between government troops and armed groups in 2017 led to the displacement of 1.4 million people.<sup>34</sup> Both sides have been accused of war crimes with an estimated 3 000 lives claimed.<sup>35</sup>

In south-eastern provinces, there was a long-standing conflict between Bantu and Twa ethnic communities in the south eastern province of Tanganyika during which over 557 000 people were displaced.<sup>36</sup> In 2015, a peace accord was signed between leaders of the two community groups; however, many remain displaced and episodes of violence<sup>37</sup> have resurged, most recently in 2017.

<sup>22</sup> HRW, Human Rights Watch, DR Congo: Chronology, August 2009, [url](#)

<sup>23</sup> Britannica, DRC government and society, 2020, [url](#)

<sup>24</sup> Britannica, Democratic Republic of the Congo, 2020, [url](#)

<sup>25</sup> The Guardian, Congo election runner-up rejects Tshisekedi victory as 'electoral coup, January 2019, [url](#)

<sup>26</sup> Britannica, Democratic Republic of the Congo, 2020, [url](#)

<sup>27</sup> FP, Foreign Policy, How Washington Got on Board With Congo's Rigged Election, February 2019, [url](#)

<sup>28</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>29</sup> FP, Foreign Policy, How Washington Got on Board With Congo's Rigged Election, February 2019, [url](#); BBC, DR Congo election: African leaders congratulate Tshisekedi, January 2019, [url](#)

<sup>30</sup> Fragile States Index, Measuring Fragility, 2020, [url](#)

<sup>31</sup> Fragile states Index, Indicators, 2020, [url](#)

<sup>32</sup> UNHCR, United Nations High Commissioner for Refugees, DR Congo emergency, March 2020, [url](#)

<sup>33</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>34</sup> UNHCR, United Nations High Commissioner for Refugees, September 2020, [url](#)

<sup>35</sup> BBC, DR Congo's Kasai crisis: War crimes committed by both sides, UN says, June 2018, [url](#)

<sup>36</sup> IRC, International Rescue Committee, A Silent Crisis in Congo: The Bantu and the Twa in Tanganyika, n.d., [url](#), p.2

<sup>37</sup> IRC, International Rescue Committee, A Silent Crisis in Congo: The Bantu and the Twa in Tanganyika, n.d., [url](#), p.8

DRC is also a host country for refugees from neighbouring countries.<sup>38</sup> The Rwandan genocide of 1994 led to a huge influx of Rwandan refugees into DRC.<sup>39</sup> In addition, thousands of refugees have fled to DRC from neighbouring countries, including the Central African Republic and Burundi.<sup>40</sup>

The United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) has operated in the region since 1999 and is the largest and most expensive UN peacekeeping mission in the world.<sup>41</sup>

### 1.3 Economic Context

DRC is classified as a low-income country.<sup>42</sup> While the proportion of the population living in poverty (defined as living on less than USD 1.90 a day) has been steadily decreasing since 2004, it still stands at an estimated 77% of the total population. Per capita expenditure on healthcare, at USD 19.43, is well below the Sub-Saharan Africa average, which stands at USD 83.78.<sup>43</sup>

In 2019, the Gross Domestic Product (GDP) of DRC was USD 47.32 billion and annual growth at 5.3%.<sup>44</sup> Domestic agriculture is the main source of food and income for the majority of the population and accounts for 20% of GDP.<sup>45</sup> Mining and resource extraction also constitute an important industry. In 2018, although the extractive sector represented 98% of exports and 18% of GDP, it only employed 11% of the active population.<sup>46</sup> Mining is concentrated in southern and eastern provinces.<sup>47</sup> Except for gold and copper, informal and small-scale mining account for a substantial portion of extracted raw materials.<sup>48</sup>

### 1.4 Historical Background

DRC gained its independence from Belgium in 1960, but its early years were characterised by political and social instability. As outlined by the Central Intelligence Agency (CIA) World Factbook, the first elected prime minister of the republic, Patrice Lumumba, was removed from office and executed by Belgian-led troops in 1961.<sup>49</sup> Joseph Mobutu later claimed power and retained his position for 32 years through disputed elections and force. Mobutu's government was guilty of severe human rights violations, political repression and corruption.<sup>50</sup> A rebellion backed by Rwanda and Uganda, and fronted by Laurent Kabila ended the Mobutu rule in 1997.<sup>51</sup> In 2001, Laurent Kabila was assassinated and was succeeded by his son, Joseph Kabila. Joseph Kabila's re-election in 2006 met with the general approval of international monitors. His re-election in November 2011, however, was criticised and disputed by the opposition.<sup>52</sup> In January 2019, after delayed elections, Felix Tshisekedi was sworn in as the new President of DRC.<sup>53</sup>

<sup>38</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>39</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>40</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>41</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>42</sup> World Bank, Data, 2019, [url](#)

<sup>43</sup> World Bank Data, current health expenditure, 2017, [url](#)

<sup>44</sup> World Bank, Data, 2019, [url](#)

<sup>45</sup> World Bank, Data Bank, 2018, [url](#)

<sup>46</sup> ITIE RDC, Initiative pour la Transparence des Industries Extractives République démocratique du Congo, June 2020, [url](#)

<sup>47</sup> ITIE RDC, Initiative pour la Transparence des Industries Extractives République démocratique du Congo, June 2020, [url](#)

<sup>48</sup> ITIE RDC, Initiative pour la Transparence des Industries Extractives République démocratique du Congo, June 2020, [url](#)

<sup>49</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>50</sup> HRW, Human Rights Watch, Zaire Human Rights Developments, 1994, [url](#)

<sup>51</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>52</sup> FP, Foreign Policy, How Washington Got on Board With Congo's Rigged Election, February 2019, [url](#)

<sup>53</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)



## 2 Health System Organisation

### 2.1 Impact of COVID-19

DRC declared its first case of coronavirus disease 2019 (COVID-19) on March 10<sup>th</sup>, 2020.<sup>54</sup> Since then, Kinshasa has been the epicentre of the outbreak with over 90% of confirmed cases.<sup>55</sup> The health system of DRC, which is already described as a being fragile and weak, has been greatly strained by the pandemic. A report by the WHO states that the number ventilators is limited and largely unknown.<sup>56</sup>

At present, a significant proportion of health facility human and financial resources have been directed to COVID-19 related activities.<sup>57</sup> This reduces availability of services on an already strained health service.<sup>58</sup> In addition, Médecins Sans Frontières (MSF) reports that the number of consultations has decreased which is likely to have downstream impacts on health outcomes and healthcare needs.<sup>59</sup>

### 2.2 Overview

Overall, the health system is described as suffering from substantial domestic underfunding with a heavy reliance on external donor funding.<sup>60</sup> A report by the World Health Organization (WHO) describes the health system as being dysfunctional due to decades of political instability.<sup>61</sup> A lack of healthcare financing by central government created a healthcare system dependent on out-of-pocket payments and external aid financing. Importantly, international aid was often provided through humanitarian assistance programmes rather than development programmes. Humanitarian assistance is typically characterised by short funding cycles based on short-term goals. As such organisations would typically focus on their individual objectives and the resources required to achieved them.<sup>62</sup> This led to multiple and parallel coordination mechanisms, such as logistics, to address disease-specific challenges through vertical programmes.<sup>63</sup> The Government and international aid community began addressing these challenges through the adoption of the Health System Strengthening Strategy in 2005.<sup>64</sup>

According to the World Bank, ‘the Government of the DRC has demonstrated progress in increasing its domestic health funding: the 2019 national health accounts show that the share of the national

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<sup>54</sup> MSF, Médecins Sans Frontières, DRC: Covid-19 continues to spread, with potentially deadly secondary impacts, June 2020, [url](#)

<sup>55</sup> WHO, World Health Organization, Plan de Response Humanitaire Revise, June 2020, [url](#), p.9

<sup>56</sup> WHO, World Health Organization, Plan de Response Humanitaire Revise, June 2020, [url](#), p.10

<sup>57</sup> WHO, World Health Organization, Plan de Response Humanitaire Revise, June 2020, [url](#), p.10

<sup>58</sup> WHO, World Health Organization, Plan de Response Humanitaire Revise, June 2020, [url](#), p.10

<sup>59</sup> MSF, Médecins Sans Frontières, DRC: Covid-19 continues to spread, with potentially deadly secondary impacts, June 2020, [url](#)

<sup>60</sup> Kalambay, H., and Van Lerberghe,W., Improving Health System Efficiency, World Health Organization, September 2015, [url](#), p.9

<sup>61</sup> Kalambay, H., and Van Lerberghe,W., Improving Health System Efficiency, World Health Organization, September 2015, [url](#), p.9

<sup>62</sup> Kalambay, H., and Van Lerberghe,W., Improving Health System Efficiency, World Health Organization, September 2015, [url](#), p.7

<sup>63</sup> Kalambay, H., and Van Lerberghe,W., Improving Health System Efficiency, World Health Organization, September 2015, [url](#), p.7

<sup>64</sup> Kalambay, H., and Van Lerberghe,W., Improving Health System Efficiency, World Health Organization, September 2015, [url](#), p.7

budget allocated to health increased from 7.0% to 8.5% between 2016 and 2018.<sup>65</sup> However, this accounts for approximately only 10% of total healthcare funding.<sup>66</sup>

The DRC health system is still supported by substantial international donor funding from multilateral, bilateral agencies and non-government organisations (NGOs).<sup>67</sup> This equates to approximately 40% of total healthcare funding.<sup>68</sup> According to data from the Organisation for Economic Cooperation and Development (OECD), in 2018 DRC was a recipient of a total of USD 2 509.8 million.<sup>69</sup> Of this, 23% was categorised as supporting ‘health and population’ activities.<sup>70</sup> According to the same source, the five main donors are United States Aid, the World Bank,<sup>71</sup> United Kingdom Aid, the Global Fund and German Aid.<sup>72</sup> In 2016, it was estimated that there were over 25 donors contributing to the DRC healthcare sector.<sup>73</sup>

The remaining portion of healthcare financing comes from out-of-pocket payments by patients at the point of care.<sup>74</sup> Reducing the proportion of out-of-pocket payments is a key objective of the National Health Development Plan 2019-2022 (Plan National de Développement Sanitaire (PNDS)).<sup>75</sup>

The PNDS outlines national priorities and is used to allocate funding resources.<sup>76</sup> The overarching strategy is further elaborated by national programmes which provide further technical and financial objectives to address specific disease areas. External funding is mostly directed to national programmes for diseases considered a national priority.<sup>77</sup>

The healthcare system in DRC is structured according to a three-level pyramid model; central, provincial and peripheral.<sup>78</sup> The roles and responsibilities at these different levels are as follows:

- **Central** – also referred to as national. The functions and responsibilities at the Central level sit within the authorities of the Ministry of Health. This level is primarily responsible for general oversight and direction of the health system through the development of national policies, strategies and directives. Other responsibilities include mobilising funds through national and international resources and overseeing health system monitoring data. These functions are divided across two key directorates, the General Secretariat Office and the General Health Inspectorate.<sup>79</sup>

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<sup>65</sup> Global Financing Facility, Democratic Republic of Congo, 2019, [url](#)

<sup>66</sup> IHME, Institute for Health Metrics, DRC dashboard, October 2020, [url](#)

<sup>67</sup> IHME, Institute for Health Metrics, DRC dashboard, October 2020, [url](#)

<sup>68</sup> IHME, Institute for Health Metrics, DRC dashboard, October 2020, [url](#)

<sup>69</sup> OECD, Organisation for Economic Cooperation and Development, Recipient Country, 2018, [url](#)

<sup>70</sup> OECD, Organisation for Economic Cooperation and Development, Recipient Country, 2018, [url](#)

<sup>71</sup> Referred to in the source as International Development Association. Definition available in glossary of terms, [url](#)

<sup>72</sup> OECD, Organisation for Economic Cooperation and Development, Recipient Country, 2018, [url](#)

<sup>73</sup> Orbie, J., et al., The EU and the Emerging Global Order, 2018, [url](#)

<sup>74</sup> IHME, Institute for Health Metrics, DRC dashboard, October 2020, [url](#)

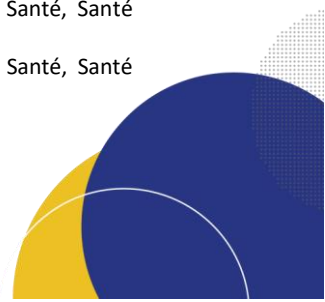
<sup>75</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 45

<sup>76</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)

<sup>77</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>78</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, Santé République Démocratique du Congo, November 2018, [url](#), pp. 10-12

<sup>79</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, Santé République Démocratique du Congo, November 2018, [url](#), pp. 10-12





- At this level, the types of health facilities include:<sup>80</sup>
  - *University hospitals*
  - *The National hospital (National hospital Kinshasa)*
- **Intermediate** – also referred to as Provincial. Led by the Provincial Health Minister who is responsible for the Provincial Health Office, the Provincial Health Inspectorate oversees the Provincial Hospital.<sup>81</sup> There is one provincial hospital per province.<sup>82</sup>

The Provincial Health Office is a decentralised structure responsible for the technical training and the contextualisation of national guidelines for provincial health facilities and monitoring of health facilities. A key objective is to support the implementation of guidelines and strategies at a health facility level.<sup>83</sup>

The Provincial Health Inspectorate is a decentralised structure primarily responsible for the quality control of health facilities through auditing and inspection. A key objective is to register and monitor the distribution of pharmaceutical interventions and specialist equipment.<sup>84</sup>

- At this level the types of health facilities include:<sup>85</sup>
  - *Provincial hospitals*
- **Peripheral** – also referred to as operational. This level is divided into 516 health zones serving a population of 100 000 to 150 000 people.<sup>86</sup> Health zones are further subdivided into 8,504 health areas. According to the PNDS, each health zone is managed and overseen by the Health Zone Team and a Chief Medical Officer. It is at this level that the majority of health services are provided to communities.
  - The types of health facilities include:<sup>87</sup>
    - *Health posts – basic facilities in rural contexts offering very limited services*
    - *Health centres – basic facilities offering a more comprehensive package of activities.<sup>88</sup> Health centres serve 5 000 to 10 000 community members.<sup>89</sup> According to the PNDS, there are 8,266 health centres distributed across 8 504 health areas<sup>90</sup>*

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<sup>80</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, SantéRépublique démocratique du Congo, November 2018, [url](#), p. 48

<sup>81</sup> PNL, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, pp.31-34

<sup>82</sup> PNL, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, pp.31-34

<sup>83</sup> PNL, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, pp. 31-34

<sup>84</sup> PNL, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, pp. 31-34

<sup>85</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 10-12

<sup>86</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République démocratique du Congo, November 2018, [url](#), pp. 10-12

<sup>87</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé République Démocratique du Congo, November 2018, [url](#), p.10

<sup>88</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p.10

<sup>89</sup> PNL, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, p.32

<sup>90</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p.10

- *General reference hospitals – according to the PNDS there are 393 of these distributed across the country*<sup>91</sup>

Health facilities are managed by a network of public and private organisations and structures.<sup>92</sup> Private facilities are sub-divided into for-profit and not-for-profit, the latter includes facilities those operated by NGOs and faith-based organisations.<sup>93</sup> An absence of national health information systems means that at present, there is an absence of national records on registered health facilities.<sup>94</sup>

The relative role of the public and private sector in managing health facilities varies according to the type of facility.<sup>95</sup> A review of the health system carried out by the Demographic and Health Surveys Programme in 2017 and 2018 categorised the different types of health facilities according to whether they were publicly or privately run.<sup>96</sup> A total of 1 380 health facilities were purposively sampled to be representative of the health system organisation.<sup>97</sup> As such, the following distributions can be considered to be representative across DRC. Of note, the study used a slightly different nomenclature for different types of health facilities than the PNDS, the following health facility names have been included as written in the study.<sup>98,99</sup> A total of 832 public facilities were reviewed, of these health centres accounted for the largest proportion (45%), followed by hospitals (35%), then reference centres (17%) and lastly medical centres (3%). A total of 162 public facilities were reviewed, of these health centres accounted for the largest proportion (50%), followed by medical centres (35%), then hospitals (9%) and reference centres (6%). A total of 346 faith-based facilities were reviewed, of these hospitals accounted for the largest proportion (50%), followed by health centres (22%), then reference centres (18%) and medical centres (18%). Lastly, 40 not-for-profit facilities were reviewed, of these medical centres accounted for the largest proportion (43%), followed by hospitals (33%), then health centres (9%) and reference centres (8%).<sup>100</sup>

The same study also identified significant regional variation in the distribution of health facilities.<sup>101</sup> Most health facilities were located in the north eastern province of North Kivu (7%). This was closely followed by the south western province of Kongo-Central, formerly part of greater Kinshasa, with 5.7% of facilities, then Kinshasa with 5.2%. Provinces with the fewest health facilities were located across northern and central provinces.<sup>102</sup>

With the exception of priority diseases, notably HIV/AIDS and TB, all consultations, diagnostic services and treatments incur a fee in all types of health facilities. Fees are typically lower in public health facilities relative to private institutions.<sup>103</sup>

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<sup>91</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p.10

<sup>92</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé République Démocratique du Congo, November 2018, [url](#), p.11

<sup>93</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p.11

<sup>94</sup> World Bank, The role of the private sector in improving the performance of the Health System in the Democratic Republic of Congo, 2018, [url](#), p. 74

<sup>95</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, April 2019, Ecole de Santé Publique de Kinshasa, [url](#), p. 19

<sup>96</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, April 2019, Ecole de Santé Publique de Kinshasa, [url](#), p. 19

<sup>97</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, April 2019, Ecole de Santé Publique de Kinshasa, [url](#), p. 19

<sup>98</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, April 2019, Ecole de Santé Publique de Kinshasa, [url](#), p. 330

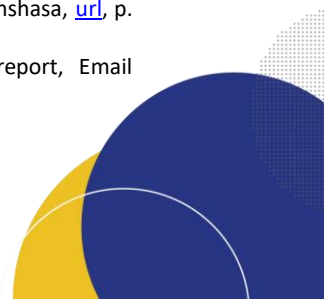
<sup>99</sup> The report does not include definitions for the different types of health facilities

<sup>100</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, April 2019, Ecole de Santé Publique de Kinshasa, [url](#), p. 19

<sup>101</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, April 2019, Ecole de Santé Publique de Kinshasa, [url](#), p. 19

<sup>102</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, April 2019, Ecole de Santé Publique de Kinshasa, [url](#), p. 19

<sup>103</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020





## 2.3 Public Healthcare

The overall coverage of basic public services, including healthcare, is very limited.<sup>104</sup>

Public healthcare operates at three levels: primary, secondary and tertiary. The PNDS outlines a Minimum Packet of Activities and a Complementary Packet of Activities which should be provided at each level of the health system.<sup>105</sup> Of note, the services listed below include those which should be provided and available at different types of healthcare facilities, in principle. However, irregular flow of finances, lack of trained personally and weak supply chains means many health services are often not actually available at the point of care.<sup>106</sup>

### Primary Healthcare

Strengthening quality, availability and access to primary healthcare services is the principal goal of PNDS.<sup>107</sup> At this level, healthcare is provided at health posts and health centres by non-physician healthcare workers. This includes nurses, midwives, nutrition councillors and community health workers.<sup>108</sup>

According to the PNDS, services available in health posts and health centres are: family planning interventions including modern contraceptives (condoms and contraceptive pills); basic paediatric services (treatment of moderate acute malnutrition, deworming, multi-nutrient supplements, oral rehydration); basic malaria services (diagnosis, vector control through larvicides and mosquito nets); basic tuberculosis services (treatment with first-line medications); basic HIV/AIDS services (only treatment of co-infections using cotrimoxazole medication); and nutritional supplementation for pregnant women (folic acid, vitamin A and calcium).<sup>109</sup>

Health centres are also expected to offer: family planning (contraceptive injections); childhood vaccinations (measles, diphtheria, tetanus toxoids and pertussis DTP, meningitis, hepatitis B, polio, tuberculosis, yellow fever); and basic tuberculosis services (microscopy diagnosis, radiography imaging).<sup>110</sup>

However, a lack of resources, including equipment and diagnostic tests, means health posts and health centres often lack the capacity to provide healthcare.<sup>111</sup> As a result, diagnosis are often made using clinical presentation of symptoms reducing the extent to which different causes of ill health may be distinguished from each other.<sup>112</sup> General symptoms such as fever are consequentially often assumed to be malaria and treated accordingly.<sup>113</sup>

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<sup>104</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>105</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 87-94

<sup>106</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>107</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p.4

<sup>108</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé République Démocratique du Congo, November 2018, [url](#)

<sup>109</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp.87-94

<sup>110</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 87-94

<sup>111</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>112</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>113</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

## Secondary Healthcare

At this level, patients can receive more specialised and complex care at general reference hospitals and provincial hospitals, from general physicians, as well as other healthcare workers.<sup>114</sup>

In principle, services available in these facilities are: family planning interventions (long lasting contraceptives, safe abortions, management of ectopic pregnancies); prenatal care (treatment of syphilis, management of hypertension, pre-eclampsia and other complications); delivery and postpartum care (deliveries with skilled birth attendant, treatment of septicaemia including neonatal, haemorrhage); treatment of sexually transmitted infections and other reproductive care (syphilis, gonorrhoea, chlamydia, urinary tract infections, inflammatory pelvic disease); paediatric care (treatment of dysentery, diarrhoea, malaria, measles, antiretroviral for HIV, treatment of severe malnutrition); childhood vaccinations (same as primary care); malaria treatment; tuberculosis (TB) services (same as primary care); HIV/AIDS services (treatment with first-line medications, nutritional supplementation for pregnant women (same as primary care); and non-communicable diseases services (screening, monitoring and treatment of heart disease, and diabetes).<sup>115</sup>

Emergency services are included in the PNDS under tertiary care facilities. However, most hospitals, including reference and provincial, provide at least basic general emergency care.<sup>116</sup> Emergency care services are extremely limited.<sup>117</sup> A study carried out in 2015 on a representative sample of provincial hospitals, found that only 2 of the 12 hospitals were able to provide all essential surgery and anaesthetic services, as defined by the WHO's Emergency and Essential Surgical Care Situation Analysis Tool.<sup>118</sup> Factors which contributed to an inability to provide services included no or interrupted water supply (9 of 12 hospitals), as well as no, or interrupted electricity supply (7 of 12 hospitals).<sup>119</sup>

In addition, pain relief in DRC, including in emergency care is very limited.<sup>120</sup> The International Narcotics Control Board (INCB) defines less than 200 daily doses per million, per day as inadequate for a population's pain management.<sup>121</sup> According to the latest data from INCB, in 2013 DRC had 2 daily doses per million, per day.<sup>122</sup>

## Tertiary Healthcare

At this level, patients can receive specialised care from specialist physicians at university hospitals and the national hospital.<sup>123</sup>

All services available in secondary healthcare centres are available at tertiary care centres. Additional services include: delivery and post-partum care (obstructed deliveries, corticosteroids to delay premature deliveries, induced pregnancies and treatment of neonatal septicaemia); paediatric

<sup>114</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)

<sup>115</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 87-94

<sup>116</sup> Kalisya, L. et al., The state of emergency care in Democratic Republic of Congo, December 2015 [url](#), pp. 156

<sup>117</sup> Sion, M. et al., Global Health: Science and practice, A Resource Planning Analysis of District Hospital Surgical Services in the Democratic Republic of the Congo, 2015, [url](#), p. 1

<sup>118</sup> Sion, M. et al., Global Health: Science and practice, A Resource Planning Analysis of District Hospital Surgical Services in the Democratic Republic of the Congo, 2015, [url](#), p. 1

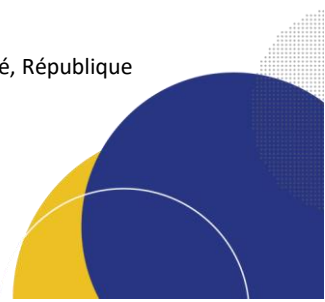
<sup>119</sup> Sion, M. et al., Global Health: Science and practice, A Resource Planning Analysis of District Hospital Surgical Services in the Democratic Republic of the Congo, 2015, [url](#), p. 1

<sup>120</sup> INCB, International Narcotic Control Board, Availability of Internationally Controlled Drugs, 2015, [url](#), p. 16

<sup>121</sup> INCB, International Narcotic Control Board, Availability of Internationally Controlled Drugs, 2015, [url](#), p. 7

<sup>122</sup> INCB, International Narcotic Control Board, Availability of Internationally Controlled Drugs, 2015, [url](#), p. 16

<sup>123</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)



services (treatment of severe: diarrhoea, pneumonia, malaria and measles); TB services (diagnosis of multidrug resistance); and emergency services, including basic emergency surgery.<sup>124</sup>

## 2.4 Private Healthcare

As previously described, private facilities are divided into for-profit and not-for-profit, with the latter including facilities operated by NGOs and faith-based organisations.<sup>125</sup> Traditional medicine has also been included under private healthcare to align with the PNDS.<sup>126</sup>

### For-profit facilities

According to the PNDS, the for-profit health sector operates primarily in urban centres and economic hubs.<sup>127</sup> The scope of services available in private facilities are not standardised and vary significantly.<sup>128</sup> Generally, private facilities are more likely to have basic resources and infrastructure, including electricity, and offer a greater scope of services. As such, there is a consensus that private facilities provide higher quality care and are the preferred provider for those with the necessary financial resources.<sup>129</sup>

There are a number of private hospitals mostly located in Kinshasa, Lubumbashi and Goma.<sup>130</sup>

### Faith-based facilities

Faith-based health facilities are an important provider of health services representing approximately 40% of health facilities.<sup>131</sup> As such, faith-based facilities are integrated into the public sector with referral pathways between facilities.<sup>132</sup> Some estimates suggest that faith-based organisations manage 34% of General Reference Hospitals.<sup>133</sup>

### Non-government organisations (NGOs)

There is a significant presence of national and international Non-Government Organisations (INGOs) integrated into the health sector. The Health Cluster, led by the WHO, coordinates agencies involved in providing health services in DRC. There are 24 international NGOs and 31 national NGOs involved in the DRC health cluster.<sup>134</sup> The majority of organisations operate in Eastern provinces and Kinshasa.<sup>135</sup>

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<sup>124</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 87-94

<sup>125</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 11

<sup>126</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 11

<sup>127</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé République Démocratique du Congo, November 2018, [url](#), p.11

<sup>128</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>129</sup> Sion, M. et al., Global Health: Science and practice, A Resource Planning Analysis of District Hospital Surgical Services in the Democratic Republic of the Congo, 2015, [url](#), p.1

<sup>130</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>131</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p.11 ; Wodon et., Market share of faith-inspired healthcare providers in Africa, The review of faith and international affairs, 12 March 2017, [url](#)

<sup>132</sup> Severe Malaria, DRC health system for malaria, 2017, [url](#)

<sup>133</sup> Severe Malaria, DRC health system for malaria, 2017, [url](#)

<sup>134</sup> WHO, World Health Organisation, Health Cluster Democratic Republic of Congo, June 2020, [url](#)

<sup>135</sup> WHO, World Health Organisation, Health Cluster Democratic Republic of Congo, June 2020, [url](#)

The role of different organisations depends on cooperation agreements, as well as on their resources and technical capacities.<sup>136</sup>

For instance, MSF has a significant presence in DRC and manages a number of clinics.<sup>137</sup> This includes a specialist HIV/AIDS clinic in Kinshasa, as well as numerous Ebola Treatment Centres in Eastern provinces.<sup>138</sup> Similarly, International Medical Corps manages several Ebola Treatment Centres and supports with provisions of essential drugs and medical supplied across the Eastern provinces of North Kivu, South Kivu and Tanganyika.<sup>139</sup>

### **Traditional medicine**

Traditional medicine has an important role in the healthcare system.<sup>140</sup> In regions with particularly scarce resources and formal health structures, such as provinces located in the centre of the DRC, traditional medicines are the first treatment source. There has been a national programme in place since 2001 that provides guidance and regulation for the traditional medicines sector.<sup>141</sup>

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<sup>136</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>137</sup> MSF, Doctors Without Borders, 2018, [url](#)

<sup>138</sup> MSF, Doctors Without Borders, 2018, [url](#)

<sup>139</sup> IMC, International Medical Corps, Democratic Republic of the Congo, n.d, [url](#)

<sup>140</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 11

<sup>141</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé République Démocratique du Congo, November 2018, [url](#), p. 11

### 3 Healthcare Human Resources

It is widely agreed that the DRC is faced with a critical shortage of healthcare professionals.<sup>142</sup> However, current and reliable data is limited. According to latest figures from the World Bank, in 2016, there were 0.074 physicians per 1 000 population, placing it 14<sup>th</sup> worst of the 264 countries included.<sup>143</sup> With regard to nurses and midwives, in 2018 there were 1.11 per 1 000 people, which is ranked as 14<sup>th</sup> worst.<sup>144</sup> The health sector is particularly lacking in specialists, including pharmacists, dentists and specialist physicians.<sup>145</sup>

Healthcare professionals are unequally distributed with most concentrated in large urban areas, notably Kinshasa. According to the PNDS, the Kinshasa has the highest number of physicians at 13 851, while Bas-Uele has the fewest with 2 117.<sup>146</sup>

Training of medical personnel is provided through a combination of public and private institutions known as Medical Technical Institutes and Medical Education Institutes. According to the PNDS, the annual human resources audit carried out in 2017 identified a total of 478 training institutions.<sup>147</sup> Of these, approximately 30% were state institutions, 34% were private faith-based institutions and 35% were private for-profit.<sup>148</sup>

Nursing training is provided in all the provinces. In contrast, midwifery is only available at 19 training schools (of the aforementioned 478) and laboratory technicians in only 13.<sup>149</sup> Emergency Medicine is not yet established as a medical speciality in DRC.<sup>150</sup> There are no postgraduate training programmes for nurses or physicians.<sup>151</sup>

The PNDS describes professional training of medical professionals as being of poor quality. It describes a proliferation of institutions which do not meet expected standards due to a general lack of resources, equipment and high quality teachers and supervisors. The PNDS also states there is low workforce motivation and retention, in part due to regular non-payment of salaries and low wages.<sup>152</sup>

<sup>142</sup> ONRHSC, Observatoire National Des Ressources Humaines de La Santé En RD. Congo, 2020, [url](#)

<sup>143</sup> World Bank, Data, 2016, [url](#)

<sup>144</sup> World Bank, Data, 2018, [url](#)

<sup>145</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo November 2018, [url](#), pp. 25-27

<sup>146</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 25

<sup>147</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 25

<sup>148</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)

<sup>149</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 25

<sup>150</sup> Kalisya, L. et al., The state of emergency care in Democratic Republic of Congo, December 2015, [url](#), p. 153

<sup>151</sup> Kalisya, L. et al., The state of emergency care in Democratic Republic of Congo, December 2015, [url](#), p. 154

<sup>152</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 25-26

The health sector is also supported by a network of Community Health Workers (CHWs, known locally as relais communautaires).<sup>153</sup> CHWs are typically existing members of the communities within which they operate.<sup>154</sup> They function as an important intermediary between formal health structures and communities. Their key responsibilities include providing health information to encourage positive hygiene practices and healthy behaviours, as well as increase healthcare seeking behaviours for communicable and non-communicable diseases.<sup>155</sup> CHWs are typically volunteers mobilised by NGOs and so are most active in areas with a large presence of organisations.<sup>156</sup>

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<sup>153</sup> PNL, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, p. 64

<sup>154</sup> Millington, K, Effectiveness of Community Health Workers, , Knowledge, evidence and learning for development, November 2018, [url](#), p. 2

<sup>155</sup> Millington, K, Effectiveness of Community Health Workers, Knowledge, evidence and learning for development, November 2018, [url](#), p. 3

<sup>156</sup> Millington, K, Effectiveness of Community Health Workers, Knowledge, evidence and learning for development, November 2018, [url](#), p. 7

## 4 Pharmaceutical Sector

A National List of Essential Medicines is published periodically.<sup>157</sup> The list was last updated in 2018 although the 2010 list is most commonly used by physicians and pharmacists.<sup>158</sup> Medications included are selected by a committee to meet the priority needs of the majority of the population. Those included on the list are prioritised by national purchasing programmes.<sup>159</sup>

The supply and provision of medications is achieved through the National System for Supply of Essential Medicines. This is based on centralised purchases by the Federation of Essential Drugs Purchasing Centres and decentralised distribution through Centres of Regional Distribution of Essential Medicines. There are 19 Regional Medical Distribution Centres that are responsible for providing stock to registered distribution sites. Provincial inspectorates carry out quality assurance to ensure that the medicines are of sufficient quality and prevent circulation of counterfeit medicines. There are four laboratories approved by the Ministry of Health which conduct quality screening. Registered medical centres which receive stock through these central purchasing mechanisms include public and private (including not-for-profit) health facilities, as well as pharmacies. The centralised management and distribution to provinces aims to ensure that supply of essential medicines matches demand.<sup>160</sup>

However, an assessment of Regional Distribution Centres revealed that they lack operational capacity to meet demands from registered health facilities. The amount of stock provided to medical facilities often falls below their requirements.<sup>161</sup> As described in the PNDS, Regional Distribution Centres have become weaker, particularly with regard to their role as a central purchasing unit.<sup>162</sup> Factors identified as undermining central purchasing and regional distribution include a lack of reliable financing, weak information management systems, lack of human resources for supervision and management and absence of local production of medicines.<sup>163</sup>

As a result, some healthcare implementing partners choose to circumvent the national supply chains and operate parallel logistics chains, creating fragmentation and duplication.<sup>164</sup> In 2017, it was estimated that there were over 170 registered and unregistered wholesalers supplying 109 registered pharmacies.<sup>165</sup> The numerous registered wholesalers reduce the scope for economies of scale and efficiencies in supply chains.<sup>166</sup>

The weak central purchasing and regional distribution mechanisms, as well as weak registration and inspection processes, have contributed to the proliferation of a parallel, informal market of medicines.

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<sup>157</sup> EASO1, Medical doctor and local consultant responsible for in-country data collection, Email Correspondence, August – November 2020

<sup>158</sup> EASO6, Senior Medical Advisor of an international healthcare company, Email Correspondence, August 2020.

<sup>159</sup> EASO1, Medical doctor and local consultant responsible for in-country data collection, Email Correspondence, August – November 2020

<sup>160</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#) - 29

<sup>161</sup> World Bank, The role of the private sector in improving the performance of the Health System in the Democratic Republic of Congo, 2018, [url](#), pp. 38-48

<sup>162</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#) - 29

<sup>163</sup> World Bank, The role of the private sector in improving the performance of the Health System in the Democratic Republic of Congo, 2018, [url](#), pp. 38-48

<sup>164</sup> World Bank, The role of the private sector in improving the performance of the Health System in the Democratic Republic of Congo, 2018, [url](#), pp. 38-48

<sup>165</sup> World Bank, The role of the private sector in improving the performance of the Health System in the Democratic Republic of Congo, 2018, [url](#), p. 10

<sup>166</sup> World Bank, The role of the private sector in improving the performance of the Health System in the Democratic Republic of Congo, 2018, [url](#), pp. 38-48



There are numerous sources which contribute to the informal medicines market which vary in size and degree of organisation. These include large-scale organised purchasing and import of unregistered medicines from international sellers. On a smaller scale, there are individuals who travel internationally to South Africa or further, with the objective of buying medicines to sell in DRC.<sup>167</sup> Lastly, there is the opportunistic import of medicines which results from individuals, particularly the diaspora community, who import often small amounts of medicine for private/family consumption or for sale to local vendors.<sup>168</sup>

These unregistered medicines are often integrated into the formal healthcare system. Private medical facilities, registered to receive stock through the central purchasing system, often supplement their stock through the informal market. In contrast, public medical facilities experiencing stockouts, are likely to direct individuals to source medicines from the informal market. For example, a doctor in a public hospital will direct family members to source a named medicine from the informal market in order to treat a patient in the hospital.<sup>169</sup>

The informal market operates through individuals as well as through pharmacies. A study by the WHO in 2015 estimated that there were over 5 000 medical dispensaries operating in Kinshasa without a licence or trained pharmacist.<sup>170</sup> While stakeholders critique the scale of unregistered and unregulated medical dispensaries, they also recognise that these currently play a critical role widening access to medications given the lack of trained pharmacists.<sup>171</sup>

The scale of the informal medicines market has resulted in the proliferation of poor quality medicines which are either counterfeit or lack sufficient active ingredient to be effective.<sup>172</sup> According to national records, approximately 0.5% of medicines entering DRC did not meet data quality standards.<sup>173</sup> However, these statistics only represent cases identified at borders where medicines which were registered were submitted for inspection during approval processes.<sup>174</sup> When the entire medicines market is considered, the proportion of poor quality medicines is much higher. For instance, a study of medicines available in the private market in 2018 found that almost 30% of medicines were defined as being of poor quality and almost 60% were underdosed.<sup>175</sup> Addressing poor medicines quality is included as a key objective of the PNDS.<sup>176</sup>

<sup>167</sup> Amwanga Z, Illegal pharmacies provide a convenient option – but not necessarily a safe one, June 2019, [url](#)

<sup>168</sup> EASO1, Medical doctor and local consultant responsible for in-country data collection, Email Correspondence, August – November 2020

<sup>169</sup> EASO1, Medical doctor and local consultant responsible for in-country data collection, Email Correspondence, August – November 2020

<sup>170</sup> Berne-Waberm, Le System Sanitaire a Kinshasa: Medicaments et Soins Du VIH-Sida, de l'hypertension Arterielle, Dur Diabète de Type II et Des Troubles Mentaux, December 2014, [url](#), p. 9

<sup>171</sup> World Bank, The role of the private sector in improving the performance of the Health System in the Democratic Republic of Congo, 2018, [url](#), p. 39

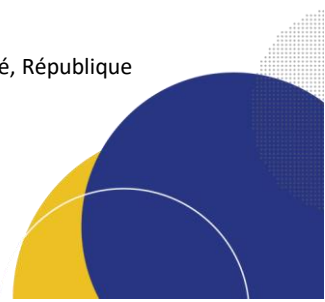
<sup>172</sup> Amwanga Z, Illegal pharmacies provide a convenient option – but not necessarily a safe one, June 2019, [url](#)

<sup>173</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)

<sup>174</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé République Démocratique du Congo, November 2018, [url](#), p.28

<sup>175</sup> Schiavetti, B. et al., The American Journal of Tropical Medicine and Hygiene, January 2018, [url](#), p. 894

<sup>176</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 28



## 5 National Policy on Blood Transfusion and Related Services Organisation

National blood transfusions are coordinated by a technical unit that sits within the Ministry of Health. The national blood transfusion policy was promulgated in 1999 and implemented in 2002. The policy aims to make quality blood products of sufficient quantity available and accessible throughout the country.<sup>177</sup> To achieve this, the policy aims to create a national network of autonomous blood transfusion structures, headed by the National Centre for Blood Transfusion located in Kinshasa.<sup>178</sup> The centre is responsible for managing 10 provincial transfusion centres managed by respective provincial medical coordinators.<sup>179</sup>

Blood donations are received through a network of mobile and stationary facilities as well as in hospitals. The majority of blood donations are from family members of those requiring transfusions (61%), followed by community volunteers (34%) and lastly those receiving some form of remuneration (5%). In most health facilities providing blood transfusions, immunohaematological classification is limited to A-B-O. The phenotype of other characteristics, such as Rhesus antigens, is not systematically carried out. Rapid antigen tests are typically used to screen for antibodies to HIV, hepatitis B and hepatitis C, as well as screening for syphilis.<sup>180</sup> Some central provinces conduct additional screening for trypanosomiasis.<sup>181</sup>

In spite of these efforts to strengthen the blood supply system, DRC is characterised by a severe blood shortage and many hospitals lack resources and facilities for blood transfusions.<sup>182</sup> An article published in 2018 describes the story of a mother who was seeking a blood transfusion for her daughter. As the clinic located in central DRC did not have any blood in stock, she was required to source her own donor. As a result, she was required to pay the clinic and the individual which meant she could not afford the total amount that her daughter required. The provincial health minister is quoted as saying '32 people in the province died in 2017 because they didn't get blood transfusions'.<sup>183</sup>

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<sup>177</sup> Kabinda, J. et al, Transfusion sanguine en République Démocratique du Congo: efforts réalisés et défis à relever, 2015, [url](#), p. 342

<sup>178</sup> EASO6, Senior Medical Advisor of an international healthcare company, Email Correspondence, August 2020.

<sup>179</sup> Kabinda, J. et al, Transfusion sanguine en République Démocratique du Congo: efforts réalisés et défis à relever, 2015, [url](#), p. 342

<sup>180</sup> Kabinda, J. et al, Transfusion sanguine en République Démocratique du Congo: efforts réalisés et défis à relever, 2015, [url](#), p. 345

<sup>181</sup> EASO6, Senior Medical Advisor of an international healthcare company, Email Correspondence, August 2020.

<sup>182</sup> Global Press Journal, A Blood Transfusion in Africa ? It's Free in Rwanda, Unaffordable in Zimbabwe, October 2017, [url](#); Global Press Journal, Critical Shortage at DRC Blood Bank Has Fatal Consequences, August 2018, [url](#)

<sup>183</sup> Amwanga, Z, Global Press Journal, Critical Shortage at DRC Blood Bank Has Fatal Consequences, August 2018, [url](#)

## 6 Patient Pathways

The healthcare system is centred on primary healthcare. From initial consultations at a primary healthcare facility, patients may receive onward referrals to specialist care. However, the fragmented nature of DRC's healthcare system has created an absence of clear patient pathways. For most diseases, there are no national treatment guidelines and protocols leading to a weak standardisation of care. Patients move frequently between different types of health facilities, from public to private for-profit and private not-for-profit, which further compounds the complexity of referral pathways.<sup>184</sup>

Direct self-referral to specialist physicians or treatment centres is possible through informal referral routes. These informal pathways are particularly common in urban centres. Private facilities in particular operate through informal pathways whereby individuals may self-refer.<sup>185</sup>

For complex care, those with necessary financial resources almost exclusively choose to travel to neighbouring countries for treatment. Key medical destinations include Rwanda, South Africa and India.<sup>186</sup>

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<sup>184</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>185</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>186</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

## 7 Risk-Pooling Mechanism

DRC has weak risk-sharing mechanisms across the health system. As described in the PNDS, ‘the poor allocation of public resources for health and insufficient mechanisms to share risks, constitute one of the major challenges to achieving Universal Health Coverage’.<sup>187</sup> There are a small number of public and private risk sharing mechanisms. According to a report by the World Bank based on data from 2014, ‘private health insurance and other health benefit programmes are concentrated among formally employed people in wealthier income quintiles and reach no more than 3% to 4% of the population’.<sup>188</sup> As a result, the majority of healthcare costs are paid at the point of care, placing large proportions of the population at risk of healthcare-related catastrophic cost.<sup>189</sup> At present, access to health insurance is largely a marker of notable wealth.<sup>190</sup>

### 7.1 Health Services Provided by the State / Public Authorities

A comprehensive outline of health services is given in [chapter 2.3](#), state provision of health services are centred on primary care.<sup>191</sup> The Ministry of Health, through provincial structures, is responsible for the payment of salaries, organisational training and replenishment of medication stocks. However, as discussed, frequent delays in salary payments as well as stock shortages are reported in public health facilities, particularly in rural districts.<sup>192</sup>

### 7.2 Public Health Insurance

A National Programme for Promotion of Health Insurance was established in 2001 as part of the Health System Strategic Plan. However, public health insurance remains distinctly under-developed.<sup>193</sup>

The only health insurance scheme supported by public financing is reserved for teachers and called the Mutual Health Insurance for Primary, Secondary and Professional Education (Mutuelle de santé des enseignants des écoles catholiques du Congo, MESP).<sup>194</sup> The insurance scheme receives co-financing from public funds equivalent to USD 1.20 per person, per month, the equivalent of 40% of the total monthly premium.<sup>195</sup> In spite of receiving support from public financing, the insurance cannot be considered a public health insurance scheme as it was established by a not-for-profit organisation

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<sup>187</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p.32

<sup>188</sup> World Bank, The role of the private sector in improving the performance of the Health System in the Democratic Republic of Congo, 2018, [url](#), p. 10

<sup>189</sup> Wagstaff, A, et al, Progress on catastrophic health spending in 133 countries: a retrospective observational study, the Lancet, February 2018, [url](#), p.176

<sup>190</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>191</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p.4

<sup>192</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)

<sup>193</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>194</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>195</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

in 2001 to support teachers and their families.<sup>196</sup> There are no other national insurance schemes for health in DRC.<sup>197</sup>

### 7.3 Community-Based Health Insurance Schemes

The government of DRC has, in its health development strategy, identified Mutual-health insurance schemes as playing an important role to achieve Universal Health Coverage.<sup>198</sup> A report assessing the role of Mutual Health Organisations in DRC states, ‘to move towards strengthening the role and regulation of Mutual Health Organisations (MHOs), the government defined in law the fundamental principles of MHOs’.<sup>199,200</sup> The same source further states, ‘MHOs are a non-profit association of members that seek, via member contributions, to conduct interventions of protection, solidarity, and mutual assistance for its members and their dependants, offering the opportunity to access quality healthcare at decent prices. The law provides two options: (1) compulsory affiliation for anyone whose premium can be deducted at the source in enterprise-based, corporate, school, and student MHOs; and (2) voluntary enrolment in community-based MHOs for informal sector workers’.<sup>201</sup>

The study further describes that there are two coordinating bodies which aim to strengthen governance and management of these mutual health schemes. The first, the National Programme for the Promotion of Mutuels (Programme National de Promotion des Mutuelles de Santé) was established under the health system strategic plan in 2001. It aims to take control of a number of small fractured mutual health schemes. The second, the Platform of Organisations for the Promotion of Mutual in Health of Congo (Plateforme des organisations promotrices des mutuelles de santé du Congo, POMUCO) was established in 2015. This aims to strengthen governance and advocacy to accelerate the achievement of universal health coverage.<sup>202</sup>

Despite of this commitment to strengthen mutual health schemes, at present they remain underdeveloped and fragmented.<sup>203</sup>

By far the most well established mutual health insurance scheme is the aforementioned Mutual Health Insurance for Primary, Secondary and Professional Education (Mutuelle de santé des enseignants des écoles catholiques du Congo, MESP). Membership of MESP is large enough so as to be able to leverage terms and conditions from providers to strengthen the quality healthcare provided at clinics.<sup>204</sup>

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<sup>196</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>197</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>198</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé République Démocratique du Congo, November 2018, [url](#), p.57

<sup>199</sup> The law determining the fundamental principles of MHOs (Loi organique N° 17/002) was proclaimed on 8 February 2017

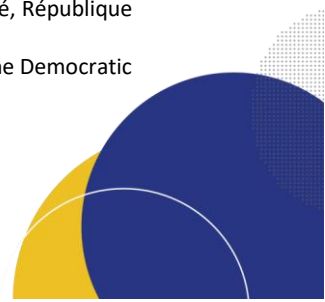
<sup>200</sup> Criel, B, et al., Can mutual health organisations influence the quality of healthcare provision? The case of the Democratic Republic of Congo, April 2020, [url](#), p.3

<sup>201</sup> Criel, B, et al., Can mutual health organisations influence the quality of healthcare provision? The case of the Democratic Republic of Congo, April 2020, [url](#), p.3

<sup>202</sup> Criel, B, et al., Can mutual health organisations influence the quality of healthcare provision? The case of the Democratic Republic of Congo, April 2020, [url](#), p.3

<sup>203</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 57

<sup>204</sup> Criel, B, et al., Can mutual health organisations influence the quality of healthcare provision? The case of the Democratic Republic of Congo, April 2020, [url](#), p. 1



## 7.4 Private Health Insurance Schemes

At present, private health insurance schemes have a limited role in DRC and cover only small portions of the population. Employers are required by law to contribute to access to healthcare of their employees and their families. However, contributing to healthcare through insurance schemes is not mandatory. Instead, companies can choose to pay medical fees, provide on-site services or contribute to insurance premiums. The law is not rigorously enforced across all sectors and so is largely applied to government employees, or those working for large international organisations.<sup>205</sup>

The coverage and types of services included in employer-sponsored health insurance vary greatly. These are often limited to coverage of primary care services but with many excluding maternal care and family planning services.<sup>206</sup> Employer sponsored insurance plans account for the majority of the private sector market. As such, the private insurance market largely covers those employed in the formal sector often in relatively lucrative positions. It is estimated that only 4% of the population is covered by a private insurance plan.<sup>207</sup>

In 2015, the government of DRC voted to expand the private health insurance sector. The Regulation and Control of Insurance Bureau was established and charged with providing operating licences to health insurance providers. However, at present there are a few private insurance companies operating in DRC.<sup>208</sup>

Companies based in remote locations, such as the mining industry, often choose to provide on-site primary health services rather operating through health insurance schemes.<sup>209</sup>

## 7.5 Other Social Security Plans

The 2011 social security law defined a number of social protection measures. On the whole, these apply to those employed in the formal sector, including public sector employees, and are dependent on employee and employer contributions.<sup>210</sup> Payments expected are typically 5% employee contribution and 5% employer contribution. Plans usually include old age pensions from the age of 60, disability pension due to permanent loss of earning capacity and survivor pensions whereby a dependent is entitled to a proportion of a deceased person's pension.<sup>211</sup> These measures are not systematically enforced and employee and employer contributions vary significantly.<sup>212</sup>

There are no laws related to mandatory maternity or paternity cover.

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<sup>205</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>206</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>207</sup> World Bank, The role of the private sector in improving the performance of the Health System in the Democratic Republic of Congo, 2018, [url](#), p. 10

<sup>208</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>209</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>210</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>211</sup> Social Security Administration, Office of Retirement and Disability Policy, Social Security Programs Throughout the World: Africa, 2019, [url](#)

<sup>212</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

## 7.6 Work Injury

Those employed in the formal sector are required to contribute 2.25% of income, to a ‘social insurance system’ to cover work injury.<sup>213</sup> This is matched by equal employer contributions.<sup>214</sup> As with pensions, this is not systematically enforced and payments are often not received for work-related injuries.<sup>215</sup>

## 7.7 Minimum Wage

The legal minimum wage in DRC is Congolese Francs 7 075 (equivalent to USD 3.61).<sup>216</sup> However, as the majority of the population work in the informal sector, the national minimum wage is often not applied.<sup>217</sup>

## 7.8 Poverty Alleviation Measures

There are no social security systems in place for unemployed persons.<sup>218</sup>

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<sup>213</sup> Social Security Administration, Office of Retirement and Disability Policy, Social Security Programs Throughout the World: Africa, 2019, [url](#)

<sup>214</sup> Social Security Administration, Office of Retirement and Disability Policy, Social Security Programs Throughout the World: Africa, 2019, [url](#)

<sup>215</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>216</sup> Wage indicator, Minimum Wage – Congo, September 2020, [url](#)

<sup>217</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>218</sup> Social Security Administration, Office of Retirement and Disability Policy, Social Security Programs Throughout the World: Africa, 2019, [url](#)



## 8 Out-of-Pocket Health Expenditure

The vast majority of healthcare in DRC is accessed through out-of-pocket expenditures, at the point of care.<sup>219</sup> Out-of-pocket healthcare spending accounts for 40% of all healthcare financing in DRC.<sup>220</sup> In primary care facilities, the ratio of expenditures from out-of-pocket healthcare is approximately 32% on health centre consultations, 64% on medications and 2% on non-medical items like food.<sup>221</sup> Those who are unable to pay are at times held in the medical facility until fees are paid. An observational study in Lubumbashi found that over half of the 85 women unable to pay were held in the hospital for 1 to 30 days.<sup>222</sup>

In private facilities including faith-based organisations, user fees are the main source of income for healthcare providers, covering healthcare activities and staff remuneration. In public facilities, government financing is often unreliable and insufficient, making user fees a vital source of revenue.<sup>223</sup> Not-for-profit institutions have more variable application of user fees depending on the organisation leading the facility.<sup>224</sup>

National programmes for priority diseases aim to remove all healthcare-related fees.<sup>225</sup> Priority diseases include HIV/AIDS and TB. As such, consultations, diagnostic tests, medications and key treatments are free, in principle. However, it is relatively common that fees are applied prior to a positive confirmation of disease. Those with suspected HIV or TB will be expected to pay for consultations and diagnostic tests in many health facilities. These fees are often prohibitive and a limit to the access to healthcare.<sup>226</sup>

### 8.1 Cost of Consultations

The cost of consultations depends on the type of facility.<sup>227</sup>

Cost of consultations	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price
Specialist consultation	USD 10	USD 10	USD 40	USD 40

Inpatient treatment costs include the consultation and bed. Additional costs such as medications and imaging are not included and are supplementary.<sup>228</sup>

<sup>219</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 41

<sup>220</sup> IHME, Institute for Health Metrics, DRC dashboard, October 2020, [url](#)

<sup>221</sup> Laokri, S., et, al, Assessing out-of-pocket expenditures for primary health care, BMC Health Services Research, June 2018, [url pp.8](#)

<sup>222</sup> Cowgill, K and Mukengeshayi, Hospital detention of mothers and their infants at a large provincial hospital, Reproductive Health, 2019, [url](#)

<sup>223</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>224</sup> For instance, MSF facilities typically do not have any user fees

<sup>225</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)

<sup>226</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>227</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>228</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

## 8.2 Treatment Cost

There is some evidence of overcharging and oversubscribing of medicines, diagnostic tests, and medical procedures by health facilities, due to the reliance on user fees.<sup>229</sup> For example, the largest community health scheme, the MESP, has medical advisors and administrative staff who review invoices relative to treatments received. Medical advisors estimate that 95% of invoices are revised down after review by up to 25%.<sup>230</sup> For the majority of the population, the cost of treatments act as a significant, and often insurmountable, barrier to healthcare.<sup>231</sup> As a result, the majority of the population does not have access to care outside of primary care services.<sup>232</sup>

## 8.3 Cost of Medication

The government of DRC registers and controls the distribution of pharmaceuticals throughout the provinces, through provincial health inspectors. This mechanism aims to regulate drug prices and quality.<sup>233</sup>

Medications for key priority diseases are provided for free. Notably these include, anti-retrovirals, treatment of opportunistic infections, and TB treatments, including multidrug-resistant tuberculosis (MDR-TB).<sup>234</sup>

Resourcing and supply chain challenges has resulted in a prominent informal pharmaceuticals market. Prices of medicines from these sources are variable, with instances of medications being both higher and lower than in registered facilities.<sup>235</sup>

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<sup>229</sup> Stéphanie Stasse et al., “Improving Financial Access to Health Care in the Kisantu District in the Democratic Republic of Congo: Acting upon Complexity”, *Global Health Action* 8, no. 1 (2015), [url](#), p.1

<sup>230</sup> Criel, B, et al., “Can Mutual Health Organisations Influence the Quality and the Affordability of Healthcare Provision? The Case of the Democratic Republic of Congo”, [url](#), p.2

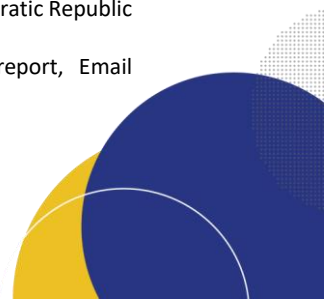
<sup>231</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)

<sup>232</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>233</sup> World Bank, The role of the private sector in improving the performance of the Health System in the Democratic Republic of Congo, 2018, [url](#), pp. 38-48

<sup>234</sup> World Bank, The role of the private sector in improving the performance of the Health System in the Democratic Republic of Congo, 2018, [url](#), pp. 38-48

<sup>235</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020



# 9 Cardiovascular Diseases

## 9.1 General Information

### 9.1.1 Epidemiological context

Cardiovascular Disease (CVD) is a general term for conditions affecting the heart and blood vessels. There is a significant lack of CVD prevalence data on CVD in DRC, although it is estimated that the prevalence is relatively high and increasing.<sup>236</sup> Stroke is ranked as the sixth leading cause of death and first among non-communicable diseases.<sup>237</sup> Coronary heart disease is the seventh leading cause of death.<sup>238</sup> According to the latest WHO data published in 2018, coronary heart disease deaths in DRC stood at 28 410, or 4.27%.<sup>239</sup> Hypertension is a key risk factor for CVD that increases morbidity and mortality. A screening campaign carried out in 2018 estimated the prevalence of arterial hypertension to be 26% of the adult population in Kinshasa.<sup>240</sup> According to the PNDS, it is likely that the prevalence is comparable in other urban areas.<sup>241</sup>

### 9.1.2 Strategies and policies for treatment and management of CVD

To date, the health system in DRC has largely been oriented towards addressing communicable diseases. In spite of this, in 2014 a National Programme against Cardiovascular Diseases (Programme National des Maladies Cardiovasculaires) was adopted by the Ministry of Health.<sup>242</sup> This raised the prioritisation given to addressing the management of CVD, particularly in public facilities. The programme, however, has not been updated and has been underfinanced. This has therefore prevented realisation of the key objectives of the programme.<sup>243</sup>

Addressing CVD is nonetheless outlined in the National Strategic Health Plan (Plan National de Développement Sanitaire 2016-2020, PNDS) as a priority health area for the Government of DRC and the Ministry of Health of DRC.<sup>244</sup> As part of this, the PNDS includes hypertension management among its key indicators for monitoring success of the strategy implementation.<sup>245</sup> In addition, management of hypertension is included among the minimum packet of activities for health centres and hospitals, while screening of risk factors and treatment of cardiovascular disease is included in the packet of activities for hospitals.<sup>246</sup>

<sup>236</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, Nov 2018, [url](#), p. 21

<sup>237</sup> Institute of Health Metrics, "DRC Dashboard," 2017, [url](#)

<sup>238</sup> Institute of Health Metrics, "DRC Dashboard," 2017, [url](#)

<sup>239</sup> World Life Expectancy, DRC, 2018, [url](#)

<sup>240</sup> Buila, N., et al., Analysis of blood pressure and selected cardiovascular risk factors in the Democratic Republic of the Congo: the May Measurement Month 2018 results, European Heart Journal Supplements, 28 August 2018, [url](#), pp. 50-53

<sup>241</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, Nov 2018, [url](#), p. 21

<sup>242</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020. Strategy document was not made available for the report.

<sup>243</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020.

<sup>244</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, Nov 2018, [url](#), p. 21

<sup>245</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 87-94

<sup>246</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 87-94

### 9.1.3 Healthcare provisions for treatment and management of CVD

CVD treatments available at primary care facilities include lifestyle consultations, risk factor monitoring and dispensing of medications, such as diuretics.<sup>247</sup> However, many primary care facilities lack guidelines on the treatment of CVD, while a lack of continual professional development training for nurses leads to a poor standardisation of care.<sup>248</sup> This often results in the poor management of risk factors and increased burden of ill health attributable to CVD.<sup>249</sup>

There are very limited specialised care services available in provincial secondary or tertiary facilities.<sup>250</sup> Provincial hospitals often face significant infrastructure challenges and lack a continuous supply of electricity and water.<sup>251</sup> As a result, elective surgeries are only performed in a few specialist hospitals.<sup>252</sup> However, limited resources means patients have poor health outcomes and mortality rates are relatively high.<sup>253</sup> For instance, an observational study of heart disease treatment in a private and a university hospital between 2014 and 2016, recorded a hospital mortality rate of 19%, and a 35% death rate within one year of presentation.<sup>254</sup>

Most seek specialised care from a select number of medical facilities located in Kinshasa.<sup>255</sup> The medical facilities include:<sup>256</sup>

- Public sector:
  - Kinshasa University Clinic (Clinique Universitaire de Kinshasa)
  - Kinshasa General Hospital (Hôpital Général de Kinshasa)
  - Ngaliema Clinic
- Private sector (for profit):
  - HJ Hospital Kinshasa (HJ Hôpitaux Kinshasa)<sup>257</sup>. The HJ Hospitals also have facilities in Lubumbashi and Goma<sup>258</sup>
  - Diamant Medical Centre (Centre Médical Diamant<sup>259</sup>)
  - Medical Centre Kinshasa (Centre Médical de Kinshasa<sup>260</sup>)

<sup>247</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 87-94

<sup>248</sup> Lulebo,A. et al., Assessment of hypertension management in primary health settings in Kinshasa, Democratic Republic of Congo, BMC Health Service Research, December 2015, [url](#), p. 3

<sup>249</sup> Lulebo,A., et al., Assessment of hypertension management in primary health settings in Kinshasa, Democratic Republic of Congo, BMC Health Service Research, December 2015, [url](#), pp. 5-8

<sup>250</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020.

<sup>251</sup> GSHP, Global Health science and practice, A Resource Planning Analysis of District Hospital Surgical Services in the Democratic Republic of the Congo, October 2018, [url](#), p. 1

<sup>252</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020.

<sup>253</sup> Malamba-Lez, D. et al, Heart failure etiologies and challenges to care in the developing world: an observational study in Democratic Republic of Congo, Cardiac Failure, October 2018, pp. 854-859, [url](#), p.1

<sup>254</sup> Malamba-Lez, D. et al, Heart failure etiologies and challenges to care in the developing world: an observational study in Democratic Republic of Congo, Cardiac Failure, October 2018, pp. 854-859, [url](#), p.1

<sup>255</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>256</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>257</sup> HJ Hospital, n.d, [url](#)

<sup>258</sup> HJ Hospital, n.d, [url](#)

<sup>259</sup> Centre medical Diamant, n.d, [url](#)

<sup>260</sup> CMK, Centre Medical de Kinshasa, n.d, [url](#)



- Monkole Medical Centre (Centre Hospitalier Monkole)<sup>261</sup>

With regard to Ngaliema Clinic, a specialist children’s cardiac ward was built in 2017.<sup>262</sup> However, according to one source writing for Global Cardiac Surgery, by late 2018 only two surgeries had been performed.<sup>263</sup>

Due to a lack of specialist cardiologists, healthcare services available at these health centres is often limited.<sup>264</sup> Specialist surgeries in particular are offered on an intermittent and often unreliable basis. The medical centres rely on international cardiologists to visit in order to perform a limited number of scheduled services.<sup>265</sup> As a result, those with the required financial resources typically seek treatment in other countries, usually South Africa.<sup>266</sup>

## 9.2 Access to Treatment

Access to healthcare in DRC is limited, particularly for specialised care. Medicines, alongside lifestyle consultations, are the main treatment options for patients with CVD in DRC.<sup>267</sup> A representative sample of health centres were reviewed in 2017 and 2018 to assess availability of different diagnostic and treatment services in health facilities.<sup>268</sup> This found that diuretics, used to treat high blood pressure, were relatively widely available, being present in 63% of facilities.<sup>269</sup> Other medicines were much less readily available. For example, statins, used to treat high cholesterol, were in stock in fewer than 1% of the health facilities reviewed. Finally, only 22% of hospitals assessed had oxygen available for use during emergency care.<sup>270</sup>

Lack of community awareness regarding CVD and related risk factors reduces health-seeking behaviours and contributes to late presentation at clinics. As a result, patients tend to require more complex care.<sup>271</sup>

Other factors limiting access to treatment include the cost of care (see below) and lack of affordable transport. A lack of transport facilities particularly affects access to emergency care during heart failure.<sup>272</sup>

Health services, including those for CVD, are available to all citizens with access to healthcare only dependent on ability to pay.

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<sup>261</sup> CEFA, Centre Hospitalier Monkole, n.d, [url](#)

<sup>262</sup> Clinique Ngaliema, n.d, [url](#)

<sup>263</sup> Kanmounye,U, Global Cardiac Surgery, Auscultating cardiac surgery in the DR Congo, September 2018, [url](#)

<sup>264</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020.

<sup>265</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020.

<sup>266</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020.

<sup>267</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020.

<sup>268</sup> Study reviewed availability of services in a total of 1,380 Health Facilities proportionally distributed across provinces. This was carried out between November 2017 and April 2018.

<sup>269</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), p. 251

<sup>270</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), p. 43

<sup>271</sup> Malamba-Lez, D. et al, Heart failure etiologies and challenges to care in the developing world: an observational study in Democratic Republic of Congo, Cardiac Failure, October 2018, pp. 854-859, [url](#), p. 1

<sup>272</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

### 9.3 Cost of Treatment

There are no financial support programmes for the treatment of CVD.<sup>273</sup> The vast majority of household healthcare spending is through out-of-pocket payments at the point of care.<sup>274</sup> Out-of-pocket payments at the point of care are a significant barrier to healthcare. For the majority of the population, treatment beyond primary care consultations are not economically accessible.<sup>275</sup> For example, according to the aforementioned study on cardiac care outcomes in Lubumbashi, the average cost of a 10-day inpatient hospitalisation for heart failure is USD 1 000.<sup>276</sup> This is almost equal to the average annual income of USD 1 080.<sup>277</sup>

The cost of inpatient care is more expensive in private hospitals when compared to public facilities. The increased price relates primarily to the cost of the room, rather than consultations and tests. The prices below were gathered from a range of clinics based in Kinshasa and provide an indication of the cost of healthcare services. The total costs incurred by patients can be approximated by summing all relevant services. For instance, outpatient cardiac consultation would cost as a minimum USD 17 for admission and USD 10 for a consultation with a cardiologist. All medications incur supplementary charges. Of note, inpatient costs are not inclusive of food.<sup>278</sup>

Cost of treatment <sup>279</sup>	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
<b>Clinical admissions</b>					
Cardiology department (daily rates)	USD 17	USD 17	USD 50-100	USD 100-300	None
Cardiac surgery department (daily rates)	Service not available	Service not available	Service not available	Service not available	None
<b>Specialist</b>					
Cardiologist	USD 10	USD 10	USD 40	USD 40	None
Cardiac surgeon	Service not available	Service not available	USD 40	USD 40	None
<b>Medical imaging</b>					
Angiogram (available in only)	Service not available	Service not available	USD 50-100*	USD 50-100*	None

<sup>273</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020

<sup>274</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 41

<sup>275</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020

<sup>276</sup> Malamba-Lez, D. et al, Heart failure aetiologies and challenges to care in the developing world: an observational study in Democratic Republic of Congo, Cardiac Failure, October 2018, 24:12 pp. 854-859, [url](#), p. 1

<sup>277</sup> World Bank, Data Bank, GNI per capita, PPP (current international \$) 2018, [url](#)

<sup>278</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>279</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

Cost of treatment <sup>279</sup>	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
one private hospital but without permanent specialists in DRC)					
Electrocardiogram (ECG)	USD 10-30	USD 10-30	USD 30-150	USD 30-150	None
Ultrasound of the heart (= echocardiography = echocardiogram = TTE)	USD 50-100	USD 50-100	USD 50-100	USD 70-100	None
Holter monitor/ ambulatory ECG device (cardiology)	USD 100-200	USD 100-200	USD 100-200	USD 100-400	None
<b>Treatment in case of myocardial infarction</b>					
Cardiac catheterisation	Service not available	Service not available	Service not available	Service not available	
Coronary artery bypass grafting (CABG), Bypass	Service not available	Service not available	Service not available	Service not available	
PTCA/PCI ; coronary angioplasty, including follow-up	Service not available	Service not available	Service not available	Service not available	
<b>Treatment in case of severe heart rhythm disorder</b>					
Placement of pacemaker*	Service periodically available when international doctors visit	Service periodically available when international doctors visit	Service periodically available when international doctors visit USD 2 500	Service periodically available when international doctors visit USD 2 500	None
Maintenance and follow-up of pacemaker	Service not available	Service not available	Service not available	Service not available	None
Placement of ICD (Implantable Cardioverter Defibrillator)	Service not available	Service not available	Service not available	Service not available	None
Follow up of ICD by Cardiologist	Service not available	Service not available	Service not available	Service not available	None



\* There are not currently any specialists based in DRC able to perform these procedures. Treatment can only be provided by visiting international doctors.<sup>280</sup>

## 9.4 Cost of Medication

Patients often have poor adherence to treatments, particularly for chronic conditions like those related to CVD.<sup>281</sup> This is due to prohibitive costs and lack of availability of key medications.<sup>282</sup>

The price of medications was collected from eight registered pharmacies based in Kinshasa.<sup>283</sup> Medicines which are only available in the informal market have not been included.

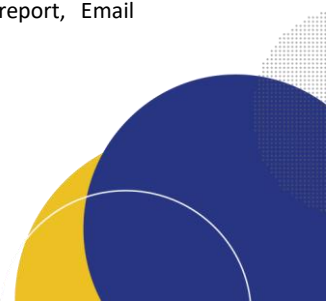
Drug name	Available in DRC	Form	Price per box	Is the drug included on national essential drugs lists?
<b>Anti-hypertensive:</b>				
Perindopril	Yes	Tablet	USD 15 (5 mg, 30 units per box) USD 32 (10 mg, 30 units per box)	No
Enalapril	Yes	Tablet	USD 8 (5 mg 30 units per box) USD 11 (20 mg, 28 units per box)	Yes
Lisinopril	Yes	Tablet	USD 18 (20 mg, 28 units per box) USD 9 (5 mg, 28 units per box)	No
Bisoprolol	Yes	Tablet	USD 5 (2.5 mg, 30 units per box) USD 12 (10 mg, 30 units per box)	No
Metoprolol	No	-	-	-
Propranolol	Yes	Tablet	USD 37.5 (160 mg, 28 units per box) USD 19 (80 mg, 28 units per box) USD 9 (40 mg, 28 units per box)	No
Carvedilol	Yes	Tablet	USD 9.5 (6.25 mg, 56 units per box). USD 32(25 mg, 30 units per box)	No
Atenolol	Yes	Tablet	USD 12.5 (100 mg, 30 units per box) USD 7(50 mg, 30 units per box)	Yes
Indapamide	Yes	Tablet	USD 11(1.5 mg, 20 units per box) USD 9 (2.5 mg, 30 units per box)	No
Furosemide	Yes	Tablet	USD 9 (40 mg, 30 units per box) USD 28.5 (10 mg, 30 units per box)	Yes

<sup>280</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020.

<sup>281</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020.

<sup>282</sup> Please refer to [chapter 4](#) for further details on the pharmaceutical sector

<sup>283</sup> Please refer to the Introduction for further details on the methodology of price data collection





Drug name	Available in DRC	Form	Price per box	Is the drug included on national essential drugs lists?
Torsemide	Yes	Tablet	USD 13 (10 mg, 30 units per box) USD 11 (5 mg, 30 units per box)	No
Bumetanide	No	-	-	No
Eplerenone	No	Tablet	USD 26 (25 mg, 30 units per box)	No
Spironolactone	Yes	Tablet	USD 11 (25 mg, 30 units per box) USD 15 (50 mg, 30 units per box) USD 19 (100 mg, 30 units per box)	Yes
Hydrochlorothiazide	Yes	Tablet	USD 14 (25 mg, 30 units per box) USD 19 (50 mg, 30 units per box) USD 20 (100 mg, 30 units per box)	Yes
Lisinopril + Hydrochlorothiazide (combination)	Yes	Tablet	USD 20 (20 mg Lisinopril/12.5 hydro, 30 units per box)	No
Enalapril + Hydrochlorothiazide (combination)	Yes	Tablet	USD 12.5 (20 mg/12.5 mg, 30 units per box)	No
Nifedipine	Yes	Tablet	USD 21 (30 mg, 30 units per box)	No
Losartan	Yes	Tablet	USD 11 (50 mg, 30 units per box) USD 15 (100 mg, 30 units per box)	No
Valsartan	Yes	Tablet	USD 37.5 (160 mg, 30 units per box) USD 30.5 (80 mg, 30 units per box)	No
Olmesartan	Yes	Tablet	USD 10.5 (40 mg, 28 units per box) USD 16.5 (80 mg, 28 units per box) USD 26 (12.5 mg, 28 units per box) USD 32 (12.5 mg, 28 units per box) USD 40 (25 mg, 28 units per box) USD 45 (25 mg, 28 units per box)	No
Telmisartan	Yes	Tablet	USD 23 (40 mg, 30 units per box) USD 25 (80 mg, 30 units per box)	No
Candesartan	Yes	Tablet	USD 28 (160 mg, 28 units per box) USD 30 (80 mg, 28 units per box) USD 24 (40 mg, 28 units per box)	No

Drug name	Available in DRC	Form	Price per box	Is the drug included on national essential drugs lists?
Irbesartan	Yes	Tablet	USD 15 (150 mg, 30 units per box) USD 17 (300 mg, 30 units per box)	No
Amlodipine	Yes	Tablet	USD 16.5 (10 mg, 30 units per box) USD 25 (5 mg, 30 units per box)	Yes
Lercanidipine	Yes	Tablet	USD 47 (20 mg, 28 units per box) USD 24.5 (10 mg, 28 units per box)	No
Amlodipine + Valsartan + Hydrochlorothiazide	Yes	Tablet	USD 45 (160 mg, 5 units per box) USD 65 (160 mg, 10 units per box)	No
Urapidil	Yes	Tablet	USD 27 (30 mg, 30 units per box). USD 38 (60 mg, 30 units per box)	No
Ketanserine	No	-	-	-
Doxazosin	Yes	Tablet	USD 50 (4 mg, 28 units per box) USD 23 (4 mg, 20 units per box) USD 15 (2 mg, 28 units per box)	No
<b>Antiplatelet aggregation:</b>				
Aspirin	Yes	Tablet	USD 12 (500 mg, 100 units per box)	Yes
Ticagrelor	No	-	-	-
Carbasalate calcium	No	-	-	-
Prasugrel	No	-	-	-
Dipyridamole	No	-	-	-

## 9.5 NGOs

There is a significant presence of national and international NGOs integrated into the health sector across DRC.<sup>284</sup> However, most of these do not focus specifically on CVD.<sup>285</sup>

<sup>284</sup> Barbelet, V. et al., Local Humanitarian Action in the Democratic Republic of Congo, March 2019, [url](#).pp.7

<sup>285</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020



The Belgian NGO Chaîne de l'Espoir, is one of particular importance for CVD service provision.<sup>286</sup> The NGO supports capacity strengthening by bringing international cardiac surgeons to provide specialised services and training to Kinshasa University Clinic (Clinique Universitaire de Kinshasa) and Ngaliema Clinic.<sup>287</sup> The organisation focuses specifically on providing treatments to children.<sup>288</sup>

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<sup>286</sup> Chaîne de l'espoir- Belgique, n.d, [url](#)

<sup>287</sup> Chaîne de l'espoir- Belgique, n.d, [url](#)

<sup>288</sup> Chaîne de l'espoir- Belgique, n.d, [url](#)

# 10 Diabetes

## 10.1 General Information

### 10.1.1 Epidemiological context

Epidemiological data on diabetes in DRC is very limited as there is absence of a national monitoring system or protocols. The International Diabetes Federation estimates that the population prevalence of combined type 1 and type 2 diabetes in DRC is 4.8%. These estimates are based on small-scale studies and comparative countries from which data has been extrapolated and modelled.<sup>289</sup> Based on this, the prevalence of diabetes in DRC is almost half of the estimated global prevalence, which stands at 8.5%.<sup>290</sup> However, there is evidence that the prevalence in cities may be notably higher. A screening campaign in Kinshasa in 2018 estimated the prevalence to be 15.5% of the adult population.<sup>291</sup>

The proportion of undiagnosed cases in DRC is very high. In 2019, it was estimated that there were 1 230 000 undiagnosed cases of diabetes with 28 382 diabetes-related deaths.<sup>292</sup> The mortality rate for people with diabetes is high; most people only survive five years after the diagnosis of diabetes.<sup>293</sup>

### 10.1.2 Strategy and policies for treatment and management of diabetes

The National Health Development Plan 2019-2022 (Plan National de Développement Sanitaire, PNDS) includes the screening and treatment of diabetes among the Essential Package of Activities for Hospitals.<sup>294,295</sup> According to the PNDS, primary care facilities, such as health posts and health centres, should, subject to supply chain capacity, be able to conduct diagnostic tests using a glucometer to measure blood-glucose levels and reactive strips for urine analysis.<sup>296</sup>

There is evidence that a more detailed strategy or national programme to address diabetes has been developed (known as the Programme National de Lutte Contre le diabète).<sup>297</sup> However, a copy of the national programme was not made available for review.

### 10.1.3 Healthcare provisions for treatment and management of diabetes

Diabetes treatments available from health centres and provincial hospital include lifestyle consultations, risk factor monitoring and dispensing of medications such as insulin.<sup>298</sup> In principle, these services are available at health centres and provincial hospitals across the country; however, this is dependent on the availability of diagnostic tests and medicines as described below. There are very limited specialised care services available in provincial secondary or tertiary facilities. Provincial

<sup>289</sup> International Diabetes Federation, IDF Atlas 9<sup>th</sup> edition, 2019, [url](#), p. 136

<sup>290</sup> WHO, World Health Organization, Diabetes Key Facts, June 2020, [url](#)

<sup>291</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 21

<sup>292</sup> International Diabetes Federation, IDF Atlas 9<sup>th</sup> edition, 2019, [url](#), pp.136 -137

<sup>293</sup> T1 International, Global Type 1 Map Democratic Republic of Congo, n.d, [url](#)

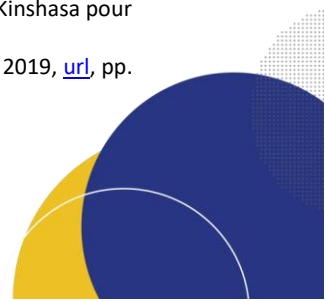
<sup>294</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 87-94

<sup>295</sup> Further details on the Essential Package of Activities included in [chapter 2](#)

<sup>296</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 87-94

<sup>297</sup> Actualite.CD, RDC/Covid-19 : une campagne de dépistage massif du diabète et de l'hypertension prévue à Kinshasa pour réduire le risque de décès, September 2020, [url](#)

<sup>298</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Sante Publique de Kinshasa, April 2019, [url](#), pp. 252-255



hospitals often face significant infrastructure challenges and lack a continuous supply of electricity and water.<sup>299</sup>

Specialised services, such as consultations with trained specialists or specialised surgeries, are almost exclusively provided in Kinshasa.<sup>300</sup> Hospitals which provide specialised services for diabetes include:

- Public sector:<sup>301</sup>
  - Kinshasa University Clinic (Clinique Universitaire de Kinshasa)
  - Kinshasa General Hospital (Hôpital Général de Kinshasa)
- Private sector (for profit):<sup>302</sup>
  - HJ Hospital Kinshasa (HJ Hôpitaux Kinshasa). The HJ Hospitals also have facilities in Lubumbashi and Goma.<sup>303</sup>
  - Diamant Medical Centre (Centre Médical Diamant)<sup>304</sup>

Medical facilities which offer specialised eye care for diabetic retinopathy include:<sup>305</sup>

- Public:
  - St Joseph’s Hospital Kinshasa (Hôpital St Joseph)
- Private:
  - Vi-zion Ophthalmology Clinic (Vi-zion Clinique D’Ophthalmologie)<sup>306</sup>

## 10.2 Access to Treatment

Access to healthcare in DRC is very limited, particularly for specialised care. With regards to diabetes, there is a significant treatment gap, particularly for patients with type 1 diabetes.<sup>307</sup> Factors which contribute to low coverage of healthcare include poor availability of diagnostic and treatment interventions in health facilities. A representative sample of health centres was reviewed in 2017 and 2018 to determine the availability of medicines and diagnostic tests.<sup>308</sup> The study found that only 6 in 10 health facilities had diagnostic tests to conduct glycaemic testing at the time of the assessment.<sup>309</sup> This varied by type of health facility, with only 47% of health centres able to test for diabetes compared to 78% of hospitals. A substantial regional variation was also recorded. The lowest availability of diagnostic services (6% of health facilities) was recorded in the central-south western

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<sup>299</sup> Sion, M. et al., Global Health: Science and practice, A Resource Planning Analysis of District Hospital Surgical Services in the Democratic Republic of the Congo, 2015, [url](#), pp.56

<sup>300</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>301</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>302</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>303</sup> HJ Hospital, n.d, [url](#)

<sup>304</sup> Centre Medical Diamant, n.d, [url](#)

<sup>305</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>306</sup> Vi-Zion MD, Clinique d’ophtalmologie, n.d, [url](#)

<sup>307</sup> Muyer, et al., Mortality of young patients with diabetes in Kinshasa, DR Congo, Diabetic Medicine, April 2010, [url](#), p. 405

<sup>308</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, April 2019, Ecole de Santé Publique de Kinshasa, [url](#), pp. 252-255

<sup>309</sup> Availability of diagnostic services varied provincially and ranged from 6% in Lomami to 95% in Bas-Uele

province of Lomami. In contrast, 95% of health facilities in the northern province of Bas-Uele had diagnostic tests available.<sup>310</sup>

Essential medicines for diabetes, including insulin, were available in approximately 10% of health centres. As with diagnostic test, the availability of insulin varied by type of health facility and province. Insulin was available in only 9% of health centres assessed compared to 55% of hospitals. A similar provincial variation in insulin availability was reported. Health facilities in the provinces of Lomami and Kasai Oriental had the lowest availability of insulin at only 5% of health facilities. In contrast, 69% of facilities in Nord-Ubangi had insulin in stock.<sup>311</sup>

As a result of poor availability of diagnostic and treatment resources, patients are required to travel to provincial hospitals where diagnostic and treatment resources are more readily available.<sup>312</sup> As the majority of the population lives in rural settings, the distance to these health facilities can be significant.<sup>313</sup>

The variation in stock availability in rural health facilities compared to urban is significant; 77% of health facilities in urban areas were equipped to provide diabetes services, compared to 40% of health facilities in rural areas.<sup>314</sup> Most specialist services are provided in university hospitals located in urban centres.<sup>315</sup>

Lack of community awareness regarding diabetes and related risk factors reduces health-seeking behaviours and contributes to late presentation at clinics.<sup>316</sup> Other factors limiting access to treatment include the cost of care (discussed below) and lack of affordable transport. A lack of transport facilities particularly affects access to emergency care during diabetes ketoacidosis, a serious complication associated with poorly managed blood-glucose levels.<sup>317</sup>

### 10.3 Cost of Treatment

There are no financial support programmes for the treatment of diabetes.<sup>318</sup> The vast majority of household healthcare spending is through out-of-pocket payments at the point of care, which creates a significant barrier.<sup>319</sup> For the majority of the population, treatments beyond primary care consultations are not economically accessible.<sup>320</sup>

Late presentation at a health facility means that patients are often diagnosed during periods of extreme ill health resulting from unmanaged blood sugar levels.<sup>321</sup> As a result, during diagnosis

<sup>310</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), pp. 252-255

<sup>311</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), pp. 252-255

<sup>312</sup> T1 International, Global Type 1 Map Democratic Republic of Congo, n.d, [url](#)

<sup>313</sup> CIA, Central Intelligence Agency, World Factbook, September 2020, [url](#)

<sup>314</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), pp. 252-255

<sup>315</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>316</sup> Katchunga, P, et al., Connaissances de la population générale sur l'hypertension artérielle et le diabète sucré au Sud-Kivu, République Démocratique du Congo, Revue d'épidémiologie et de santé publique, March 2012, [url](#), p. 141

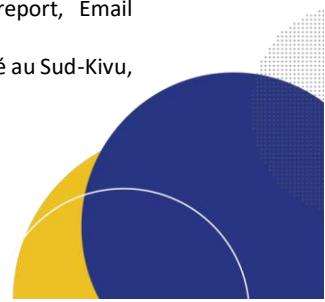
<sup>317</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>318</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>319</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, Nov 2018, [url](#), p. 41

<sup>320</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>321</sup> Katchunga, P, et al., Connaissances de la population générale sur l'hypertension artérielle et le diabète sucré au Sud-Kivu, République Démocratique du Congo, Revue d'épidémiologie et de santé publique, March 2012, [url](#), p. 141



patients are typically admitted to hospital for approximately 10 days. The cost of admission ranges from USD 50-100.<sup>322</sup> The average annual income of USD 1 080 equates to USD 90 per month, making hospital healthcare prohibitively expensive for the majority of the population.<sup>323</sup>

The cost of inpatient care is more expensive in private hospitals when compared to public facilities. The increased price relates primarily to the cost of the room, rather than consultations and tests. The prices below were gathered from a range of clinics based in Kinshasa and provide an indication of the cost of healthcare services. The total costs incurred by patients can be approximated by summing all relevant services. All medications incur supplementary charges. Of note, inpatient costs are not inclusive of food.<sup>324</sup>

Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
<b>Clinical admission</b>					
Admittance in internal or endocrinology department (daily rates)	USD 10-20	USD 20-30	USD 30	USD 30	None
<b>Specialist consultations</b>					
Internal specialist (internist)	USD 10	USD 10	USD 50	USD 50	None
Ophthalmologist	USD 10	USD 10	USD 30	USD 30	None
Endocrinologist	USD 10	USD 10	USD 60	USD 60	None
General practitioner	USD 5	USD 5	USD 20	USD 20	None
Neurologist	USD 15-25	USD 15-25	USD 50	USD 50	None
<b>Devices for measuring blood glucose</b>					
Blood glucose meter for self-use by patient	USD 4	USD 6	USD 15	USD 15	None
Blood glucose self-test strips for use by patient	USD 2.5	USD 4	USD 15	USD 15	None
<b>Laboratory research</b>					
Blood glucose (including HbA1C/ glyc.Hb)	USD 16	USD 24	USD 35	USD 35	None

<sup>322</sup> T1 International, Global Type 1 Map Democratic Republic of Congo, n.d, [url](#)

<sup>323</sup> World Bank, Data Bank, GNI per capita, PPP (current international \$) 2018, [url](#); United Nations Development Programme, Human Development Report 2016, 2016, [url](#)

<sup>324</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
Renal/ kidney function (creatinine, urea, proteinuria, sodium, potassium levels)	USD 27	USD 41	USD 170	USD 170	None
<b>Treatment</b>					
Laser treatment of diabetic retinopathy	Not available	Not available	USD 200	USD 200	

## 10.4 Cost of Medication

Patients often have poor adherence to treatments, particularly for chronic conditions like diabetes.<sup>325</sup> This is due to prohibitive costs and lack of availability of key medications.<sup>326</sup>

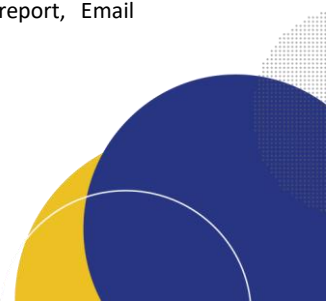
The price of medications was collected from eight registered pharmacies based in Kinshasa.<sup>327</sup> Medicines which are only available in the informal market have not been included.

Drug name	Available in DRC?	Form	Price per box	Is the drug typically included on national essential drugs medicines lists?
<b>Oral Antidiabetics</b>				
Liraglutide	No	-	-	No
Exenatide	No	-	-	No
Lixisenatide	No	-	-	No
Metformin	Yes	Tablet	USD 1 (850 mg, 10 tablets per box) USD 1.5 (500 mg, 10 tablets per box)	Yes
Acarbose	No	-	-	-
Canagliflozin	No	-	-	-
Dapagliflozin	No	-	-	-
Empagliflozin	No	-	-	-
Glibenclamide	Yes	Tablet	USD 15 (5 mg, 20 tablets per box)	Yes

<sup>325</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>326</sup> Please refer to [chapter 4](#) for further details on the pharmaceutical sector

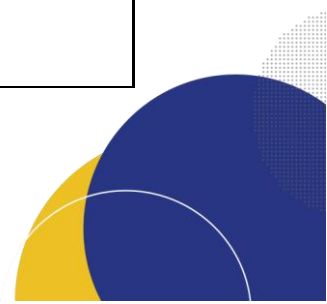
<sup>327</sup> Please refer to the Introduction for further details on the methodology of price data collection





Drug name	Available in DRC?	Form	Price per box	Is the drug typically included on national essential drugs medicines lists?
Gliclazide	Yes	Tablet	USD 6 (40 mg, 30 tablets per box) USD 10 (80 mg, 30 tablets per box)	No
Glimepiride	Yes	Tablet	USD 5 (1 mg, 30 tablets per box) USD 10 (2 mg, 30 tablets per box) USD 19.5 (4 mg, 30 tablets per box)	No
Linagliptin	No	-	-	No
Pioglitazone	No	-	-	No
Repaglinide	Yes	Tablet	USD 8 (1 mg, 30 units per box) USD 15 (2 mg, 30 tablets per box)	No
Saxagliptin + Metformin	No	-	-	No
Saxagliptin Hydrochloride	No	-	-	No
Sitagliptin	No	-	-	No
Tolbutamide	No	-	-	No
Vildagliptin	No	-	-	No
<b>Insulins</b>				
Subcutaneous infusion, by self-carried pump	No	-	-	No
Intermediate acting [12-24 hours]; insulin NPH/isophane like Insulatard®	Yes	Injection	USD 4 (each box contains 100 pens of 5 ml, 100U/mL) USD 7 (each box contains 100 pens of 5 ml, 400U/mL)	Yes
Long acting [24 hours]; insulin detemir	Yes	Injection (insulin pens)	USD 12 (each box contains 5 pens of 5 ml, 100U/mL)	No

Drug name	Available in DRC?	Form	Price per box	Is the drug typically included on national essential drugs medicines lists?
Long acting [24 hours]; insulin glargine like Lantus®	Yes	Injection	USD 12 (each box contains 5 pens of 5 ml, 100U/mL)	No
Premixed: combination of regular (short acting) and insulin isophane (intermediate acting) like Mixtard®	Yes	Injection	USD 4 (each box contains 100 pens of 5 ml, 100U/mL) USD 7 (each box contains 100 pens of 5 ml, 400U/mL)	Yes
Premixed: aspart (rapid acting) and aspart protamine (intermediate acting) like ®Novomix	Yes	Injection	USD 12 (each box contains 5 pens of 5 ml, 100U/mL)	No
Premixed: combination of lispro (rapid acting) and insulin lispro protamine (intermediate acting)	Yes	Injection	USD 12 (each box contains 5 pens of 5 ml, 100U/mL)	No
Premixed: NPH 70/30 combination of rapid and intermediate acting insulin	Yes	Injection	USD 12 (each box contains 5 pens of 5 ml, 100U/mL)	No
Combination of insulin degludec (extra-long acting) and insulin aspart (rapid acting)	Yes	Injection	USD 15 (each box contains 5 pens of 5 ml, 100U/mL)	No
Rapid acting [2-5 hours]; insulin aspart like ®Novorapid	Yes	Injection	USD 12 (each box contains 5 pens of 5 ml, 100U/mL)	No
Rapid acting [2-5 hours]; insulin glulisine	No	-	-	No
Rapid acting [2-5 hours]; insulin lispro	Yes	Injection	USD 12 (each box contains 5 pens of 5 ml, 100U/mL)	No
Short acting [7-8 hours]; bovine, porcine or human regular insulin like ®Actrapid	Yes	Injection	USD 3.75 (each box contains 5 pens of 5 ml, 100U/mL) USD 7 (each box contains 5 pens	Yes



Drug name	Available in DRC?	Form	Price per box	Is the drug typically included on national essential drugs medicines lists?
			of 5 ml, 400U/mL)	
Ultra-long acting [42 hours]; insulin degludec	No	-	-	No
<b>Others</b>				
Glucagon	Yes	Injection	USD 35.85 (1 mg/ml, 1 unit per box)	Yes

## 10.5 NGOs

There are some examples of diabetes projects supported by NGOs in DRC.<sup>328</sup> However, these projects are localised and not integrated into the health system. For instance, programme and research reports indicate that in 2017, Médecins Sans Frontières (MSF) was supporting an integrated diabetes clinic in Mweso Hospital in eastern Democratic Republic of Congo.<sup>329</sup> However, there is an absence of data on whether the hospital continues to be supported by MSF for diabetes care.

The World Diabetes Foundation has delivered a variety of health system capacity strengthening and community outreach programmes mostly in Kinshasa and Eastern provinces.<sup>330</sup> These programmes have varied in length from five years of programme implementation to one year of implementation.<sup>331</sup>

<sup>328</sup> World Diabetes Foundation, Improving diabetes care WDF05-128, n.d, [url](#); MSF, Médecins Sans Frontières, Evaluating the effectiveness and burden of diabetes care in a complex humanitarian emergency setting in Mweso, North Kivu, Democratic Republic of the Congo (DRC), 2015, [url](#)

<sup>329</sup> Murphy, A., et al., Diabetes care in a complex humanitarian emergency setting: a qualitative evaluation, Health services Research, June 2017, [url](#), p. 2; MSF, Médecins Sans Frontières, Evaluating the effectiveness and burden of diabetes care in a complex humanitarian emergency setting in Mweso, North Kivu, Democratic Republic of the Congo (DRC), 2015, [url](#)

<sup>330</sup> World diabetes Foundation, n.d, [url](#)

<sup>331</sup> World diabetes Foundation, Integrated diabetes care, project timeline 2010 – 2015, n.d, [url](#); World diabetes Foundation, Sensitisation and Education Campaign on Diabetes in the Bukavu Health Care District, project timeline 2013 – 2014, n.d, [url](#)

# 11 Haematology: Anaemia and Blood Clotting Disorders

## 11.1 General Information

### 11.1.1 Epidemiological context

Haematological disorders are diseases which affect the blood or blood production.<sup>332</sup> This chapter will focus on sickle cell disease, anaemia and haemophilia.

#### Sickle cell disease

Global prevalence data shows that DRC has one of the highest burdens of sickle cell disease in the world.<sup>333</sup> Population prevalence data is limited; however, studies estimate that approximately 30% of the population carries the sickle cell trait.<sup>334</sup> There is evidence that the sickle cell trait is protective against malaria and therefore particularly common in regions with a high prevalence of malaria.<sup>335</sup> However, inheriting two copies of the sickle cell trait is associated with severe ill health and mortality.<sup>336</sup> This form of sickle cell diseases is known as sickle cell anaemia. At present, DRC does not conduct routine childhood screening for sickle cell anaemia, as a result national prevalence data is limited.<sup>337</sup> However, regional estimates have shown the prevalence of new-borns born with sickle cell anaemia ranges from 0.96 %<sup>338</sup> to 1.4 %.<sup>339</sup> This equates to approximately 30 000 to 40 000 new-borns each year.<sup>340</sup> No data was found on the outcomes of children born with sickle cell disease in DRC. Regional studies on outcomes from across sub-Saharan Africa suggest that sickle cell anaemia is associated with very high rates of childhood mortality with estimates stating that between 50% and 90% of children die before the age of five.<sup>341</sup>

#### Iron deficient anaemia

The prevalence of iron deficient anaemia is high.<sup>342</sup> Overall, approximately 60% of children under 5 and 40% of women aged between 15 and 49 are affected by anaemia.<sup>343</sup> Iron deficient anaemia is particularly harmful to these groups given its association with impaired brain development, increased

<sup>332</sup> Nature Research, Haematological diseases definition, n.d [url](#)

<sup>333</sup> Piel, F. et al., Global burden of sickle cell anaemia in children under five, 2010-2050: modelling based on demographics, excess mortality, and interventions, Plos Med, July 2013, [url](#), p. 4

<sup>334</sup> Aloni, M. et al., Acute Crises and Complications of Sickle Cell Anaemia Among Patients Attending a Paediatric Tertiary Unit in Kinshasa, Democratic Republic Of Congo, Haematology reports, June 2017, [url](#), p. 1

<sup>335</sup> Piel, F. et al., Global distribution of the sickle cell gene and geographical confirmation of the malaria hypothesis, Nature Communications, November 2010, [url](#), p. 1

<sup>336</sup> Wastnedge, E. et al., The global burden of sickle cell disease in children under five years of age: a systematic review and meta-analysis, December 2017, [url](#), pp. 5-7

<sup>337</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>338</sup> Agasa, B. et al., Prevalence of sickle cell disease in a north-eastern region of the Democratic Republic of Congo: what impact on transfusion policy?, February 2010, [url](#), p. 1

<sup>339</sup> Tshiolo, L. et al., Neonatal screening for sickle cell anaemia in the Democratic Republic of the Congo: experience from a pioneer project on 31 204 new-borns, Journal of Clinical Pathology, January 2009 [url](#), p. 1

<sup>340</sup> Aloni, M. et al., Acute Crises and Complications of Sickle Cell Anaemia Among Patients Attending a Paediatric Tertiary Unit in Kinshasa, Democratic Republic Of Congo, Haematology reports, June 2017, [url](#), p. 1

<sup>341</sup> Grosse, S. et al., Sickle Cell Disease in Africa, American Journal of Preventative Medicine, December 2011, [url](#), p. 1

<sup>342</sup> DHA, Demographic and Health Survey 2013 – 2014 Democratic Republic of Congo, 2014 [url](#), p. 12

<sup>343</sup> DRC National Anaemia Profile, 2014, [url](#), p. 1

risk of pre-term delivery and low birth weight delivery.<sup>344</sup> Lack of iron consumption from food the main cause of iron deficient anaemia in DRC.<sup>345</sup> DRC is faced with the second largest hunger crisis in the world with over 70% of the population experiencing chronic food insecurity and poor dietary diversity.<sup>346</sup>

## Haemophilia

Haemophilia is a condition which impairs the body's ability to create blood clots to stop bleeding. There are two types of haemophilia known as haemophilia A and B. These differ with respect to the missing blood clotting factors. Data on the prevalence of haemophilia A and B in DRC is extremely limited.<sup>347</sup> The World Federation of Haemophilia (WFH), an international not-for-profit organisation, estimates that haemophilia is rare, with 1 child in 10 000 born with haemophilia A and 1 in 50 000 born with haemophilia B.<sup>348</sup> When applied to population demographic data for DRC, these estimates suggest that there are approximately 8 400 people living with haemophilia A and 1 600 with haemophilia B.<sup>349</sup>

### 11.1.2 Strategy and policies for treatment and management of haematological disorders

There is no overarching national strategy for the management of haematological disorders.<sup>350</sup> There is mention of sickle cell disease within the National Health Development Plan (Plan National de Développement Sanitaire 2019-2022, PNDS); however, this only extends to saying that the treatment of sickle cell anaemia is not yet integrated into essential primary care services.<sup>351</sup> There is evidence that a national programme specifically aimed at addressing sickle cell anaemia (Programme National de Lutte contre la Drepanocytose), has been developed by the Ministry of Health.<sup>352</sup> However, a copy of the national programme was not made available for review.

The PNDS does not comment on the other haematological disorders included in this report.<sup>353</sup> However, there is a significant focus given to addressing malnutrition which, as described, is the main underlying cause of iron deficient anaemia in DRC.<sup>354</sup> A national strategy to strengthen nutritional security is likely to have a positive impact on iron deficient anaemia.<sup>355</sup>

Broadly, there is an absence of national guidelines for the treatment of haematological diseases. As such, treatment and care pathways are not standardised and as a result, quality of care is highly variable.<sup>356</sup>

<sup>344</sup> DRC National Anaemia Profile, 2014, [url](#), p. 2

<sup>345</sup> Messina, J. et al., Spatial and social factors drive anaemia in Congolese women, November 2013, [url](#), p. 2

<sup>346</sup> World Food Programme, Democratic Republic of Congo, 2019, [url](#)

<sup>347</sup> EASO3, Deputy Manager of a priority national programme. Responsible for national implementation of the strategy, Email Correspondence, August 2020

<sup>348</sup> World Federation of Haemophilia, Annual Global Survey 2018, October 2019, [url](#)

<sup>349</sup> Based on population estimates from CIA, Central Intelligence Agency, World Factbook, July 2020, [url](#)

<sup>350</sup> EASO3, Deputy Manager of a priority national programme. Responsible for national implementation of the strategy, Email Correspondence, August 2020

<sup>351</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé République Démocratique du Congo, November 2018, [url](#) pp. 22

<sup>352</sup> Foundation Pierre Fabre, n.d, [url](#)

<sup>353</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)

<sup>354</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#) pp. 15-16

<sup>355</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>356</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

### 11.1.3 Healthcare provisions for treatment and management of haematological disorders

The availability of treatments for haematological disorders is very limited.<sup>357</sup>

The PNDS places an emphasis on strengthening primary care services. Treatments for haematological disorders available at a primary care level includes nutritional consultations for those suffering from nutritional anaemia and dispensing of basic medication.<sup>358</sup>

Specialist treatments for SCD, including blood transfusions, are available in a small number of hospitals in large urban areas, notably Lubumbashi<sup>359</sup> and Kinshasa.<sup>360</sup> This includes a specialist sickle cell treatment centre in Monkole Hospital (Centre Hospitalier Monkole)<sup>361</sup> in Kinshasa.<sup>362</sup> There are no specialist treatment centres for haemophilia but some treatments, such as blood transfusions, can be treated in the same centres as sickle cell disease.<sup>363</sup> More details on the blood transfusion system can be found in 0.

### 11.1.4 Human resources

There is a notable lack of medical specialists trained on the management of haematological disorders. In a study of 460 physicians treating patients with SCD, fewer than 1% had ever received specific training.<sup>364</sup> Formal medical training on management of blood clotting diseases is even more limited.<sup>365</sup> WFH delivers important capacity training for physicians to improve treatment of those with haemophilia. Physicians from DRC are not yet well integrated into the training programme, as none of the 42 healthcare professionals from 18 African countries trained between 2016 and 2018 were from DRC.<sup>366</sup>

## 11.2 Access to Treatment

Access to healthcare in DRC is limited, particularly for specialised care such as the treatment of haematological disorders.<sup>367</sup> Newborn screening programmes are poorly integrated into maternity

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<sup>357</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>358</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>359</sup> Lubumbashi is DRC's second largest city, located in the South East

<sup>360</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>361</sup> Foundation Pierre Fabre, Support for the sickle cell treatment unit at the Centre Hospitalier Monkole, n.d, [url](#)

<sup>362</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>363</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>364</sup> Mbiya, B. et al., Sickle cell disease in the Democratic Republic of Congo: Assessing Physicians' Knowledge and Practices, Tropical Medicine and Infectious Disease, July 2020, [url](#), p. 1

<sup>365</sup> EASO3, Deputy Manager of a priority national programme. Responsible for national implementation of the strategy, Email Correspondence, August 2020

<sup>366</sup> Diop, S., et.al., Improving access to haemophilia care in sub-Saharan Africa by capacity building, Blood advances, December 2019 [url](#), p. 3

<sup>367</sup> EASO3, Deputy Manager of a priority national programme. Responsible for national implementation of the strategy, Email Correspondence, August 2020



services.<sup>368</sup> As a result, haematological diseases are characterised by late presentation to health facilities and a notable treatment gap.<sup>369</sup>

### Sickle cell disease

A cause of the treatment gap arises from a lack of diagnostic and treatment availability at health facilities.<sup>370</sup> A representative sample of health facilities were reviewed in 2017 and 2018 to assess the availability of different essential services.<sup>371</sup> This review, by the USAID funded Demographic and Health Surveys (DHS) Program and Kinshasa School of Public Health, found that nationally, only 1% of health facilities offer diagnostic services for sickle cell anaemia. Disaggregation by type of health facility found that no health centres and only 4% of hospitals were equipped for diagnostic testing.<sup>372</sup> Attempts to scale-up testing of new-borns have mostly been delivered through pilot programmes in selected maternities.<sup>373</sup> Although these programmes have demonstrated a positive impact, they remain fragmented and lack national reach.<sup>374</sup>

Key treatments of sickle cell anaemia include prevention and prompt treatment of infections, pain relief, treatment with hydroxyurea to prevent sickle formation, blood transfusions and general regular monitoring by physicians.

### Iron deficient anaemia

Programmes to address iron deficient anaemia mostly focus on improving food security and nutritional diversity. Many of these programmes fall outside of the scope of the health system. From health facilities, community members may receive lifestyle consultations to increase iron consumption.<sup>375</sup>

### Haemophilia

First-line treatments for haemophilia include a number of medications.<sup>376</sup> In addition, poorly managed blood clotting disorders often require elective surgeries due to musculoskeletal complications.<sup>377</sup> These medications and surgeries are largely unavailable in DRC.<sup>378</sup>

Poor resourcing of health facilities affects access to healthcare for all the aforementioned haematological disorders. Other factors which limit access to treatment include the cost of care

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<sup>368</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>369</sup> Tshiolo, L , National Development of SCD Programmes in Congo DR, Conference Presentation, October 2016 [url](#)

<sup>370</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), pp. 42-43

<sup>371</sup> Study reviewed availability of services in a total of 1,380 Health Facilities proportionally distributed across provinces. This was carried out between November 2017 and April 2018.

<sup>372</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), pp. 42-43

<sup>373</sup> Tshiolo, L, Neonatal screening for sickle cell anaemia in the Democratic Republic of the Congo: experience from a pioneer project on 31 204 new-borns, Journal of Clinical Pathology, January 2009, [url](#), p. 1

<sup>374</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>375</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>376</sup> World Federation of Haemophilia, Guidelines for the Management of Haemophilia, 2020, [url](#), pp. 12-14

<sup>377</sup> World Federation of Haemophilia, Guidelines for the Management of Haemophilia, 2020, [url](#), p. 14

<sup>378</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020



(discussed below) and lack of affordable transport. A lack of transport facilities particularly affects access to emergency care during sickle cell crisis.<sup>379</sup>

Health services are available to all community members and there are no restrictions according to migration status. The only condition to access treatment is ability to pay.<sup>380</sup>

### 11.3 Cost of Treatment

There is no national risk-sharing mechanisms or national health insurance for haematological disorders.<sup>381</sup> As a result, the majority of households use out-of-pocket payments at the point of care. Specialist treatments are expensive and costs are prohibitive for the majority of the population.<sup>382</sup> As a result, most patients receive only basic interventions available from primary care facilities or pharmacies. These include simple pain relief and broad-spectrum antibacterial and antiviral medications.<sup>383</sup>

The cost of inpatient care is more expensive in private hospitals when compared to public facilities. The increased price relates primarily to the cost of the room, rather than consultations and tests. The prices below were gathered from a range of clinics based in Kinshasa and provide an indication of the cost of healthcare services. The total costs incurred by patients can be approximated by summing all relevant services. For instance, outpatient cardiac consultation would cost as a minimum USD 17 for admission as well as USD 10 for a consultation with a cardiologist. All medications incur supplementary charges. Of note, inpatient costs are not inclusive of food.<sup>384</sup>

Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
<b>Clinical admission</b>					
Haematology department (daily rates)	USD 25-30	USD 30-40	USD 50	USD 50	None
Paediatric department (daily rates)	USD 10-20	USD 20-30	USD 50-100	USD 50-100	None
Intensive care treatment (daily rate)	USD 15-25	USD 25-40	USD 100-300	USD 100-300	None
<b>Specialist Consultation</b>					
Haematologist	USD 10-15	USD 10-15	USD 40	USD 40	None

<sup>379</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>380</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>381</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>382</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 41

<sup>383</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>384</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
Paediatrician	USD 10	USD 10	USD 40	USD 40	None
<b>Laboratory tests and diagnostics</b>					
Complete Blood Count: e.g. Hb, WBC & platelets	USD 10	USD 15	USD 40	USD 40	None
Coagulation tests: e.g. prothrombin time (PT)	USD 55	USD 82	USD 60-90	USD 60-90	None
Serologic testing of blood types (A, B, O, rhesus, +/-)	USD 19	USD 29	USD 15	USD 15	None
Measuring blood oxygen/ arterial blood gas (Astrup)	USD 35	USD 35	USD 60	USD 60	None
<b>Treatments</b>					
Transfusion of erythrocytes/red blood cells	USD 20	USD 20	USD 75	USD 75	None
Blood transfusion (safe; e.g. checked for HIV and hepatitis B/C)	USD 18	USD 26	USD 75	USD 75	None
FFP (Fresh Frozen Plasma) replacements	Not available	Not available	Not available	Not available	None
Plasmapheresis	Not available	Not available	Infrequently available*	Infrequently available*	None
Platelets / thrombocytes transfusion	USD 100	USD 100	USD 225	USD 225	None
Clinical treatment in case of sickle cell crisis	USD 100-150/10 days	USD 200-300/10 days	USD 400-500/10 days	USD 400-500/10 days	None
Oxygen therapy with device like nasal catheter	-	USD 15-20/day	USD 30	USD 30	None
<b>Diagnostic imaging</b>					
Transcranial Doppler (TCD) to measure blood flow through brain's blood vessels.	Not available	Not available	USD 210	USD 210	None
Haematology: phlebotomy / venipuncture / blood collection	Not available	Not available	Not available	Not available	None

\*Only possible in one hospital but plasmapheresis machine is currently being repaired out of the country.

## 11.4 Cost of Medication

Patients often have poor adherence to treatments, particularly for chronic conditions like those related to CVD.<sup>385</sup> This is due to prohibitive costs and lack of availability of key medications.<sup>386</sup>

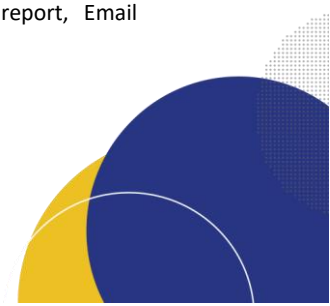
The price of medications was collected from eight registered pharmacies based in Kinshasa.<sup>387</sup> Medicines which are only available in the informal market have not been included.

Drug name	Available in DRC?	Form	Price per box	Is the drug included on lists like national essential drugs list?
<b>Haemostatics</b>				
Eltrombopag olamine	No	-	-	-
Romiplostim	No	-	-	-
Tranexamic acid	Yes	Tablet	USD 25 (250 mg, 50 units per box) USD 23 (500 mg, 20 units per box)	Yes
		Injection	USD 15 (16 (500 g/2 ml))	
Eptacog alfa ( = activated Recombinant factor VII a)	No	-	-	-
Octocog alfa	No	-	-	-
Moroctocog alfa	No	-	-	-
Desmopressin	Yes	Tablet	USD 45 (0.2 mg, 30 units per box)	No
Efmoroctocog alfa	No	-	-	-
Etamsylate	No	-	-	-
Factor VIII coagulation (clotting) factor	No	-	-	-
Factor IX coagulation (clotting) factor	No	-	-	-
Factor VIII + Von Willebrand coagulation (clotting) factor	No	-	-	-

<sup>385</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>386</sup> Please refer to [chapter 4](#) for further details on the pharmaceutical sector

<sup>387</sup> Please refer to the Introduction for further details on the methodology of price data collection



Drug name	Available in DRC?	Form	Price per box	Is the drug included on lists like national essential drugs list?
Von Willebrand coagulation (clotting) factor	No	-	-	-
<b>Against anaemia</b>				
Folic acid	Yes	Tablet	USD 5 (5 mg, 100 units per box)	Yes
Hydroxycarbamide or hydroxyurea (Hydrea)	Yes	Tablet	USD 13 (500 mg, 30 units per box)	No
Iron (oral/tablets)	No	-	-	-
Ferrous gluconate	No	-	-	-
Ferrous fumarate	No	-	-	-
Ferrous succinate	No	-	-	-
Ferrous sulphate + folic acid (vit B9)	Yes	Tablet	USD 9 (50 mg/350 mcg, 30 units per box)	No
<b>Iron injections</b>				
Ferric carboxymaltose (intravenous iron)	No	-	-	-
Iron(III) isomaltoside 1000 (intravenous iron - Diafer®/ Monofer®)	No	-	-	-
Iron dextran (injection/ intravenous)	No	-	-	-
Ferrioxidesaccharate (ferric saccharate-intravenous iron) - Venofer®	Yes	Capsule	USD 5 (200 mg, 10 units per box)	No
		Injection	30 USD (20 mg/ml)	
Iron dextran (injection/ intravenous)	No	-	-	-
<b>For chelation/elimination of metals/iron</b>				
Deferasirox	No	-	-	-
Deferiprone	No	-	-	-
Deferoxamine	No	-	-	-

## 11.5 NGOs

Of the haematological disorders, SCD has received relatively significant support from the NGO community. For example, the Pierre Fabre Foundation financed the specialist sickle cell unit in Monkole Hospital for a two-year period during 2011 and 2012.<sup>388</sup> More recently, the country's first lady Denise Nyakeru Tshisekedi, has been advocating for improved community sensitisation and health services for SCD. This has included making SCD a priority area for financial support from her foundation.<sup>389</sup>

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<sup>388</sup> Foundation Pierre Fabre, Support for the sickle cell treatment unit at the Centre Hospitalier Monkole, n.d., [url](#)

<sup>389</sup> Denise Nyakeru Tshisekedi Foundation, Projet de Lutte contre la Drepanocytose, n.d., [url](#)

# 12 Hepatitis B and C

## 12.1 General Information

### 12.1.1 Epidemiological context

Hepatitis is an inflammation of the liver which causes numerous health problems. Hepatitis B and C refer to the virus which causes the inflammation. Hepatitis B and C are chronic conditions which, if left untreated, can lead to liver cirrhosis or cancer.<sup>390</sup> Data on the prevalence of hepatitis B and C in DRC varies significantly as it is not routinely monitored.<sup>391</sup>

Hepatitis B is relatively widespread throughout the country and population age groups.<sup>392</sup> The Coalition for Global Hepatitis Elimination estimates that prevalence in DRC is approximately 4.25%, corresponding to 3 727 890 people living with this chronic infection.<sup>393</sup> This is below the regional prevalence estimates which stands at 6.2% of the adult population.<sup>394</sup> In 2019, there were an estimated 4,460 hepatitis B related deaths in DRC.<sup>395</sup> Key transmission routes include sexual transmission, vertical transmission from mother to child and infected blood transfusions.<sup>396</sup>

Hepatitis C is also relatively widespread in DRC. The prevalence is ranked as high/moderate and estimated at 3.26% of the population. In 2019, there were approximately 5 000 hepatitis C related deaths.<sup>397</sup> Key transmission routes for hepatitis C include inadequately sterilised medical equipment particularly syringes and infected blood transfusions. Key at risk population groups include people with diabetes, people with HIV and postpartum women.<sup>398</sup>

### 12.1.2 Strategies and policies for treatment and management of hepatitis

The Ministry of Health have not developed specific programmes to outline key priorities to address the burden of hepatitis B and C.<sup>399</sup> However, within the National Strategic Plan against HIV/AIDS (PSNHIV, Plan Stratégique National de Lutte Contre le VIH/SIDA 2018-2021), focus is given on hepatitis co-infection.<sup>400</sup> The PSNHIV includes among its key objectives the strengthening of screening and of treatment capacities for hepatitis in patients who are HIV positive.<sup>401</sup> In addition, the national cooperation strategy with the World Health Organization (Stratégie de Coopération de l’OMS avec le pays République Démocratique du Congo 2017–2021) sets hepatitis B and C prevention and

<sup>390</sup> WHO, World Health Organization, Hepatitis, n.d, [url](#)

<sup>391</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>392</sup> Shindano, T. et al., Hepatitis B virus infection in the Democratic Republic of Congo: a systematic review of prevalence studies (2000-2016), Journal of Public Health, January 2018, [url](#), p. 1

<sup>393</sup> Coalition for Global Hepatitis Elimination, Data Dashboards Democratic Republic of Congo, 2019, [url](#)

<sup>394</sup> World Health Organization, Fact Sheet Hepatitis B, July 2020, [url](#)

<sup>395</sup> Coalition for Global Hepatitis Elimination, Data Dashboards Democratic Republic of Congo, 2019, [url](#)

<sup>396</sup> Shindano, T. et al., Hepatitis B virus infection in the Democratic Republic of Congo: a systematic review of prevalence studies (2000-2016), Journal of Public Health, January 2018, [url](#), p. 1

<sup>397</sup> Coalition for Global Hepatitis Elimination, Data Dashboards Democratic Republic of Congo, 2019 [url](#)

<sup>398</sup> WHO, World Health Organization, Hepatitis C, n.d, [url](#)

<sup>399</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020.

<sup>400</sup> PSNHIV, Plan stratégique sectoriel santé de La lutte contre le vih/sida 2018-2021, Ministère de la Santé République Démocratique du Congo, April 2018 [no url], p. 7

<sup>401</sup> PSNHIV, Plan stratégique sectoriel santé de La lutte contre le vih/sida 2018-2021, Ministère de la Santé, République Démocratique du Congo, April 2018 [no url], p. 8

management as strategic priorities.<sup>402</sup> Lastly, the National Health Development Plan 2019-2022 (Plan National de Développement Sanitaire, PNDS) includes hepatitis B vaccinations among recommended routine childhood vaccinations.<sup>403</sup> However, there is no further reference to hepatitis B or C in the PNDS.<sup>404</sup>

### 12.1.3 Healthcare provisions for treatment and management of hepatitis

The PSNHIV is relatively well financed which has enabled some resource mobilisation for hepatitis healthcare activities. Beyond the PSNHIV, there has been little financing of hepatitis-related healthcare.<sup>405</sup>

The PNDS places an emphasis on strengthening primary care services.<sup>406</sup> In principle, basic services for hepatitis B and C, including diagnostic testing and medicines, can be received at primary care structures. However, accessibility and supply chain challenges, discussed below, reduce the extent to which these services are available.<sup>407</sup>

There are very limited specialised care services available in secondary or tertiary facilities. Elective surgeries are performed only in few specialist hospitals. With respect to complex care for liver damage, these are only available in a few specialist private facilities in Kinshasa.<sup>408</sup> The medical facilities include:<sup>409</sup>

- Public sector:
  - Kinshasa University Clinic (Clinique Universitaire de Kinshasa)
- Private sector (for profit):
  - HJ Hospitals Kinshasa (HJ Hôpitaux Kinshasa). The HJ Hospitals also have facilities in Lubumbashi and Goma.<sup>410</sup>
  - Diamant Medical Centre (Centre Médical Diamant)<sup>411</sup>
  - Medical Centre Kinshasa (Centre Médical de Kinshasa)<sup>412</sup>
    - Monkole Medical Centre (Centre Hospitalier Monkole)<sup>413</sup>
    - Clinique Marie Yvette<sup>414</sup>

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<sup>402</sup> WHO, World Health Organization, Stratégie de Coopération de l'OMS avec le pays République Démocratique du Congo 2017–2021, [url](#), p. 17

<sup>403</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo November 2018, [url](#), p. 91

<sup>404</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)

<sup>405</sup> EASO4, Medical Doctor and Monitoring and Evaluation officer in the Ministry of Health, Email Correspondence, August 2020.

<sup>406</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 4

<sup>407</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), p.42

<sup>408</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>409</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>410</sup> HJ Hospitals, n.d, [url](#)

<sup>411</sup> Centre Medical Diamant, n.d, [url](#)

<sup>412</sup> CMK, Centre Medical de Kinshasa, n.d, [url](#)

<sup>413</sup> Centre Hospitalier Monkole, n.d, [url](#)

<sup>414</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020





In general, those with the required financial resources travel internationally for all specialised care.<sup>415</sup>

## 12.2 Access to Treatment

It is estimated that the majority of those affected by hepatitis B and C are unaware of their infection status and are not receiving treatment.<sup>416</sup> As such, many of those infected develop liver cirrhosis and other complications.<sup>417</sup> Factors contributing to this treatment gap are many and include challenges to providing and accessing care.<sup>418</sup>

Challenges to providing services include limited health facility resources to carry out diagnostic and monitoring tests and provide treatment interventions.<sup>419</sup> Systematic screening for hepatitis is not performed within the population or at-risk groups, such as pregnant women. Primary healthcare workers are not adequately trained and equipped to diagnose and treat patients with chronic hepatitis B and C.<sup>420</sup>

Similarly, low access to healthcare for the population is rooted in numerous factors including lack of financial resources to pay for services and inaccessibility of clinics due to geographical spread of health centres.<sup>421</sup>

In the absence of a national programme to control hepatitis, there are no targeted programmes to reduce barriers to accessing care.<sup>422</sup> However, there are small localised trials which aim to pilot approaches to determine their effect and scalability.<sup>423</sup> Examples of these include reducing mother-child transmission of hepatitis B by integrating screening, treatment and immunisation programmes into existing vertical transmission programmes.<sup>424</sup>

## 12.3 Cost of Treatment

There are no financial support programmes for the treatment of hepatitis.<sup>425</sup> The vast majority of household healthcare spending is through out-of-pocket payments at the point of care. Out-of-pocket payments at the point of care are significant barrier to accessing healthcare. For the majority of the population, treatment beyond primary care consultations are not economically accessible.<sup>426</sup>

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<sup>415</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>416</sup> Coalition for Global Hepatitis Elimination, Data Dashboards Democratic Republic of Congo, 2019, [url](#)

<sup>417</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>418</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>419</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, p. 42

<sup>420</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>421</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>422</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>423</sup> Clinical Trials, Arresting vertical transmission of Hepatitis B Virus, University of North Carolina and University of Kinshasa, August 2020, [url](#)

<sup>424</sup> Clinical Trials, Arresting vertical transmission of Hepatitis B Virus, Clinical Trials, University of North Carolina and University of Kinshasa, August 2020, [url](#)

<sup>425</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>426</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#) pp. 41

The principal treatments options for hepatitis B and C are lengthy medications.<sup>427</sup> The availability of these medications is very low and the costs of treatment is extremely high (discussed further below).<sup>428</sup>

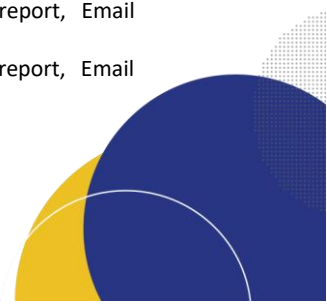
Other healthcare costs such as consultations and inpatient treatment depend on the type of health facility. The prices below were gathered from a range of clinics based in Kinshasa and provide an indication of the cost of healthcare services. The total costs incurred by patients can be approximated by summing all relevant services. All medications incur supplementary charges. Of note, in-patient costs are not inclusive of food.<sup>429</sup>

Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
<b>Clinical admission</b>					
Infectious disease department (daily rate)	USD 10-25	USD 25-40	Over USD 200	Over USD 30	None
<b>Specialist</b>					
Internist or Infectologist	USD 20	USD 20	USD 40	USD 40	None
Hepatologist	USD 20	USD 20	USD 40	USD 40	None
Gastroenterologist	USD 20	USD 20	USD 40	USD 40	None
Internal medicine (Internist)	USD 20	USD 20	USD 40	USD 40	None
<b>Clinical biology</b>					
Laboratory research of liver function (PT, albumin, bilirubin, transaminases: ASAT(=SGOT), ALAT(=SGPT)	USD 25	USD 35	USD 90	USD 90	None
Laboratory research of HBV antibody in case of hepatitis B	USD 10	USD 15	USD 40	USD 40	None
Laboratory research of HCV antibody in case of hepatitis C	USD 10	USD 15	USD 40	USD 40	None
<b>Diagnostics for hepatitis</b>					
Diagnostic imaging by means of ultrasound (of the liver)	USD 40	USD 40	USD 105	USD 105	None
Diagnostic research, in the form of liver biopsy	USD 90	USD 90	USD 150-205	USD 150-205	None

<sup>427</sup> WHO, World Health Organization, Hepatitis, n.d, [url](#)

<sup>428</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>429</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020



Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
Diagnostic research: transient elastography; test for liver fibrosis (e.g. FibroScan)	USD 280	USD 280	USD 360	USD 360	None

## 12.4 Cost of Medication

For most patients with hepatitis B, antiviral medications help to reduce the impact of infection but they do not provide a cure. As such, patients require life-long treatment.<sup>430</sup> In DRC, patients with chronic conditions usually often have poor adherence to treatments due to prohibitive costs and lack of availability of key medications.<sup>431</sup>

Direct Acting Antivirals can cure a patient of hepatitis C in 12 weeks with a success rate of over 90%.<sup>432</sup> Licensing agreements allow for the use of some generic medicines in DRC reducing the cost of treatment to increase access.<sup>433</sup> Under generic pricing structures, a 12-week course of direct-acting antiviral medications such as sofosbuvir for hepatitis C can be procured at USD 750 per patient.<sup>434</sup> However, a weak central purchasing system for medications means that in spite of these vastly reduced treatments costs, these medications are mostly unavailable in DRC.<sup>435</sup>

The price of medications was collected from eight registered pharmacies based in Kinshasa.<sup>436</sup> Medicines which are only available in the informal market have not been included.

Drug name	Available in DRC?	Form	Price per box	Is the drug included on national essential drugs list?
<b>Hepatitis B medication:</b>				
Adefovir	No	-	-	No
Entecavir	No	-	-	No
Telbivudine	No	-	-	No
<b>Hepatitis C medication:</b>				
Sofosbuvir	No	-	-	No
Sofosbuvir + Velpatasvir (combination; e.g. Epclusa®)	No	-	-	No
Velpatasvir	No	-	-	No

<sup>430</sup> WHO, World Health Organization, Guidelines on hepatitis B and C testing, February 2017, [url](#), p. 24

<sup>431</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>432</sup> WHO, World Health Organization, Guidelines on hepatitis B and C testing, February 2017, [url](#), p. 28-29

<sup>433</sup> WHO, World Health Organization, Technology and market landscape hepatitis C medicines, August 2017, [url](#), p. 54

<sup>434</sup> WHO, World Health Organization, Technology and market landscape hepatitis C medicines, August 2017, [url](#), p. 59

<sup>435</sup> Medical Xpress, Researchers define the burden of Hepatitis in Democratic Republic of the Congo, October 2017, [url](#)

<sup>436</sup> Please refer to the Introduction for further details on the methodology of price data collection

Drug name	Available in DRC?	Form	Price per box	Is the drug included on national essential drugs list?
Daclatasvir	No	-	-	No
Dasabuvir	No	-	-	No
Elbasvir + Grazoprevir (combination)	No	-	-	No
Glecaprevir + Pibrentasvir (combination)	No	-	-	No
Ledipasvir	Yes	-	-	No
Ledipasvir + sofosbuvir (combination)	Yes	Tablet	USD 980 (90 mg/400 mg, 30 units per box)	No
Ombitasvir + Paritaprevir + Ritonavir (combination)	No	-	-	No
Ribavirin	Yes	Tablet	USD 360 (200 mg, 30 units per box)	No
Simeprevir	No	-	-	No
Sofosbuvir + Velpatasvir + Voxilaprevir (combination)	No	-	-	No
<b>Both hepatitis B and C (classic medication):</b>				
Interferon alfa 2a	Yes	Tablet	USD 350 (600 mg, 30 units per box)	No
Interferon alfa 2b	Yes	Tablet	USD 125 (200 mg, 30 units per box)	No
Peg interferon alfa 2a	No	-	-	No

## 12.5 NGOs

The national NGO called Association d'encadrement des personnes infectées par l'hépatite (also known as SOS Hépatites), is a member of the World Hepatitis Alliance.<sup>437</sup> The organisation advocates to strengthen health services for those with hepatitis.<sup>438</sup>

Research for the report did not identify any other NGOs supporting health services for hepatitis.

<sup>437</sup> World Hepatitis Alliance, Our Members, n.d, [url](#)

<sup>438</sup> SOS Hépatites, August 2019, [url](#)



# 13 HIV/AIDS

## 13.1 General Information

### 13.1.1 Epidemiological context

Since 2010, the prevalence of HIV has been steadily decreasing.<sup>439</sup> However, it remains among the leading causes of death in DRC.<sup>440</sup> There are approximately 520,000 people living with HIV/AIDS in DRC representing 1.2% of the population.<sup>441</sup>

Prevalence data on opportunistic infections is very limited.<sup>442</sup> A study on patient data from a hospital in Kinshasa identified TB as the main opportunistic infection, affecting 43%<sup>443</sup> of patients being treated for HIV. This was followed by fungal infections, such as candidiasis (21% co-infected), pneumonia (11%), and other viral and bacterial infections, such as herpes zoster (10%) and salmonella (4%).<sup>444</sup>

### 13.1.2 Strategies and policies for treatment and management of HIV/AIDS

Addressing the burden of HIV/AIDS is a key priority for the Government. Two current strategy documents outline the Ministry of Health<sup>445</sup> and the multisectoral<sup>446</sup> approach to control and prevent HIV/AIDS. In particular, these aim to reduce transmission rates, particularly from mother to child, and increase access to quality healthcare. The strategy documents aim to reduce the number of new infections by 80% by 2021.<sup>447</sup>

The national HIV/AIDS programme received 90% of financing through external resources.<sup>448</sup> Key donors to the HIV/AIDS response are PEPFAR (the U.S. President's Emergency Plan for AIDS Relief) and the Global Fund.<sup>449</sup> PEPFAR focuses its activities on the three key provinces Haut-Katanga, Lualaba and Kinshasa, which account for 50% of the total number of people living with HIV/AIDS in DRC.<sup>450</sup> The financial contribution from the government primarily funds health worker salaries and some infrastructure.<sup>451</sup>

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<sup>439</sup> UN AIDS, Democratic Republic of Congo Fact Sheet, 2019, [url](#)

<sup>440</sup> Institute of Health Metrics, DRC Dashboard, 2017, [url](#)

<sup>441</sup> UN AIDS, Democratic Republic of Congo Fact Sheet, 2019, [url](#)

<sup>442</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>443</sup> The study methodology does not include the total number of patients included.

<sup>444</sup> Kamangu, NE. et al., Profiles of opportunistic infections in people living with HIV followed at the Military Hospital of Kinshasa Reference (camoKokolo), DRC, *Retrovirology*, May 2012, doi:10.1186/1742-4690-9-S1-P146

<sup>445</sup> Plan Strategique Multisectoriel Santé de la Lutte Contre le VIH/SIDA 2018-2021, Programme National de la Lutte Contre le VIH/SIDA, Ministère de la Santé, République Démocratique du Congo

<sup>446</sup> PSNHIV, Plan Stratégique National de la Riposte au VIH/SIDA 2018-2021, Programme National Multisectoriel de Lutte contre le Sida, Secretariat Executif National, pp. 26-27

<sup>447</sup> PSNHIV, Plan stratégique sectoriel santé de La lutte contre le vih/sida 2018-2021, Ministère de la Santé, République Démocratique du Congo, April 2018, pp. 26-27

<sup>448</sup> Plan Stratégique Multisectoriel Santé de la Lutte Contre le VIH/SIDA 2018-2021, Programme National de la Lutte Contre le VIH/SIDA, Ministère de la Santé, République Démocratique du Congo [no url], pp. 9

<sup>449</sup> Plan Stratégique Multisectoriel Santé de la Lutte Contre le VIH/SIDA 2018-2021, Programme National de la Lutte Contre le VIH/SIDA, Ministère de la Santé, République Démocratique du Congo [no url], pp. 24-29

<sup>450</sup> PEPFAR, Democratic Republic of the Congo Country Operational Plan (COP) 2019 Strategic Direction Summary, April 2019, [url](#), p. 3

<sup>451</sup> PEPFAR, Democratic Republic of the Congo Country Operational Plan (COP) 2019 Strategic Direction Summary, April 2019, [url](#), pp. 55

### 13.1.3 Healthcare provisions for treatment and management of HIV/AIDS

In general, the care and treatment of people living with HIV/AIDS consists of three components: medical, nutritional and psychosocial. This includes promotion of prevention, testing, care, treatment (including for opportunistic infections), and viral load detection.<sup>452</sup> According to the National Strategy for the Fight Against HIV/AIDS, these services should be integrated into the broader health system.<sup>453</sup> This means that the diagnosis and treatment of HIV/AIDS should be provided by all health facilities. However, as described below, weak supply chains limit the extent to which health facilities are able to provide a comprehensive package of HIV/AIDS services.<sup>454</sup> At a community level, networks of Community Health Workers (CHWs) act as an intermediary between health facilities and their communities. With regard to HIV, CHWs aim to increase coverage of treatment by encouraging healthcare-seeking behaviours and promote prevention messaging. Importantly, this includes addressing HIV-related stigma.<sup>455</sup>

In addition to integrated health services, a specialist HIV/AIDS medical facility known as Kabinda Day Hospital is managed by Médecins Sans Frontières in Kinshasa. The hospital provides treatment for people at all stages of HIV/AIDS infection including those with advanced AIDS.<sup>456</sup>

## 13.2 Access to Treatment

In spite of being a priority disease for the Ministry of Health, UNAIDS estimates that the coverage of HIV/AIDS services is low. Approximately 53% of adults and children living with HIV receive antiretroviral therapy (ARTs), leaving a coverage gap of over 40%. This varies across different segments of the population with highest coverage in men aged over 15 at 72%, and lowest in children aged from 0 to 14, at 28% coverage. The coverage of treatments to prevent mother to child transmission is estimated at 45%.<sup>457</sup> Details on the treatment coverage of opportunistic infections is very limited. Factors which contribute to low coverage include poor availability of diagnostics and treatment interventions in health facilities.<sup>458</sup>

A representative sample of health centres were reviewed in 2017 and 2018 to determine the extent of stock shortages in medical facilities. The assessment found that approximately 4 out of 10 health facilities did not have resources to conduct HIV screening, including rapid testing kits and ARTs which were only available in 37% of health facilities. The availability of medicines and diagnostic kits varied by type of health facility. Hospitals recorded the greatest availability of products at the point of assessment, while conversely, these were least available in Health Centres. Significant provincial variation was also recorded with treatments least available in Central and North-western provinces.<sup>459</sup>

The lack of availability of diagnostic and treatment products in community-level health facilities, creates a notable barrier to accessing HIV/AIDS services. Community members are required to travel

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<sup>452</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), p. 228

<sup>453</sup> PSNHIV, Plan stratégique sectoriel santé de La lutte contre le vih/sida 2018-2021, Ministère de la Santé, République Démocratique du Congo, April 2018 [no url], pp. 26-27

<sup>454</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), pp. 228-230

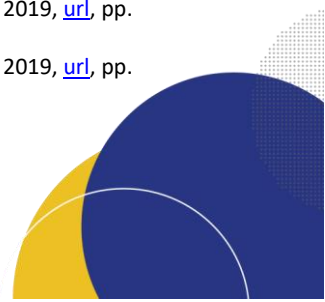
<sup>455</sup> DFID, Department for International Development, Effectiveness of Community Health Workers, November 2018, [url](#), p. 8

<sup>456</sup> MSF, Médecins Sans Frontières, In Kinshasa, HIV-positive people wait until death's door before coming to receive treatment, November 2019, [url](#)

<sup>457</sup> UNAIDS, Democratic Republic of Congo Fact Sheet, 2019, [url](#)

<sup>458</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), pp. 227-238

<sup>459</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), pp. 227-238



greater distances to find facilities with medicines in stock.<sup>460</sup> Other factors limiting access to treatment include lack of affordable transport, stigma, and prohibitive cost of initial consultations.<sup>461</sup>

### 13.3 Cost of Treatment

In principle, there should not be any user fees for HIV treatment services, including biological monitoring and distribution of ARTs.<sup>462</sup> However, it is not uncommon for patients to be charged consultation and testing fees prior to knowing their HIV status. The price of these vary according to the type of health facility (health centre or hospital) and whether they are public or private facilities.<sup>463</sup>

Costs of treatment of associated healthcare, such as co-infections, are not systematically free of charge.<sup>464</sup> User fees are often prohibitive and limit access to treatment for large portions of the population.<sup>465</sup>

Some targeted programmes, such as conditional cash and voucher programmes, have been implemented to reduce financial burdens and encourage use of HIV/AIDS services.<sup>466</sup> For example, a randomised control trial conducted at an antenatal clinic gave participants USD 5 for enrolling on a programme to prevent mother-to-child HIV transmission.<sup>467</sup> Those who enrolled were given an additional dollar for each consultation visit. The study found the conditional cash programme increased the number of women who attended antenatal visits. However, these types of programmes are often localised and not integrated into the health system.<sup>468</sup>

The cost of inpatient care is more expensive in private hospitals when compared to public facilities. The increased price relates primarily to the cost of the room, rather than consultations and tests. The prices below were gathered from a range of clinics based in Kinshasa and provide an indication of the cost of healthcare services. The total costs incurred by patients can be approximated by summing all relevant services. Of note, in-patient costs are not inclusive of food.<sup>469</sup>

Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
<b>Clinical admission</b>					
Infectious disease department (daily rate)	Free	Free	USD 95	USD 300	Free in all public facilities supported by the PSNHIV

<sup>460</sup> Motomoke, E Village reach, On Road and River: Distributions begin in DRC, August 2017, [url](#)

<sup>461</sup> The conversation, HIV is still taboo in the DRC: chronicles from Kinshasa, August 2017, [url](#)

<sup>462</sup> Plan Stratégique Multisectoriel Santé de la Lutte Contre le VIH/SIDA 2018-2021, Programme National de la Lutte Contre le VIH/SIDA, Ministère de la Santé, République Démocratique du Congo [no url], p. 24

<sup>463</sup> Democratic Republic of the Congo Country Operational Plan (COP) April 2019, President's Emergency Plan For AIDS Relief, PEPFAR, [url](#), p. 43

<sup>464</sup> EASO3, Deputy Manager of a priority national programme. Responsible for national implementation of the strategy, Email Correspondence, August 2020

<sup>465</sup> MSF, Medecins Sans Frontieres, Left Behind by the HIV Response, December 2017, [url](#), p. 26

<sup>466</sup> Yotebieng, M. et al., Lancet HIV, February 2016, Conditional cash transfers increase uptake of and retention in PMTCT care: A randomized controlled trial [url](#)

<sup>467</sup> Yotebieng, M. et al., Lancet HIV, February 2016, Conditional cash transfers increase uptake of and retention in PMTCT care: A randomized controlled trial [url](#)

<sup>468</sup> Tull, K, Social Protection Measures for Increasing Access to Health Services, 2018, University of Leeds Nuffield Centre for International Health and Development, November 2018, [url](#)

<sup>469</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020



Consultation cost by specialist					
Internist	Free	Free	USD 40	USD 40	Free in all public facilities supported by the PSNHIV
Infectologist	Free	Free	USD 40	USD 40	Free in all public facilities supported by the PSNHIV
HIV specialist	Free	Free	USD 40	USD 40	Free in all public facilities supported by the PSNHIV
<b>Clinical biology</b>					
CD4 count*	Not available	-	Free, only available in certain not-for-profit USD 100-112 in private clinics	Free, only available in certain not-for-profit USD 100-112 in private clinics	Free, only available in certain not-for-profit
Viral Load	Free	Free	USD 10	USD 10	Free in all public facilities supported by the PSNHIV

\* The government has not been able to mobilise resources to make CD4 counts available in public health facilities. These are only carried out in clinics managed by the NGO Médecins Sans Frontières.<sup>470</sup>

### 13.4 Cost of Medication

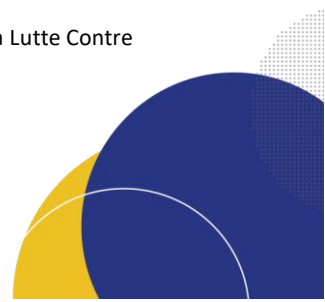
Antiretroviral treatments for HIV are free of charge at all health facilities and registered pharmacies.<sup>471</sup>

The price of medications was collected from eight registered pharmacies based in Kinshasa.<sup>472</sup> Medicines which are only available in the informal market have not been included.

<sup>470</sup> EASO3, Deputy Manager of a priority national programme. Responsible for national implementation of the strategy, Email Correspondence, August 2020

<sup>471</sup> Plan Stratégique Multisectoriel Santé de la Lutte Contre le VIH/SIDA 2018-2021, Programme National de la Lutte Contre le VIH/SIDA, Ministère de la Santé, République Démocratique du Congo [no url], p. 24

<sup>472</sup> Please refer to the Introduction for further details on the methodology of price data collection



Drug name	Is it available in DRC?	Form	Price per box	Is the drug included on national essential drugs list?
<b>Single antiretroviral/ARVs:</b>				
Ritonavir	Yes	Tablet	Free (100 mg, 120 units per box)	Yes
Tenofovir disoproxil (both for hepatitis B and HIV)	No	-	-	No
Raltegravir	No	-	-	No
Emtricitabine	No	-	-	No
Darunavir	Yes	Tablet	Free (600 mg, 60 units per box)	Yes
Tenofovir alafenamide (both for hepatitis B and HIV)	No	-	-	No
Cobicistat	No	-	-	No
Dolutegravir	Yes	Tablet	Free (50 mg, 30 units per box)	Yes
Elvitegravir	No	-	-	No
Maraviroc	No	-	-	No
Stavudine	No	-	-	No
Nevirapine	Yes	Tablet	Free (50 mg, 60 units per box) Free (200 mg, 60 units per box)	Yes
Efavirenz	Yes	Tablet	Free (200 mg, 30 units per box) Free (600 mg, 30 units per box)	Yes
Etravirine	No	-	-	No
Rilpivirine	No	-	-	No
Lamivudine (both for hepatitis B and HIV)	Yes	Tablet	Free (150 mg, 30/60/90/120 units per box) Free (300 mg, 30/60/90/120 units per box)	Yes
Abacavir	Yes	Tablet	Free (300 mg, 60 units per box)	Yes
Zidovudine	Yes	Tablet	Free (150 mg, 30/60/90/120 units per box)	Yes

Drug name	Is it available in DRC?	Form	Price per box	Is the drug included on national essential drugs list?
			Free (300 mg, 30/60/90/120 units per box)	
Enfuvirtide	No	-	-	No
Atazanavir	No	-	-	No
Fosamprenavir	No	-	-	No
Indinavir	No	-	-	No
<b>Combination with 2, 3 or 4 antiretrovirals:</b>				
Symtuza® (combination of darunavir/cobicistat/emtricitabine/tenofovir alafenamide)	No	-	-	No
Truvada® (combination of emtricitabine /tenofovir disoproxil)	Yes	Tablet	Free (200 mg, 30 units per box) Free (300 mg, 30 units per box)	Yes
Atripla® (combination of efavirenz/emtricitabine /tenofovir disoproxil)	No	-	-	No
Biktarvy® (combination of bictegravir/emtricitabine/tenofovir alafenamide)	No	-	-	No
Combivir® (combination of zidovudine / lamivudine)	Yes	Tablet	Free (150 mg, 30 units per box) Free (300 mg, 30 units per box).	Yes
Descovy® (combination of emtricitabine /tenofovir alafenamide)	No	-	-	No
Epzicom® Kivexa® (combination of abacavir and lamivudine)	Yes	Tablet	Free (300 mg, 60 units per box)	Yes
Eviplera® (combination of emtricitabine / rilpivirine /tenofovir disoproxil)	No	-	-	No
Genvoya® (combination of elvitegravir + cobicistat +emtricitabine + tenofovir alafenamide)	No	-	-	No
Juluca® (combination of dolutegravir and rilpivirine)	No	-	-	No
Kaletra® (combination of lopinavir / ritonavir)	Yes	Tablet	Free (100 mg, 60 units per box)	Yes



Drug name	Is it available in DRC?	Form	Price per box	Is the drug included on national essential drugs list?
Odefsey® (combination of emtricitabine/tenofovir alafenamide/ rilpivirin)	No	-	-	No
Rezolsta® (combination of darunavir/cobicistat)	No	-	-	No
Stribild® (combination of elvitegravir / cobicistat /tenofovir disoproxil/ emtricitabine)	No	-	-	No
Triumeq® (combination of abacavir/dolutegravir/lamivudine)	No	-	-	No
Trizivir® (combination of abacavir / zidovudine /lamivudine)	No	-	-	No
Delstrigo® (combination of doravirine /lamivudine /tenofovir disoproxil)	No	-	-	No
Dovato® (combination of dolutegravir/lamivudine)	No	-	-	No

## 13.5 NGOs

Providing and strengthening HIV/AIDS services is a priority for the Ministry of Health and the broader global health community.<sup>473</sup> As such, the role of national and international NGOs is extensive.<sup>474</sup> The literature review did not elucidate existing resources providing a comprehensive overview of the role of NGOs in HIV/AIDS service provision. The role of NGOs can be understood through project documents and resources published on NGO websites.

Examples of international NGOs delivering HIV/AIDS health services include MSF,<sup>475</sup> IMC,<sup>476</sup> and Cordaid.<sup>477</sup> These NGOs often work with local NGOs and civil societies to implement projects. For instance, in 2018, Cordaid worked with 28 civil society organisations to deliver HIV/AIDS services in 413 health zones across the country.<sup>478</sup> The type of services provided by international NGOs varies from managing clinics including training medical staff to integrating a specific activities, such as psychosocial support.<sup>479</sup>

MSF and IMC in particular manage a number of clinics across Eastern provinces which provide HIV services among other things. In addition, MSF manages a large specialist HIV/AIDS clinic in Kinshasa known as the Centre Hospitalier de Kabinda. In 2018, the clinic provided treatment to over 2 000 patients.<sup>480</sup>

<sup>473</sup> WHO, World Health Organization, WHO Cooperation Strategy with Democratic Republic of Congo 2017-2021, 2017

<sup>474</sup> Plan Stratégique Multisectoriel Santé de la Lutte Contre le VIH/SIDA 2018-2021, Programme National de la Lutte Contre le VIH/SIDA, Ministère de la Santé, République Démocratique du Congo [no url], p. 50

<sup>475</sup> MSF, Doctors Without Borders, 2018, [url](#)

<sup>476</sup> IMC, International Medical Corps, Democratic Republic of the Congo, n.d, [url](#)

<sup>477</sup> Cordaid, Global Fund Partnership, 2018 [url](#)

<sup>478</sup> Cordaid, Global Fund Partnership, 2018 [url](#)

<sup>479</sup> WHO, World Health Organisation, Health Cluster Democratic Republic of Congo, June 2020, [url](#)

<sup>480</sup> MSF, Doctors Without Borders, 2018, [url](#)

# 14 Nephrology

## 14.1 General Information

### 14.1.1 Epidemiological context

Nephrology relates to the study of kidneys and kidney disease. Prevalence data for kidney disease in DRC is very limited.<sup>481</sup> Estimates for the prevalence of Chronic Kidney Disease (CKD) range from 7% to 12%<sup>482</sup> of the population and end-stage renal disease is estimated to affect 0.2% of the population.<sup>483</sup> In line with global trends as the burden of noncommunicable diseases and risk factors increase, the overall prevalence is estimated to be increasing.<sup>484</sup> Key risk factors for CKD include hypertension and diabetes.<sup>485</sup>

### 14.1.2 Strategies and policies for treatment and management of kidney disease

A national programme or strategy specifically aimed at addressing the burden of CKD has not been developed.<sup>486</sup> CKD is also not mentioned in the National Health Development Plan 2019-2022 (Plan National de Développement Sanitaire, PNDS).<sup>487</sup> However, key risk factors, notably hypertension and diabetes are referred to in the PNDS and national programmes to address them have been developed.<sup>488,489</sup>

### 14.1.3 Healthcare provisions for treatment and management of kidney disease

Primary care facilities offer basic services.<sup>490</sup> These include medications and lifestyle consultations to address risk factors, such as hypertension.<sup>491</sup> Specialist care for nephrology is very limited due to a lack of trained physicians and specialised equipment.<sup>492</sup> With regard to human resources specialised in the treatment of kidney disease, data suggests that there are very few specialised nephrologists in

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<sup>481</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>482</sup> Mannix, M. et al., Prevalence and risk factors of chronic kidney disease (CKD) in South Kivu, Democratic Republic of Congo (DRC): a population-based study, nephrology dialysis transplantation, May 2018, [url](#), p. 1; Sumaili, E. et al, Epidemiology of chronic kidney disease in the Democratic Republic of Congo: Review of cross-sectional studies from Kinshasa, the capital July 2010, [url](#), p. 1

<sup>483</sup> Sumaili, E. et.al, Prevalence of chronic kidney disease in Kinshasa: results of a pilot study from the Democratic Republic of Congo, January 2009, [url](#), p. 1

<sup>484</sup> Sumaili, E. et.al, Prevalence of chronic kidney disease in Kinshasa: results of a pilot study from the Democratic Republic of Congo, January 2009, [url](#), p. 1

<sup>485</sup> Please refer to chapters on cardiovascular disease and diabetes for further information

<sup>486</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>487</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 21 and 93

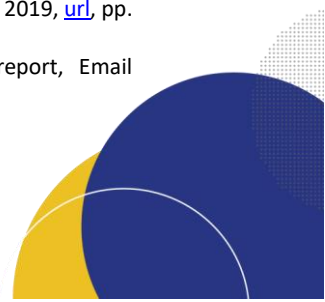
<sup>488</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>489</sup> Please refer to chapters on cardiovascular disease and diabetes for further information

<sup>490</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 9

<sup>491</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, , Ecole de Santé Publique de Kinshasa, April 2019, [url](#), pp. 251-259

<sup>492</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020



DRC. A study from 2007 estimated that there were seven nephrologists (0.11/million inhabitants) for the entire population.<sup>493</sup> While it is possible that the number of nephrologists has increased, it is probable that these are still relatively few in number.<sup>494</sup>

There are two dialysis centres located in Kinshasa and Lubumbashi. It is estimated that there are fewer than 10 dialysis machines for the entire population.<sup>495</sup> Health facilities with specialist Kidney wards are:<sup>496</sup>

- Public sector:
  - Kinshasa University Clinic (Clinique Universitaire de Kinshasa)
  - Kinshasa General Hospital (Hôpital Général de Kinshasa)
- Private sector (for profit):
  - HJ Hospital Kinshasa (HJ Hôpitaux Kinshasa).<sup>497</sup> Includes dialysis facilities
  - Medical Centre Kinshasa (Centre Médical de Kinshasa)<sup>498</sup>

Kidney transplants are not currently available in DRC. All kidney donor candidates are referred abroad by Congolese nephrologists. Complications upon return to DRC often cannot be adequately managed by in-country facilities, requiring the patient to travel abroad for follow-up care.<sup>499</sup>

## 14.2 Access to Treatment

Access to treatment for CKD and end-stage kidney disease is very limited.<sup>500</sup> There is limited information on the national treatment gap; however, a study in Kinshasa estimates that only 12% of those requiring dialysis are on treatment.<sup>501</sup> As a result, according to a review on access to dialysis in Kinshasa, most patients with end-stage renal disease in DRC die without receiving appropriate treatment.<sup>502</sup>

Treatment for kidney disease includes lifestyle consultations and pharmacological interventions to manage high blood pressure and high cholesterol.<sup>503</sup> These are similar to treatments required for cardiovascular disease.<sup>504</sup> These are accessible in primary care facilities, such as health centres.<sup>505</sup>

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<sup>493</sup> Krzesinski, JM., How to tackle the avalanche of chronic kidney disease in sub-Saharan Africa: the situation in the Democratic Republic of Congo as an example, nephrology dialysis transplantation, February 2007, [url](#), p. 334

<sup>494</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>495</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>496</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>497</sup> HJ Hospitals, n.d, [url](#)

<sup>498</sup> CMK, Centre Medical de Kinshasa, n.d, [url](#)

<sup>499</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>500</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>501</sup> Mukendi, S. et al., Accessibilité à la dialyse péritonéale continue en ambulatoire à Kinshasa, Journal of Nephrology, September 2012, [url](#)

<sup>502</sup> Izeidi, P. et al., Cost estimate of chronic hemodialysis in Kinshasa, the Democratic Republic of the Congo: A prospective study in two centres, Hemodialysis International, 2020, [url](#), p. 122

<sup>503</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>504</sup> Please refer to report on cardiovascular disease for further details.

<sup>505</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

Specialist care includes dialysis. As there are only two dialysis centres, this creates a significant geographical barrier for the majority of the population who lives in rural settings.<sup>506</sup> Other factors contributing to poor access to treatment include the prohibitive cost of healthcare (discussed below) and lack of affordable transport.<sup>507</sup>

### 14.3 Cost of Treatment

There is no national risk-sharing mechanisms or national health insurance for the treatment of kidney disease.<sup>508</sup> As a result, the majority of households use out-of-pocket payments at the point of care.<sup>509</sup>

The treatment of kidney disease is prohibitively expensive for the majority of the population. Dialysis in particular requires financial resources which far exceed the average income in DRC.<sup>510</sup> The total estimated cost of regular haemodialysis, including dialysis and medications, is approximately USD 28 000 per year.<sup>511</sup> The average annual income is USD 1 080.<sup>512</sup>

The prices below were gathered from a range of clinics based in Kinshasa and provide an indication of the cost of healthcare services. The total costs incurred by patients can be approximated by summing all relevant services. All medications incur supplementary charges. Of note, inpatient costs are not inclusive of food.<sup>513</sup>

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<sup>506</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>507</sup> Kalisya, L. et al., The state of emergency care in Democratic Republic of Congo, *African Journal of Emergency Medicine*, August 2015, [url](#), p. 156

<sup>508</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>509</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 41

<sup>510</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>511</sup> Izeidi, P. et al., Cost estimate of chronic haemodialysis in Kinshasa, the Democratic Republic of the Congo: A prospective study in two centres, *Haemodialysis International*, 2020, [url](#), p. 124

<sup>512</sup> World Bank, Data Bank, GNI per capita, PPP (current international \$) 2018, [url](#)

<sup>513</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020





Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
<b>Clinical admission</b>					
Nephrology department (daily rates)	USD 25-50	USD 50	USD 30	USD 30	No
<b>Specialist Consultation</b>					
Consultation by an internist	USD 10	USD 10	USD 40	USD 40	No
Consultation by a nephrologist	USD 10	USD 10	USD 50	USD 50	No
<b>Laboratory tests</b>					
Research for electrolytes; potassium, sodium, calcium and magnesium	USD 40	USD 55	USD 65-100	USD 65-100	No
Research / acid-base balance in blood and urine; e.g. serum and urine pH, electrolyte levels	USD 25	USD 35	USD 40-100	USD 40-100	No
Research of bacterial cultures	USD 10	USD 15	USD 30-100	USD 30-100	No
Research of renal/ kidney function (creatinine, urea, proteinuria, sodium, potassium levels)	USD 30	USD 45	USD 65-300	USD 65-300	No
Research: PTH, calcium, phosphate	USD 40	USD 60	USD 50-70	USD 50-70	No
<b>Medical imaging</b>					
Ultrasound of kidney	USD 30-35	USD 30-35	USD 45-100	USD 45-100	No
<b>Treatment</b>					
Haemodialysis (cost of one session)	Not available	USD 60-195 per session	USD 340-490 per session	USD 340-490 per session	No
Acute haemodialysis	Not available	190\$USD per session	USD 250 per session	USD 250 per session	No
Kidney transplantation and follow-up	Not available	Not available	Not available	Not available	No

## 14.4 Cost of Medication

Patients often have poor adherence to treatments, particularly for chronic conditions like those related to kidney disease.<sup>514</sup> This is due to prohibitive costs and lack of availability of key medications.<sup>515</sup> The estimated quarterly costs of medications for a patient with end-stage renal disease is USD 802.<sup>516</sup>

The price of medications was collected from eight registered pharmacies based in Kinshasa.<sup>517</sup> Medicines which are only available in the informal market have not been included.

Drug name	Available in DRC?	Form	Price per box	Is the drug typically included on the national essential drugs medicines list?
<b>Haematopoietic growth factor; for anaemia due to renal problems</b>				
Darbepoetin Alpha	No	-	-	-
Epoetin Alpha	No	-	-	-
Epoetin Beta	No	-	-	-
Erythropoietin	Yes	Injection	USD 30-50 (4 000 mg, 6 units per box)	Yes
Epoetin Zeta	No	-	-	-
Epoetin Theta	No	-	-	-
<b>Phosphate binders</b>				
calcium acetate + magnesium carbonate	No	-	-	-
calcium carbonate	Yes	Tablets	USD 10 (500 mg, 60 units per box)	Yes
aluminium hydroxide	No	-	-	-
magnesium hydroxide + aluminium hydroxide (combination)	Yes	Sachet	USD 20 (400 mg 30 units per box)	Yes
		Tablet	USD 5 (400 mg, 40 units per box)	
sevelamer	Yes	Tablet	USD 100 (800 mg, 180 units per box)	Yes
lanthanum carbonate	No	-	-	-
ferrioxidesaccharate (ferric saccharate) for oral use for phosphate binding	No	-	-	-

<sup>514</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020

<sup>515</sup> Please refer to [chapter 4](#) for further details on the pharmaceutical sector

<sup>516</sup> Izeidi, P. et al., Cost estimate of chronic haemodialysis in Kinshasa, the Democratic Republic of the Congo: A prospective study in two centres, *Haemodialysis International*, 2020, [url](#), p. 125

<sup>517</sup> Please refer to the Introduction for further details on the methodology of price data collection



Drug name	Available in DRC?	Form	Price per box	Is the drug typically included on the national essential drugs medicines list?
<b>Medication to treat metabolic acidosis</b>				
sodium bicarbonate (= sodium hydrogen carbonate)	Yes	Suspension	USD 10 (250 ml, 1 unit per box) USD 20 (500 ml, 1 unit per box)	Yes

## 14.5 NGOs

The key informant interviews and literature review did not identify any national or international NGOs who focus specifically on kidney disease.

# 15 Neurology: Epilepsy and Cerebrovascular Accident (Stroke)

## 15.1 General Information

### 15.1.1 Epidemiological context

Neurological disorder includes a range of disorders; the focus here is on epilepsy and stroke. Availability of prevalence data on neurological disease in DRC varies by type of disease.<sup>518</sup>

WHO publishes estimates of stroke<sup>519</sup> prevalence and burden of disease. According to these, in 2018 stroke accounted for 29 821 or 4.48% of total deaths in DRC and has been ranked among the top 10 causes of death throughout the last decade.<sup>520</sup>

The prevalence of epilepsy is significantly less well documented. Globally, epilepsy is believed to affect 4 to 10 people in every 1,000.<sup>521</sup> In DRC, a study carried out in Lubumbashi suggests that the prevalence is approximately 6 per 1 000 (500 000 individuals).<sup>522</sup> However, there is little data to generalise this to the wider population.<sup>523</sup> Relative proportions of neurological disorders can be inferred from health facility patient records. Among 3 540 patients who presented to a neuropsychiatric clinic over a 1-year period, 423 (11.9%) were identified as having epilepsy.<sup>524</sup> For the majority of people with epilepsy, the underlying cause is unknown. However, global estimates suggest that approximately 25% of cases result from traumatic brain injury and are therefore considered preventable.<sup>525</sup> Road traffic accidents are a key driver of brain injury and the incidence of accidents is high in DRC.<sup>526</sup>

### 15.1.2 Strategies and policies for treatment and management of CVD

The National Health Development Plan 2019-2022 (Plan National de Développement Sanitaire, PNDS) does not include any reference to epilepsy or stroke.<sup>527</sup> In addition a, targeted national programme has not been developed by the Ministry of Health for either of these diseases.<sup>528</sup> However, the PNDS

<sup>518</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>519</sup> Stroke results either from a blood clot blocking blood flow to the brain (ischaemic) or bleeding around the brain (haemorrhagic).

<sup>520</sup> Institute of Health Metrics, DRC Dashboard, 2017, [url](#)

<sup>521</sup> WHO, World Health Organization, Epilepsy, June 2019, [url](#)

<sup>522</sup> Koba Bora, B. et al., Living with epilepsy in Lubumbashi: epidemiology, risk factors and treatment gap, Pan Africa Medical Journal, August 2015 [url](#) pp.1

<sup>523</sup> Mukuku, O. et al., Epidemiology of Epilepsy in Lubumbashi, Hindawi Neurology Research International, June 2019, [url](#) pp.2

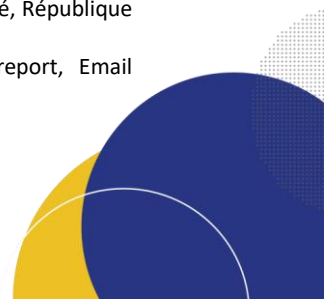
<sup>524</sup> Koba Bora, B. et al., Living with epilepsy in Lubumbashi: epidemiology, risk factors and treatment gap, Pan Africa Medical Journal, 26 August 2015 doi: [url](#)

<sup>525</sup> WHO, World Health Organization, Epilepsy, June 2019, [url](#)

<sup>526</sup> Institute of Health Metrics, "DRC Dashboard," 2017, [url](#)

<sup>527</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)

<sup>528</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020



does include addressing hypertension under its key performance indicators.<sup>529</sup> Hypertension is a key risk factor for stroke.

### 15.1.3 Healthcare provisions for neurology

The PNDS places an emphasis on strengthening primary care services.<sup>530</sup> Neurological treatments available from primary care services are extremely limited. Services include dispensing medications when these are in stock.<sup>531</sup>

Specialist treatments are available in hospitals of large urban areas notably Lubumbashi<sup>532</sup> and Kinshasa.<sup>533</sup> There is one specialist neuropsychiatric institution located in each of these cities, these are: Centre Neuro-Psychiatrique Joseph Guislain, Lubumbashi,<sup>534</sup> and Centre Neuro-Psychopathologique, in Kinshasa University Hospital.<sup>535</sup> Epilepsy services available in these hospitals include diagnostic tests (electroencephalography (EEG) and computerised tomography (CT) scan, as well as treatment using anti-epileptic medications.<sup>536</sup>

The treatments for stroke aim to reduce the impact of the stroke and decrease the likelihood of reoccurrence. An important risk factor for stroke is cardiovascular disease.<sup>537</sup> Treatments for stroke include pharmacological interventions immediately after the episode of stroke, followed by longer term physiotherapy to manage impairments. The latter is available in both of the specialist neurological centres in Kinshasa and Lubumbashi.<sup>538</sup>

## 15.2 Access to Treatment

General access to healthcare in DRC is extremely limited. This is even more true for specialist services such as neurology.<sup>539</sup>

An observational study of patients diagnosed with epilepsy in Lubumbashi, estimated a treatment gap of 67%.<sup>540</sup> As the estimate is based on those presenting at the hospital, the actual treatment gap is likely to be significantly greater.<sup>541</sup> Epilepsy was also characterised by late presentation to physicians with the mean duration between the onset of seizures and first consultation at 83.5 months.<sup>542</sup> This

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<sup>529</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 79

<sup>530</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 4

<sup>531</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>532</sup> DRC's second largest city located in the South East

<sup>533</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>534</sup> Fracarita International, n.d, [url](#)

<sup>535</sup> Univeristy de Kinshasa, Centre Neuro Pyscho Pathologique, n.d, [url](#)

<sup>536</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>537</sup> For further details on healthcare services for CVD, please refer to the CVD report.

<sup>538</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>539</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>540</sup> Koba Bora, B. et al., Living with epilepsy in Lubumbashi: epidemiology, risk factors and treatment gap, Pan Africa Medical Journal, August 2015 [url](#), p. 3

<sup>541</sup> Koba Bora, B. et al., Living with epilepsy in Lubumbashi: epidemiology, risk factors and treatment gap, Pan Africa Medical Journal, August 2015 [url](#), p. 2

<sup>542</sup> Mukuku, O. et al., Epidemiology of Epilepsy in Lubumbashi, Hindawi Neurology Research International, 29 June 2019, [url](#), p. 3

increases the likelihood of long-term impairments from unmanaged seizures.<sup>543</sup> The treatment gap for stroke is unknown, as many patients and their families do not seek formal care.<sup>544</sup>

Traditional healers have an important role in epilepsy. In rural districts where formal healthcare structures are limited, traditional medicine is often the first healthcare sought for children with epilepsy.<sup>545</sup> In the aforementioned observational study in Lubumbashi, 30% of patients with epilepsy had visited traditional healers prior to presentation at the hospital.<sup>546</sup>

Factors contributing to poor access to treatment include the prohibitive cost of healthcare (discussed below), poor availability of specialist services nationally and lack of affordable transport.<sup>547</sup> A lack of transport facilities particularly affects access to emergency care during a stroke.<sup>548</sup>

Globally, epilepsy has a long history of association with witchcraft and evil spirits, leading to stigma that affects health-seeking behaviours. A study on perceptions of epilepsy from a rural community in Ituri, a North eastern province, found that epilepsy related stigma was common.<sup>549</sup> Although these findings cannot be generalised to the entire population, they do demonstrate additional factors that impact health-seeking behaviours of families and access to anti-epileptic drugs.<sup>550</sup>

### 15.3 Cost of Treatment

There are no financial support programmes for the treatment of neurological disorders.<sup>551</sup> The vast majority of household healthcare spending is through out-of-pocket payments at the point of care.<sup>552</sup>

Out-of-pocket payments are significant barrier to healthcare. For the majority of the population, treatments beyond primary care consultations are not economically accessible.<sup>553</sup> For example, the average cost of hospitalisation in a public neurology ward is USD 17.5 - 25 per day. Diagnostic imaging, such as an EEG, is supplementary and costs on average 33.5 USD. The average annual income is approximately USD 1 080, equating to USD 90 per month.<sup>554</sup>

The prices below were gathered from a range of clinics based in Kinshasa and provide an indication of the cost of healthcare services. The total costs incurred by patients can be approximated by summing all relevant services.<sup>555</sup>

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<sup>543</sup> Epilepsy Foundation, Thinking, Memory and Epilepsy, February 2014, [url](#)

<sup>544</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>545</sup> Mukuku, O. et al., Epidemiology of Epilepsy in Lubumbashi, Hindawi Neurology Research International, June 2019, [url](#), p. 3

<sup>546</sup> Mukuku, O. et al., Epidemiology of Epilepsy in Lubumbashi, Hindawi Neurology Research International, June 2019, [url](#), p. 4

<sup>547</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>548</sup> Kalisya, L. et al., The state of emergency care in Democratic Republic of Congo, African Journal of Emergency Medicine, August 2015, [url](#), p. 156

<sup>549</sup> Dolo, H. et al., Community perceptions of epilepsy and its treatment in onchocerciasis endemic region in Ituri, Infectious diseases of poverty, December 2018 [url](#), pp. 3-6

<sup>550</sup> Mukuku, O. et al., Epidemiology of Epilepsy in Lubumbashi, Hindawi Neurology Research International, 29 June 2019, [url](#), p. 3

<sup>551</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>552</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, Nov 2018, [url](#), p. 41

<sup>553</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>554</sup> World Bank, Data Bank, GNI per capita, PPP (current international \$) 2018, [url](#)

<sup>555</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020



Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
<b>Clinical admission</b>					
Clinical admittance in neurology department (daily rates)	USD 10-20	USD 20-25	USD 50	USD 50	No
<b>Specialist consultation</b>					
Neurologist	USD 15-25	USD 15-25	USD 30-50	USD 30-50	No
Rehabilitation specialist	USD 10	USD 10	USD 30	USD 30	No
Neurosurgeon	USD 15-25	USD 15-25	USD 50	USD 50	No
Internist	USD 10	USD 10	USD 40	USD 40	No
Physical therapist	USD 10	USD 10	USD 20-30	USD 20-30	No
<b>Laboratory research and diagnostics</b>					
Medication level in the blood (e.g. for antipsychotics/for, antiepileptics and/or for lithium carbonate)	Not available	Not available	Not available	Not available	No
International normalised ratio (INR e.g. in case of acenocoumarol anticlotting)	Not available	Not available	Not available	Not available	No
EEG (Electroencephalogram)	USD 30	USD 30	USD 50-250	USD 50-250	No
CT scan	USD 100-180	USD 100-180	USD 280-450	USD 280-450	No
MRI scan	USD 190	USD 190	USD 200-500	USD 200-500	No

## 15.4 Cost of Medication

Patients often have poor adherence to treatments, particularly for chronic conditions like neurological disorders.<sup>556</sup> This is due to prohibitive costs and lack of availability of key medications.<sup>557</sup>

The price of medications was collected from eight registered pharmacies based in Kinshasa.<sup>558</sup> Medicines which are only available in the informal market have not been included.

<sup>556</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>557</sup> Please refer to [chapter 4](#) for further details on the pharmaceutical sector

<sup>558</sup> Please refer to the Introduction for further details on the methodology of price data collection



Drug name	Is it available in DRC?	Form	Price per box	Is the drug included on the national essential drugs list?
<b>Antiepileptics (e.g. to reduce frequency of epileptic attacks):</b>				
Levetiracetam	Yes	Tablet	USD 30 (250 mg, units per box) USD 35 (500 mg, 50 units per box) USD 39 (1 000 mg, 30 units per box)	No
Carbamazepine	Yes	Tablet	USD 20 (100 mg, 20 units per box) USD 40 (200 mg, 20 units per box)	Yes
Oxcarbazepine	No	-	-	No
Valproic acid OR Valproate OR Depakine®	Yes	Tablet	USD 15 (500 mg, 40 units per box)	Yes
Lamotrigine	No	-	-	No
Pregabalin	Yes	Tablet	USD 55 (150 mg, 56 units per box) USD 45 (75 mg, 56 units per box) USD 20 (50 mg, 30 units per box) USD 15 (25 mg, 30 units per box)	No
Gabapentine	Yes	Tablet	USD 75 (300 mg, 90 units per box)	No
Lacosamide	No	-	-	No
Phenytoin	Yes, but typically very difficult to find	Tablet	USD 15 (100 mg, 100 units per box)	Yes
Phenobarbital	Yes	Tablet	USD 10 (50 mg, 15 units per box) USD 13.5 (100 mg, 15 units per box)	Yes
Vigabatrin	No	-	-	No
Ethosuximide	Yes, but typically very difficult to find	Suspension	USD 10, (5 ml, 1 unit per box)	Yes
		Capsules	USD 240 (250 mg, 100 units per box)	
Brivaracetam	No	-	-	No



Drug name	Is it available in DRC?	Form	Price per box	Is the drug included on the national essential drugs list?
Clonazepam	Yes	Injection	USD 40 USD (1 mg, 6 units per box)	Yes
		Tablet	USD 25 (0.5 mg, 100 units per box) USD 20 (2.5 mg, 40 units per box)	
Lacosamide	No	-	-	No
Clobazam	Yes	Tablet	USD 35 (10 mg, 30 units per box)	No
Perampanel	No	-	-	No
Primidone	No	-	-	No
Stiripentol	No	-	-	No
Rufinamide	No	-	-	No
<b>Antiepileptics to treat acute attacks / status epilepticus:</b>				
Diazepam (rectiole / rectal suppository for epileptic attacks)	Yes, but typically very difficult to find	Tablet	USD 3.50 (10 mg, 10 units per box)	No
Diazepam (i.v. Injection for epileptic attacks)	Yes	Injection	USD 10 (5 mg, 10 units per box)	Yes
Midazolam (i.m. Injection for epileptic attacks)	Yes, but typically very difficult to find	Injection	USD 4 (5 mg, 5 units per box)	No
Midazolam (nose spray for epileptic attacks)	No	-	-	No
Midazolam (i.v. Injection for epileptic attacks)	No	-	-	No
Midazolam (oromucosal solution for epileptic attacks)	No	-	-	No
Valproate OR Depakine® (i.v. Injection for epileptic attacks)	No	-	-	No
Levetiracetam (i.v. Injection for epileptic attacks)	No	-	-	No
Lorazepam (i.v. Injection for epileptic attacks)	No	-	-	No

Drug name	Is it available in DRC?	Form	Price per box	Is the drug included on the national essential drugs list?
phenytoin (i.v. injection for epileptic attacks)	Yes	Solution	USD 13 (25 mg/ml, 10 units per box) USD 25 (50 mg/ml, 10 units per box)	Yes
phenobarbital (i.v. injection for epileptic attacks); with neonatal convulsions/attacks	No	-	-	No
<b>Anti-blood-clotting medicines:</b>				
Warfarin	Yes, but typically very difficult to find	Tablet	USD 3 (2 mg, 20 units per box) USD 6 (5 mg, 20 units per box)	Yes
Rivaroxaban	No	-	-	No
Acetylsalicylic acid (Aspirin®)	Yes	Tablet	USD 2.5 (100 mg, 100 units per box) USD 3 (500 mg, 30 units per packet)	Yes
Carbasalate calcium	No	-	-	No
Acenocoumarol	No	-	-	No
Heparin	Yes	Capsule	USD 12 (200 mg, 10 units per box)	Yes
Enoxaparin	No	-	-	No
Phenprocoumon	No	-	-	No
Prasugrel	No	-	-	No
Clopidogrel	Yes	Tablet	USD 35 (75 mg, 30 units per box)	No
Apixaban	No	-	-	No

## 15.5 NGOs

Fracarita International is a faith-based non-profit organisation that has an important role in the treatment of Neurological Disorders in DRC. Fracarita International supports the specialist centre of Lubumbashi, Centre Neuro-Psychiatrique Dr Joseph Guislain, with resources and capacity strengthening.<sup>559</sup>

The international NGO, Humanity and Inclusion also is also active regarding disability inclusion and advocacy.<sup>560</sup> Humanity and Inclusion aims to address the needs of all disabilities which includes, but

<sup>559</sup> Fracarita International, n.d, [url](#)

<sup>560</sup> Humanity and Inclusion, Democratic Republic of Congo, n.d, [url](#)



is not exclusive to, neurological disorders. Humanity and inclusion operates primarily in the eastern province of North Kivu and central province of Kasai.<sup>561</sup>

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<sup>561</sup> Humanity and Inclusion, Democratic Republic of Congo, n.d, [url](#)

# 16 Psychiatry

## 16.1 General Information

### 16.1.1 Epidemiological context

Psychiatry is a medical field that addresses a range of mental health conditions. The focus here will be on depression, anxiety disorders like post-traumatic stress disorder, and psychotic disorders like schizophrenia and bipolar disorder. There is very limited reliable prevalence data on mental health disorders in DRC as data is not routinely collected and reported in clinics.<sup>562</sup> According to the 2019 Global Burden of Disease study, 4.21% of the population suffers from depressive disorders, equal to over 3.6 million people. This is greater than the estimated global prevalence which stands at 3.76%.<sup>563</sup> Other studies and reports suggest that the prevalence is much higher at 15 million people.<sup>564</sup> Of note, however, these studies reference the National Mental Health Programme (Programme National de Santé Mentale, PNSM), published in 2006 and so cannot be considered up to date.<sup>565</sup>

Displaced populations, including internally displaced, refugees, and returnees, are disproportionately affected by mental ill health.<sup>566</sup> As outlined in [chapter 1](#), there are over 5 million internally displaced people and over 524 000 refugees living in DRC.<sup>567</sup> This suggest that there is a high level of need for mental health services.

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<sup>562</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

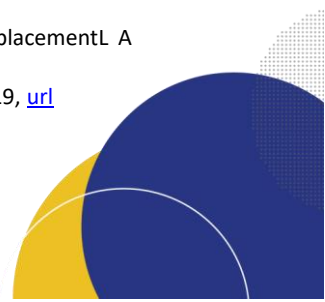
<sup>563</sup> IHME, Institute for Health Metrics, Global Health Development Report, 2019, [url](#)

<sup>564</sup> WHO, World Health Organization, Democratic Republic of Congo, Mental Health Atlas 2011, [url](#), p. 1; Le Potentiel, Au moins 15 millions de personnes atteintes des troubles mentaux en RDC, 14 October 2008. Referenced in: Immigration and Refugee Board of Canada, Democratic Republic of the Congo: The treatment of people with mental health disorders; protection and services provided by the state, June 2012, [url](#)

<sup>565</sup> The PSNM was not made available for review

<sup>566</sup> Morina, N., et al., Psychiatric Disorders in Refugees and Internally Displaced Persons After Forces DisplacementL A Systematic Review, September 2018, [url](#), p. 1

<sup>567</sup> UNHCR, United Nations High Commissioner for Refugees, DR Congo emergency dashboard, September 2019, [url](#)



### 16.1.2 Strategies and policies for psychiatry

The burden of mental health disorder is described in detail in the National Health Development Plan (Plan National de Développement Sanitaire 2016-2020, PNDS). Although the PNDS details the estimated burden of disease, it does not go on to propose a health system response to address it.<sup>568</sup> In addition, the lists of essential services for health centres and hospitals do not include any psychiatric services.<sup>569</sup> Previously, a number of national strategies, referred to as programmes, were developed to strengthen the provision of mental health service. Importantly, the 1999 strategy aimed to move treatment services out of medical facilities towards a care in the community approach, by increasing service provision through primary care structures.<sup>570</sup> This model is considered to be a fundamental step to address stigma and strengthen dignity in care for those with mental health disorders. However, the most recent national programme for mental health has not been updated since 2006.<sup>571</sup> The absence of a renewed strategy suggests that targeted health system strengthening for mental health provisions has not continued.

The WHO provides important technical support to the Ministry of Health. Key priorities of the support provided are outlined in the Strategic Cooperation of WHO with DRC 2017-2021 (Stratégie de Coopération de l'OMS avec le pays République Démocratique du Congo 2017-2021).<sup>572</sup> The country cooperation strategy includes the strengthening of mental health services among the key priorities.<sup>573</sup> In particular, the strategy aims to focus on strengthening mental health services for women at a primary care level.<sup>574</sup>

### 16.1.3 Healthcare provisions for psychiatry

The health facility from which patients can receive treatment depends on the psychiatric services which they require. In principle, primary care facilities can dispense medications; however, supply chains greatly limit the availability of medications. Secondary and tertiary facilities, such as hospitals, can provide more complex treatments, including inpatient facilities during mental health crisis.<sup>575</sup>

An article from 2010 identified six hospital institutions with services for mental health disorders.<sup>576</sup> This includes four specialised mental health facilities which are, the Neuro-Psycho-Pathology Centre (Centre Neuro-Psycho-Pathologique, CNPP) at the University of Kinshasa, the CNPP at the Katwambi Centre (Centre de Katwambi) in the province of Western Kasai and Doctor Joseph Guillain of Lubumbashi Neuropsychiatric Centre (centre neuropsychiatrique Docteur Joseph Guillain de Lubumbashi) in Katanga province, and the Karhale Psychiatric Mental Health Care Centre (centre psychiatrique Soins de santé mentale de Karhale) in South Kivu. In addition to facilities identified in

<sup>568</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 21

<sup>569</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 87-93

<sup>570</sup> On'okoko, M., Mental health in the Democratic Republic of Congo: a post-crisis country challenge, April 2010, [url](#), p. 41

<sup>571</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondance, August-November 2020

<sup>572</sup> WHO, World Health Organization, Stratégie de Coopération de l'oms avec le pays République Démocratique du Congo 2017-2021, [url](#)

<sup>573</sup> WHO, World Health Organization, Stratégie de Coopération de l'oms avec le pays République Démocratique du Congo 2017-2021, [url](#), p. 17

<sup>574</sup> WHO, World Health Organization, Stratégie de Coopération de l'oms avec le pays République Démocratique du Congo o 2017-2021, [url](#), p. 57

<sup>575</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondance, August-November 2020

<sup>576</sup> Xinhua News Agency, RDC: un malade mental viole et tue sa mère à Kananga, 16 November 2010, [url](#)

the source, Telema Hospital in Kinshasa is an important provider of psychiatric health services.<sup>577</sup> In 2014, it was estimated that there were 500 inpatient beds nationally.<sup>578</sup>

Psychotherapy and other forms of talking therapies, such as cognitive behavioural therapy, are almost non-existent.<sup>579</sup> However, local women's organisations often provide support services for victims of rape.<sup>580</sup> In addition, mental health and psychosocial support is a growing specialism within international humanitarian and development organisations.<sup>581</sup> Through these, psychologists and psychiatrists provide supplementary specialist services in conflict and post-conflict provinces.<sup>582</sup>

### 16.1.4 Human resources

There is a significant lack of trained mental health medical professionals in DRC.<sup>583</sup> A more recent needs assessment conducted in 2019 in Eastern DRC suggests that significant human resource challenges persist.<sup>584</sup> These assessment reviewed mental health service provision in six private health centres in the north eastern province of South Kivu. This found that although 6% of centres had staff with at least some mental health training, the extent of training varied from five days to one month.<sup>585</sup>

## 16.2 Access to Treatment

Access to healthcare generally in DRC is extremely limited.<sup>586</sup> The PNDS estimates that the treatment coverage of psychiatric services is just 5%, meaning the vast majority of those who require services do not have access.<sup>587</sup> A contributing factor to low coverage is the poor availability of specialist services in health facilities, the PNDS states that only 3% of primary care facilities have integrated mental health services.<sup>588</sup>

Lack of availability of treatment options in clinics increases the distance communities are required to travel for healthcare.<sup>589</sup> While there is some geographic distribution of specialist mental centres, the

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<sup>577</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>578</sup> Ikanga, J, Psychology in the Democratic Republic of the Congo: Its struggles for birth and growth, American Psychological Association, December 2014, [url](#)

<sup>579</sup> Organisation suisse d'aide aux réfugiés OSAR, RD Congo: Soins psychiatriques, 10 June 2009. Referenced in: Organisation suisse d'aide aux réfugiés (OSAR), République démocratique du Congo : développements actuels, 6 October 2011, [url](#), p. 21

<sup>580</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>581</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>582</sup> Bedford, J. et al., Key considerations: mental health and psychosocial support, North Kivu, *Anthrologica*, October 2019 [url](#), p. 1-2

<sup>583</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>584</sup> Thulin, E. et al., Mental Health Care and Gender Based Violence in Eastern DRC: Needs Assessment and Report of Activities, January 2020, [url](#), p. 7

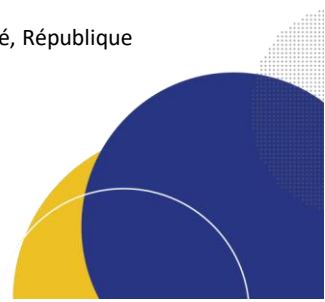
<sup>585</sup> Thulin, E., et.al., Mental Health Care and Gender Based Violence in Eastern DRC: Needs Assessment and Report of Activities, January 2020, [url](#), p. 7

<sup>586</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>587</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 21

<sup>588</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)

<sup>589</sup> Motomoke, E, Village reach, On Road and River: Distributions begin in DRC, August 2017, [url](#)





majority are located in Kinshasa. Patients from rural areas who received prescriptions from urban providers have difficulty refilling them near home.<sup>590</sup>

Other factors limiting access to psychiatric treatment include the cost of care (discussed below), lack of affordable transport, and stigma. Mental health stigma has an important role in affecting healthcare-seeking behaviours of individuals and their families.<sup>591</sup> As described ‘the shame of having a mental disorder extends to the family because each person is an integral part of a larger familial and social fabric’.<sup>592</sup> Children with mental health disorders are particularly affected by stigma, with some being called ‘child witches’ or cursed.<sup>593</sup>

Stigma associated with key risk factors of mental ill health further reduces healthcare-seeking behaviour. In particular, experiences of sexual violence and human rights abuses are associated with major depressive disorder and post-traumatic stress disorder.<sup>594</sup> Related stigma increases the diagnostic and treatment gap.<sup>595</sup>

### 16.3 Cost of Treatment

There are no financial support programmes for the treatment of mental health disorders.<sup>596</sup> The vast majority of household healthcare spending is through out-of-pocket payments at the point of care.<sup>597</sup> Out-of-pocket payments at the point of care are a significant barrier to healthcare. For the majority of the population, treatment beyond primary care consultations are not economically accessible.<sup>598</sup>

The cost of psychiatric treatment is considered high compared to average earnings. Additional hospital expenses, such as food, typically also have to be covered by patients.<sup>599</sup>

The prices below were gathered from a range of clinics based in Kinshasa and provide an indication of the cost of healthcare services. The total costs incurred by patients can be approximated by summing all relevant services.<sup>600</sup>

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<sup>590</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>591</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>592</sup> Ikanga, J, Psychology in the Democratic Republic of the Congo: Its struggles for birth and growth, in: Psychology International, December 2014, [url](#)

<sup>593</sup> UNICEF, Les enfants accusés de sorcellerie, April 2010, [url](#), p. 22

<sup>594</sup> Johnson, K. et al., Association of Sexual Violence and Human Rights Violations With Physical and Mental Health in Territories in the Eastern Democratic Republic of the Congo, American Medical Association, August 2010, [url](#), p. 553

<sup>595</sup> Espinoza, S, Barriers to Mental Health Treatment Within the Congolese Population, October 2016, [url](#)

<sup>596</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>597</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 41

<sup>598</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020

<sup>599</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>600</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
<b>Clinical admission</b>					
Psychiatric clinic (daily rates)	USD 10-20	USD 20-25	USD 50	USD 50	No
<b>Specialist Consultation</b>					
Psychiatrist	USD 15-25	USD 15-25	USD 30-50	USD 30-50	No
Psychologist	USD 10	USD 10	USD 20-30	USD 20-30	No
Psychiatric nurse at home (per visit)	USD 10	USD 10	USD 20	USD 20	No
<b>Psychotherapy session treatments</b>					
Cognitive behavioural therapy	USD 10 per session	USD 10 per session	USD 15 per session	USD 15 per session	No
Eye Movement Desensitisation and Reprocessing	USD 25 per session	USD 25 per session	USD 25 per session	USD 25 per session	No
Other treatments	Not available	-	-	-	-

## 16.4 Cost of Medication

Patients often have poor adherence to treatments, particularly for chronic conditions like those related to CVD.<sup>601</sup> This is due to prohibitive costs and lack of availability of key medications.<sup>602</sup>

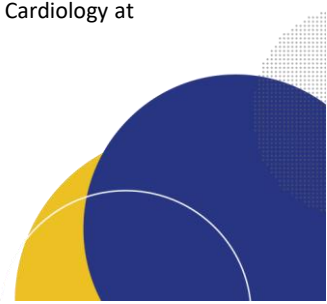
The price of medications was collected from eight registered pharmacies based in Kinshasa.<sup>603</sup> Medicines which are only available in the informal market have not been included.

Drug name	Is it available in DRC?	Form	Price per box	Is the drug typically included on national essential drugs medicines list?
<b>Antidepressants</b>				
Paroxetine	Yes	Tablet	USD 20 (20 mg, 30 units per box)	No
Sertraline	No	-	-	No
Citalopram	Yes	Tablet	USD 30 (10 mg, 28 units per box)	No
Clomipramine	No	-	-	No

<sup>601</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020

<sup>602</sup> Please refer to [chapter 4](#) for further details on the pharmaceutical sector

<sup>603</sup> Please refer to the Introduction for further details on the methodology of price data collection



Drug name	Is it available in DRC?	Form	Price per box	Is the drug typically included on national essential drugs medicines list?
Duloxetine	No	-	-	No
Escitalopram	Yes	Tablet	USD 30 (10 mg, 28 units per box)	No
Fluoxetine	Yes	Tablet	USD 10 (20 mg, 14 units per box)	Yes
Fluvoxamine	No	-	-	No
Imipramine	Yes, but typically difficult to find	Tablet	USD 2 (25 mg, 30 units per box)	No
Mianserin	No	-	-	No
Trazodone	Yes	Tablet	USD 20 (50 mg, 30 units per box)	No
Amitriptyline	Yes	Tablet	USD 15 (25 mg, 30 units per box) USD 12.95 (10 mg, 30 units per box)	Yes
Nortriptyline	No	-	-	No
<b>Medication off-label use for PTSD</b>				
Alfuzosin (also with prostate complaints)	Yes	Tablet	USD 30 (10 mg, 30 units per box)	No
Lamotrigine (also antiepileptic)	Yes	Tablet	USD 70 (200 mg, 30 units per box) USD 37 (100 mg, 30 units per box) USD 22 (50 mg, 30 units per box) USD 15 (25 mg, 30 units per box)	No
Topiramate	Yes	Tablet	USD 150 (100 mg, 28 units per box)	No
<b>Antipsychotics; classic</b>				
Haloperidol	Yes	Injection Capsules	USD 20 (5 mg, 5 units per box) USD 10 (5 mg, 20 units per box)	Yes
Amisulpride	No	-	-	No
Bromperidol	No	-	-	No
Pipamperone	No	-	-	No
Zuclopenthixol	No	-	-	No

Drug name	Is it available in DRC?	Form	Price per box	Is the drug typically included on national essential drugs medicines list?
Chlorpromazine	Yes	Tablet	USD 15 (25 mg, 100 units per box)	Yes
Fluphenazine	Yes	Tablet Injection	USD 160 (25 mg, 30 units per box) USD 3.2 (25 mg/ml, 3 units per box)	Yes
Pimozide	No	-	-	No
Flupentixol	No	-	-	No
Pimozide	No	-	-	No
<b>Antipsychotics; modern atypical</b>				
Clozapine	No	-	-	No
Olanzapine	Yes	Tablet	USD 40 (5 mg, 30 units per box) USD 60 (10 mg, 30 units per box)	No
Risperidone	Yes	Tablet	USD 35 (1 mg, 30 units per box) USD 70 (2 mg, 30 units per box)	Yes
Pipamperone	No	-	-	No
Quetiapine	Yes	Tablet	USD 100 (300 mg, 30 units per box) USD110 (300 mg, 60 units per box)	No
<b>Depot injections with classic antipsychotics</b>				
Flupentixol decanoate depot injection	No	-	-	No
Bromperidol decanoate depot injection	No	-	-	No
Fluphenazine decanoate depot injection	No	-	-	No
Haloperidol decanoate depot injection	No	-	-	No
Zuclopenthixol decanoate depot injection	No	-	-	No
<b>Depot injections with modern atypical antipsychotics</b>				
Paliperidone palmitate depot injection	No	-	-	No



Drug name	Is it available in DRC?	Form	Price per box	Is the drug typically included on national essential drugs medicines list?
Aripiprazole depot injections	No	-	-	No
olanzapineOlanzapine pamoate depot injection	No	-	-	No
Risperidone depot injection	No	-	-	No
<b>Anxiolytics</b>				
Diazepam (e.g. Valium)	Yes	Tablet	USD 10 (10 mg, 30 units per box)	Yes
Oxazepam	No	-	-	No
Bromazepam	Yes	Tablet	USD 30 (6 mg, 30 units per box) USD 15 (3 mg, 30 units per box)	Yes
Buspirone	No	-	-	No
Chlordiazepoxide	No	-	-	No
Clonazepam	Yes, but typically difficult to find	Tablet	USD 5 (0.5 mg, 50 units per box)	No
Clorazepate	Yes	Tablet	USD 30( 5mg, 30 units per box)	No
Lorazepam	Yes	Tablet	USD 30 (1 mg, 30 units per box) USD 30 (2.5 mg, 30 units per box)	No
<b>Medication for bipolar disorder/ manic depression</b>				
Lithium carbonate	No	-	-	No
Carbamazepine (also antiepileptic)	Yes	Tablet	USD 15 (200 mg, 50 units per box)	Yes
<b>Medication for sleeping disorder; sedatives</b>				
Temazepam	No	-	-	No
Flurazepam	No	-	-	No
Nitrazepam	No	-	-	No
Zopiclone	Yes	Tablet	USD 45 (7.5 mg, 14 units per box)	No
Zolpidem	Yes	Tablet	USD 30 (10 mg, 14 units per box)	No
Valerian extract	No	-	-	No

Drug name	Is it available in DRC?	Form	Price per box	Is the drug typically included on national essential drugs medicines list?
Melatonin	Yes	Tablet	USD 35 (2 mg, 30units per box)	No
<b>Medication to treat side effects of antipsychotics/anti-Parkinsonism</b>				
Biperidene	No	-	-	No
Trihexyphenidyl	Yes, but typically difficult to find	Tablet	USD 3 (5 mg, 20 units per box)	No

## 16.5 NGOs

National and international NGOs have an important role in community level provision of mental health services. Many of the NGOs focus their mental health programmes on supporting victims of sexual and gender-based violence. For instance, Médecins Sans Frontières (MSF),<sup>604</sup> International Rescue Committee,<sup>605</sup> Care International<sup>606</sup> and International Medical Corps<sup>607</sup> all provide programmes related to mental health. The activities of these NGOs are focused on Eastern provinces and the Kasai region in central DRC.

Mental health and psychosocial support programmes also target victims of the Ebola epidemic and their families. A report by UNICEF states that in 2019, there were 1 100 psychologists trained to support patients and their families.<sup>608</sup> Other organisations supporting mental health interventions include the Danish Refugee Council.<sup>609</sup>

Of note, there are over 50 national and international NGOs operating in DRC.<sup>610</sup> Supporting victims of violence in all its forms is a core objective of many of these organisations. The above list of NGOs and their operations should not be considered an exhaustive depiction of all community-based mental health services.

<sup>604</sup> MSF, Médecins Sans Frontières, n.d, [url](#)

<sup>605</sup> IRC, International Rescue Committee, Democratic Republic of the Congo: Strategy Action Plan, 2020, [url](#), p. 3

<sup>606</sup> Care International, Democratic Republic of Congo, n.d, [url](#)

<sup>607</sup> IMC, International Medical Corps, Democratic Republic of the Congo, n.d, [url](#)

<sup>608</sup> UNICEF, Supporting Ebola patients and their families, December 2019, [url](#)

<sup>609</sup> WHO, World Health Organization, Psychological support for life after Ebola, June 2019, [url](#)

<sup>610</sup> WHO, World Health Organization, Health Cluster, September 2020, [url](#)



# 17 Pulmonology: Asthma, Chronic Obstructive Pulmonary Disease and Obstructive Sleep Apnoea

## 17.1 General Information

### 17.1.1 Epidemiological context

Respiratory illnesses include a number of diseases which affect the lungs and other parts of the respiratory system. Respiratory illnesses, in particular asthma and chronic obstructive pulmonary disease (COPD), are a significant burden in the DRC.<sup>611</sup> The 2019 Global Burden of Disease (GBD) study estimates that the prevalence of chronic respiratory illnesses stands at 4.01%, equivalent to over 3.4 million people. This includes asthma and COPD for which their disaggregated prevalence is estimated at 3.09% and 1.01%, respectively.<sup>612</sup> Other studies suggest that the prevalence of different types of respiratory illnesses are significantly higher.<sup>613</sup> A study carried out in 2017 estimated the prevalence of asthma among adults in Kinshasa to be 6.9%.<sup>614</sup> In line with global trends whereby asthma is more prevalent in urban areas, the general population prevalence is likely to be slightly lower.<sup>615</sup>

Data on COPD in DRC is very limited. Systematic reviews estimate that the prevalence in sub-Saharan African countries is between 4% and 25% of the population.<sup>616</sup> Globally, COPD is the third most common cause of death and an estimated 90% of deaths are believed to occur in low- and middle-income countries.<sup>617</sup>

Key risk factors for COPD and asthma in DRC are household air pollution, occupational exposures and smoking. With regard to occupational exposures, construction workers and mine workers are among key at-risk groups.<sup>618</sup> In addition, asthma and COPD are important risk factors for lower respiratory tract infections and increase the likelihood and severity of a disease.<sup>619</sup> In DRC, lower respiratory tract infections are the third leading cause of death.<sup>620</sup>

With regard to obstructive sleep apnoea, globally there is a lack of reliable prevalence data and most information is derived from studies in high-income countries. A recent estimate suggests that over 900 million people across the globe have obstructive sleep apnoea.<sup>621</sup> Key risk factors for obstructive sleep apnoea relate to cardiovascular diseases and include obesity.<sup>622</sup> Although the number of people

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<sup>611</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>612</sup> IHME, Institute of Health Metrics, GBD Results Tool, 2019, [url](#)

<sup>613</sup> Kabengele, B, et al., Prevalence and determinants of asthma in adults in Kinshasa, Plos One, May 2019, [url](#), p. 1

<sup>614</sup> Kabengele, B, et al., Prevalence and determinants of asthma in adults in Kinshasa, Plos One, May 2019, [url](#), p. 1

<sup>615</sup> The majority of the population of DRC live in rural settings.

<sup>616</sup> Finney, L, et al., Chronic obstructive pulmonary disease in sub-Saharan Africa: a systematic review, Int. Journal of Tuberculosis and Lung Disease, January 2013 [url](#), p. 1

<sup>617</sup> WHO, World Health Organization, Chronic obstructive pulmonary disease (COPD) Key Facts, December 2017, [url](#)

<sup>618</sup> Mbelambel, E. et al., Prevalence of chronic obstructive pulmonary disease among Congolese cement workers exposed to cement dust, 16 October 2018, [url](#), p. 1

<sup>619</sup> WHO, World Health Organization, The Global Impact of Respiratory Disease, 2017, [url](#)

<sup>620</sup> IHME, Institute for Health Metrics, DRC Dashboard, 2019, [url](#)

<sup>621</sup> Benjaidel, A. et al., Estimation of the global prevalence and burden of obstructive sleep apnoea: a literature-based analysis, The Lancet, August 2019, DOI: [url](#), p. 1

<sup>622</sup> Gulotta, G. et al., Risk Factors for Obstructive Sleep Apnoea Syndrome in Children: State of the Art, September 2019, [url](#), p. 3

who are obese in DRC is increasing, the national prevalence of 3.7% is significantly lower than the global average of 13%.<sup>623</sup> It is therefore probable that the prevalence of sleep apnoea is increasing but nonetheless lower than the global average.<sup>624</sup>

### 17.1.2 Strategies and policies for treatment and management of respiratory illness

The National Health Development Plan (Plan National de Développement Sanitaire 2016-2020, PNDS) makes some reference to respiratory infections.<sup>625</sup> The list of essential health centre and hospital services includes the treatment of pneumonia.<sup>626</sup> However, there is no reference to other respiratory infections or diseases.<sup>627</sup>

In addition to the PNDS, strategic priorities of the ministry of health are detailed in documents known as programmes.<sup>628</sup> There is evidence that a national programme against acute respiratory tract infections (Programme National de Lutte Contre les Infections Respiratoires Aigues) has been developed.<sup>629</sup> However, the programme was not made available for review. Similarly, a targeted national programme to address the prevalence of smoking has also been developed but was not made available.<sup>630</sup>

The PNDS does not refer to obstructive sleep apnoea, nor do the other national level documents reviewed.<sup>631</sup>

The WHO provides important technical support to the Ministry of Health. The key priorities of the support provided are outlined in the Strategic Cooperation of WHO with DRC 2017-2021 (Stratégie de Coopération de l'OMS avec le pays de la République Démocratique du Congo 2017-2021).<sup>632</sup> Although the cooperation agreement includes the strengthening of health services for noncommunicable diseases (NCDs), details are not provided on the NCDs which will be prioritised.<sup>633</sup> As a result, it is not clear whether respiratory tract illnesses, such as asthma and COPD, would be included.<sup>634</sup> The cooperation also does not include reference to respiratory tract infections, such as pneumonia.<sup>635</sup>

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<sup>623</sup> World Health Organization, Country Profile Democratic Republic of Congo, 2016, [url](#)

<sup>624</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>625</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 49

<sup>626</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), pp. 87-94

<sup>627</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>628</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>629</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>630</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

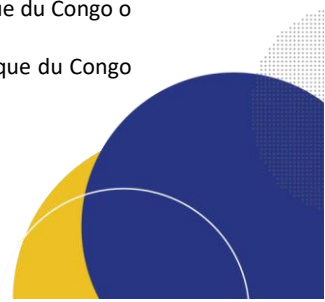
<sup>631</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#)

<sup>632</sup> WHO, World Health Organization, Stratégie de Coopération de l'oms avec le pays République Démocratique du Congo 2017-2021, [url](#)

<sup>633</sup> WHO, World Health Organization, Stratégie de Coopération de l'oms avec le pays République Démocratique du Congo o 2017-2021, [url](#) pp.57

<sup>634</sup> WHO, World Health Organization, Stratégie de Coopération de l'oms avec le pays République Démocratique du Congo o 2017-2021, [url](#)

<sup>635</sup> WHO, World Health Organization, Stratégie de Coopération de l'oms avec le pays République Démocratique du Congo 2017-2021, [url](#)





### 17.1.3 Healthcare provisions for treatment and management of respiratory illness

Treatments available for respiratory illnesses from primary care facilities include consultations with non-specialist medical staff and access to basic medications. At a community level, health centres should be able to treat acute respiratory illnesses, depending on the availability of medicines.<sup>636</sup> For treatments related to chronic conditions, such as asthma, patients can access more specialist consultations at provincial level hospitals. However, provincial hospitals often face significant infrastructure challenges and lack a continuous supply of electricity and water.<sup>637</sup> For specialist consultations, patients must visit Kinshasa where health facilities are better resourced. Health facilities able to treat chronic respiratory conditions include ‘the principle large medical centres of Kinshasa’.<sup>638</sup> These are:<sup>639</sup>

- Public sector:
  - Kinshasa University Clinic (Clinique Universitaire de Kinshasa)
  - Kinshasa General Hospital (Hôpital Général de Kinshasa)
- Private sector (For Profit):
  - HJ Hospital Kinshasa (HJ Hôpitaux Kinshasa).<sup>640</sup> The HJ Hospitals also have facilities in Lubumbashi and Goma<sup>641</sup>
  - Diamant Medical Centre (Centre Médical Diamant)<sup>642</sup>
  - Medical Centre Kinshasa (Centre Médical de Kinshasa)<sup>643</sup>

## 17.2 Access to Treatment

Access to healthcare in DRC is limited, particularly for specialised care. A factor contributing to low access to healthcare includes poor availability of medicines at health facilities.<sup>644</sup> A representative sample of health centres were reviewed in 2017 and 2018 to assess availability of different diagnostic and treatment services in health facilities.<sup>645</sup> This found that fewer than 20% of health facilities offered treatment options for asthma or COPD.<sup>646</sup>

As outlined in [chapter 1](#), DRC suffers from significant supply chain challenges which greatly limit the availability of medicines. The central and the southern province are particularly affected by the weak

<sup>636</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>637</sup> Sion, M. et al., A resource planning analysis of district hospital surgical services in the Democratic Republic of the Congo, *Global Health: Science and Practice*, 2015 [url](#), p. 1

<sup>638</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>639</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>640</sup> HJ Hospitals, n.d, [url](#)

<sup>641</sup> HJ Hospitals, n.d, [url](#)

<sup>642</sup> Centre Medical Diamant, n.d, [url](#)

<sup>643</sup> CMK, Centre Medical de Kinshasa, n.d, [url](#)

<sup>644</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), pp. 60-61 and 82-83

<sup>645</sup> Study reviewed availability of services in a total of 1,380 health facilities proportionately distributed across provinces. This was carried out between November 2017 and April 2018.

<sup>646</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), pp. 251-260

supply chains and often experience the greatest duration of stock interruptions.<sup>647</sup> Medications used to treat respiratory diseases are exposed to the same weak supply chains. As a result, individuals are often required to travel significant distances in order to find medicines or specialist care.<sup>648</sup> Other factors which limit access to treatment include the cost of care (discussed below) and lack of affordable transport. A lack of transport facilities particularly affects access to emergency care for example during asthma attacks and pulmonology crisis.<sup>649</sup>

### 17.3 Cost of Treatment

There are no financial support programmes for the treatment of patients with chronic lung conditions.<sup>650</sup> The vast majority of household healthcare spending is through out-of-pocket payments at the point of care.<sup>651</sup> Out-of-pocket payments at the point of care are a significant barrier to healthcare. For the majority of the population, treatment beyond primary care consultations are not economically accessible.<sup>652</sup>

The prices below were gathered from a range of clinics based in Kinshasa and provide an indication of the cost of healthcare services. The total costs incurred by patients can be approximated by summing all relevant services.<sup>653</sup>

Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
<b>Clinical admission</b>					
Pulmonology department (daily rates)	USD 10-20	USD 20-30	USD 30	USD 30	No
<b>Specialist consultation</b>					
General practitioner	USD 5	USD 5	USD 20	USD 20	No
Pulmonologist	USD 10	USD 10	USD 30	USD 30	No
<b>Diagnostic research</b>					
Lung function tests	USD 50	USD 50	USD 100-110	USD 100-110	No
<b>Medical devices</b>					

<sup>647</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>648</sup> Motomoke, E, Village reach, On Road and River: Distributions begin in DRC, August 2017, [url](#)

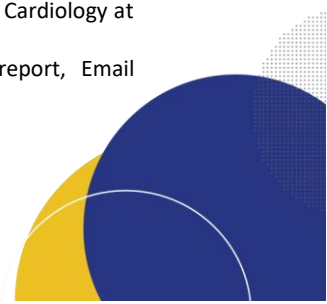
<sup>649</sup> Kalisya, L. et al., The state of emergency care in Democratic Republic of Congo, African Journal of Emergency Medicine, August 2015, [url](#), p. 156

<sup>650</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>651</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé, République Démocratique du Congo, November 2018, [url](#), p. 41

<sup>652</sup> EASO2, Director of a national programme within the Ministry of Health and Medical Director and Head of Cardiology at prominent Kinshasa based facility, Email Correspondence, August 2020

<sup>653</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020



Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
Spacer (with mask) for inhaler with asthma medication	USD 20	USD 20	USD 20	USD 20	No
Nebulizer	USD 15	USD 15	USD 15	USD 15	No
Breathing machines (ventilator, respirator, etc.)	Not available	USD 900	USD 900	USD 900	No
CPAP therapy	Not available	USD 5	USD 5	USD 5	No

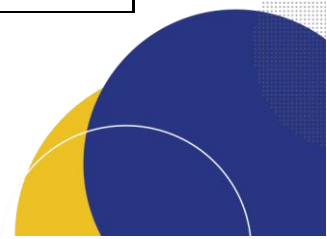
## 17.4 Cost of Medication

Many of the medicines used to treat respiratory illnesses are not available in DRC. The availability and price of medications was collected from eight registered pharmacies based in Kinshasa.<sup>654</sup> Medicines which are only available in the informal market have not been included.

Drug name	Available in DRC?	Form	Price per box	Is the drug typically included on national essential medicines list?
Salmeterol + fluticasone (propionate)	No	-	-	No
Formoterol + budesonide [combination]	No	-	-	No
Fluticasone (propionate) + formoterol	No	-	-	No
Ipratropium + fenoterol (combination)	Yes	Tablet	USD 25 (50 mcg/20 mcg, 5 units per box)	No
Salbutamol + ipratropium	No	-	-	No
Indacaterol + glycopyrrolate (combination)	No	-	-	No
Tiotropium + olodaterol	No	-	-	No

<sup>654</sup> Please refer to the Introduction for further details on the methodology of price data collection

Drug name	Available in DRC?	Form	Price per box	Is the drug typically included on national essential medicines list?
Formoterol + budesonide [combination]	No	-	-	No
Budesonide + salmeterol (combination)	No	-	-	No
Beclometasone + formoterol + glycopyrronium	No	-	-	No
Aclidinium + formoterol	No	-	-	No
Beclometasone + formoterol (combination)	No	-	-	No
Vilanterol + fluticasone furoate (combination)	No	-	-	No
Montelukast sodium	yes	Tablet	USD 22 (10 mg, 30 units per box)	No
Salbutamol	Yes		USD 10 (2.5 mg /2.5 ml, 60 units per box) (Spray) USD 60 (5 mg /2.5 ml, 10 units per box) (vial) USD 3 (5 mg /2.5ml, 1 unit per box) (syrup) USD 7.125 (1 mg, 10 units per box) (Suppository)	Yes
Salmeterol	No	-	-	No
Cromoglicic acid	No	-	-	No
Terbutaline	No	-	-	No
Formoterol	No	-	-	No
Theophylline	Yes		USD 30 (400 mg, 50 units per box)	Yes
Ciclesonide	No	-	-	No
Beclometasone	Yes	Spray	USD 40 (250 mcg, 1unit per box) USD 20 (125 mcg, 1 unit per box)	Yes
Budesonide	Yes	Suspension	USD 100 (1 mg /2ml, 20 units per box)	No



Drug name	Available in DRC?	Form	Price per box	Is the drug typically included on national essential medicines list?
Fluticasone	Yes	Spray	USD 20 (12 mcg, 1 unit per box)	No
Ipratropium	No	-	-	No
Tiotropium	No	-	-	No
Ipratropium bromide monohydrate	Yes	Tablet	USD 15 (10 mcg, 10 units per box)	No
Glycopyrronium bromide	No	-	-	No
Acridinium bromide	No	-	-	No

## 17.5 NGOs

Chronic respiratory illnesses are not cited among the priority healthcare interventions supported by the large international NGOs which operate in DRC (such as MSF and IMC). There are number of advocacy organisations which aim to raise awareness of the respiratory illnesses faced by those who work in the informal mining sector.<sup>655</sup> However to date, there has not been a large NGO response to implementing healthcare interventions.

Treatments for acute respiratory tract infections are supported by some NGOs. The medical international NGO, International Medical Corps (IMC), supports 64 clinics and hospitals. These are located in the Eastern provinces of North Kivu, South Kivu and Tanganyika. These facilities are equipped to treat lower respiratory tract infections, such as pneumonia.<sup>656</sup>

<sup>655</sup> Amnesty, DRC: Alarming research shows long lasting harm from cobalt mine abuses, May 2020, [url](#)

<sup>656</sup> IMC, International Medical Corps, Democratic Republic of Congo, n.d, [url](#)

# 18 Tuberculosis

## 18.1 General Information

### 18.1.1 Epidemiology

DRC has a high burden of tuberculosis (TB) infections. DRC is ranked ninth in the world and second in Africa for total number of TB infections.<sup>657</sup> The Global TB report publishes 3 lists of the 30 countries with highest burden of TB, TB/HIV coinfection and multidrug-resistant TB (MDR-TB). DRC is 1 of 14 countries to appear on all 3 lists.<sup>658</sup>

In 2018, approximately 270 000 people fell ill with TB, representing 321 cases per 100 000. Of these, approximately 11% were coinfecting with HIV.<sup>659</sup> MDR-TB is a growing concern. Of new TB infections in 2018, approximately 1.7% of cases were MDR-TB cases rising to 9.5% for previously treated cases.<sup>660</sup> In spite of these challenges, there have been notable improvements across key indicators. Since 2010, the rate of new cases has steadily declined from 327 to 321 cases per 100 000 people. Similarly, the number of deaths attributable to TB in those not co-infected with HIV has steadily decreased from 57 to 51 per 100 000 people.<sup>661</sup>

### 18.1.2 Policies and strategies

Addressing TB is a key priority for the Ministry of Health and the Government of DRC.<sup>662</sup> The national response to TB is coordinated by the National Programme for the Fight Against Tuberculosis (PNLT, Plan stratégique National de Lutte Contre La Tuberculose).<sup>663</sup> This coordinating body is part of the Ministry of Health and responsible for drafting and overseeing the National Strategy for the Fight Against Tuberculosis 2018-2020.<sup>664</sup> The current strategy builds on previous strategies, the first of which was published in 1980.<sup>665</sup> The general objective of the Strategy is to contribute to a reduction in mortality and morbidity, as well as catastrophic costs<sup>666</sup> linked to TB. Specifically, this aims to reduce the number of deaths attributable to TB by 20% in 2020 compared to 2015.<sup>667</sup> To do this, the strategy comprises 10 objectives which focus on different dimensions of TB diagnosis and treatment, including scaling up screening services, strengthening service provisions for treatment of HIV co-infection and MDR-TB, as well as strengthening the broader healthcare systems and structures.<sup>668</sup>

<sup>657</sup> PNLT, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secrétariat General, République Démocratique du Congo, 2017 [no url], p. 15

<sup>658</sup> WHO, World Health Organisation, Global Tuberculosis Report, 2019, [url](#), p. 23

<sup>659</sup> WHO, World Health Organization, Tuberculosis Country Profile, 2020, [url](#), p. 37

<sup>660</sup> WHO, World Health Organisation, Tuberculosis Country Profile, 2020, [url](#), p. 58

<sup>661</sup> WHO, World Health Organisation, Tuberculosis Country Profile, 2020, [url](#)

<sup>662</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>663</sup> PNLT, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secrétariat General, République Démocratique du Congo, 2017 [no url]

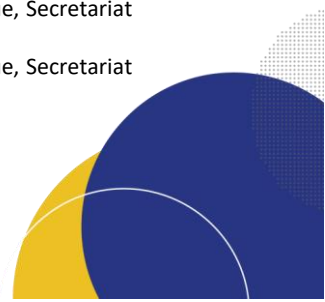
<sup>664</sup> PNLT, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secrétariat General, République Démocratique du Congo, 2017 [no url], pp. 35 - 58

<sup>665</sup> PNLT, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secrétariat General, République Démocratique du Congo, 2017 [no url], p. 35

<sup>666</sup> Defined as costs totalling  $\geq 20\%$  of annual household income.

<sup>667</sup> PNLT, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secrétariat General, République Démocratique du Congo, 2017, p. 110

<sup>668</sup> PNLT, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secrétariat General, République Démocratique du Congo, 2017, pp. 110-111



The implementation of the TB strategy receives significant technical and financial support from numerous international agencies.<sup>669</sup> This includes multilateral agencies, notably the World Bank and WHO, bilateral funders and international NGOs.<sup>670</sup> Latest figures from 2018 show that the TB services were largely financed through international funds. The principal financing agency was the Global Fund which dispersed USD 46.995 million.<sup>671</sup> Domestic funding stood at USD 0.55 million.<sup>672</sup> Total financing needs stood at USD 74.372 million indicating a significant financing gap of USD 26.78 million.<sup>673</sup> The scale of under financing has been relatively consistent since 2015 while the value of domestic contributions has varied from a peak of USD 2.75 million in 2015 and to the lowest at USD 0.188 million in 2017.<sup>674</sup>

Financial resources from State contributions are used primarily for salary and workforce costs.<sup>675</sup>

### 18.1.3 The National Response

The PNLТ strategy states that healthcare implementation and governance for TB should be as follows:<sup>676</sup>

**Central Level** – This includes the directorate for the PNLТ situated within the Ministry of Health. The directorate is responsible for the overall coordination of tuberculosis programme activities. Central level functions also include a National Reference Laboratory, a central warehouse for anti-tuberculosis drugs and a specialist hospital in Kinshasa, ‘Centre d’Excellence Damien’. The hospital is responsible for providing specialist services for multi-drug resistant MDR- TB.<sup>677</sup>

**Intermediate Level** – This includes provincial health officers who form the Provincial Coordination for the fight against Leprosy and Tuberculosis (CPLT, Coordinations Provinciales Lèpre et Tuberculose). Each CPLT oversees a reference laboratory and provides technical support to their respective Health Zones.<sup>678</sup>

**Peripheral Level** –<sup>679</sup> This level constitutes the main point of contact between community members and activities outlined in the PNLТ. Within each health zone, all health centres are expected to be able to screen for TB and provide first-line treatment and monitoring services. At least three health centres should offer diagnostic and treatment services delivered by at least one nurse trained specifically in TB screening and treatment. These centres are consequentially called Health Centres for Diagnosis and Treatment. The principal diagnostic approach uses microscopes with 100x immersion for assessment of sputum samples. GeneXpert machines are used for the diagnosis of TB and to determine whether an individual is infected with MDR-TB. In 2016, there were 84 GeneXpert machines

<sup>669</sup> PNLТ, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General République Démocratique du Congo, 2017, pp. 118-146

<sup>670</sup> PNLТ, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, p. 61

<sup>671</sup> Stop TB Partnership, Country Dashboards, 2018, [url](#)

<sup>672</sup> WHO, World Health Organization, Global Tuberculosis Report 2020 [url](#), p. 137

<sup>673</sup> Stop TB Partnership, Country Dashboards, 2018, [url](#)

<sup>674</sup> Stop TB Partnership, Country Dashboards, 2018, [url](#)

<sup>675</sup> PNLТ, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, [no url], pp. 36-38

<sup>676</sup> PNLТ, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, p. 35

<sup>677</sup> PNLТ, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, p. 35

<sup>678</sup> PNLТ, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, p. 35

<sup>679</sup> PNLТ, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, pp. 35-40

located across the country.<sup>680</sup> The PNLT aims to have 252 machines in place by the end of 2020. Diagnosis services are also provided using magnetic resonance imaging (MRI) scanners. DRC has a lack of MRI scanners; a study by WHO in 2014 stated that there were no scanners available across the country.<sup>681</sup> Some well-resourced hospitals, such as HJ Hospital Kinshasa,<sup>682</sup> now have MRI scanners; however, nationally, these remain few in number.<sup>683</sup>

Health centres which do not have on-site diagnostic facilities are expected to transfer samples to diagnostic centres and offer treatment services. First-line treatment for drug-susceptible TB, directly observed treatment short-course (DOTS) course should be available in all health facilities.<sup>684</sup>

A network of Community Health Workers (CHWs) act as an intermediary between health facilities and their local communities.<sup>685</sup> With regards to TB, CHWs aim to increase coverage of treatment by encouraging healthcare seeking behaviours and promote prevention messaging.<sup>686</sup>

## 18.2 Access to Treatment

It is estimated that 63% of those requiring treatment received services, resulting in a coverage gap of approximately 40%.<sup>687</sup>

A key driver of low coverage rates is lack of availability of treatment and diagnostic services at health facilities.<sup>688</sup> A representative sample of health centres were reviewed in 2017 and 2018 to assess availability of services.<sup>689</sup> Of these, only half were able to provide diagnostic services either directly or through referral. This includes sputum microscopy, rapid diagnostic kits and lung radiography. Of these only 60% offered HIV testing for TB patients. Of health centres offering treatment, only half had first-line medications available at the point of the assessment. Services were least available in health centres and conversely most readily available in hospitals.<sup>690</sup>

The lack of availability of diagnostic and treatment products in community level health facilities, creates a large barrier to accessing TB services.<sup>691</sup> Community members are required to travel greater distances to find facilities with medicines in stock.<sup>692</sup> Other factors limiting access to treatment include, lack of affordable transport, stigma and prohibitive cost of initial consultations.<sup>693</sup>

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<sup>680</sup> PNLT, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo o, 2017, pp. 37

<sup>681</sup> WHO, World Health Organization, Global Health Observatory data repository , September 2016, [url](#)

<sup>682</sup> HJ Hospitals, n.d, [url](#)

<sup>683</sup> PNLT, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, pp. 35-40

<sup>684</sup> PNLT, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, pp. 35-40

<sup>685</sup> DFID, Department for International Development, Effectiveness of community health workers, November 2018, [url](#), p. 2

<sup>686</sup> PNLT, Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020, Ministère de la Santé Publique, Secretariat General, République Démocratique du Congo, 2017, p. 64

<sup>687</sup> WHO, World Health Organisation, Tuberculosis Country Profile, 2020, [url](#)

<sup>688</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

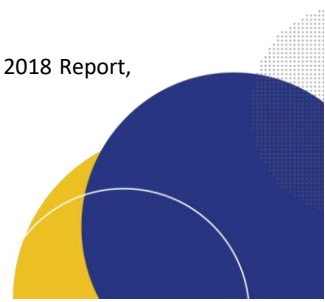
<sup>689</sup> Study reviewed availability of services in a total of 1,380 Health Facilities proportionately distributed across provinces. This was carried out between November 2017 and April 2018.

<sup>690</sup> EPSS, Evaluation des Prestations des Services de soins de Santé, Ecole de Santé Publique de Kinshasa, April 2019, [url](#), pp. 277-286

<sup>691</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>692</sup> Motomoke,E, Village reach, On Road and River: Distributions begin in DRC, August 2017, [url](#)

<sup>693</sup> Stop TB Partnership, TB Community, Right and Gender Assessment in Democratic Republic of the Congo 2018 Report, 2018, [url](#), p. 19





According to a report by Stop TB, key at risk populations include those who are people living with HIV, close contacts of a known case, prison populations, people who work in mines and internally displaced populations. Aside from HIV, active case finding from these other target populations remains low.<sup>694</sup>

### 18.3 Cost of Treatment

There are few health insurance schemes in DRC. The system largely operates through point-of-care payments. These are typically out-of-pocket payments that are often be prohibitive for the poorest.<sup>695</sup>

However, many treatment and care services for TB, particularly medications, are provided free of charge to all patients.<sup>696</sup>

According to treatment protocols, diagnostic tests and medications for TB, including MDR-TB, are free at the point of care.<sup>697</sup> The main costs incurred by patients are related to consultations and inpatient fees. It is estimated that 57% of patients faced catastrophic healthcare costs<sup>698</sup> in 2019 as a result of their TB treatment.<sup>699</sup> Costs vary significantly according to the type of facility in which treatment is received.<sup>700</sup>

In 2018, the average cost of treating patients with drug-susceptible TB was USD 200.<sup>701</sup> For patients with MDR-TB this rises to USD 4 500.<sup>702</sup>

The Government of DRC, along with WHO, is in the process of carrying out a survey on costs faced by TB patients and their households. This aims to understand the key drivers of catastrophic costs in order to standardise the cost of care for patients.<sup>703</sup>

The prices below were gathered from a range of clinics based in Kinshasa and provide an indication of the cost of healthcare services. The total costs incurred by patients can be approximated by summing all relevant services.<sup>704</sup>

Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
<b>Specialist consultation</b>					
Pulmonologist	USD 12.5	USD 12.5	USD 40	USD 40	Free in all public facilities supported by the PNLT

<sup>694</sup> Stop TB Partnership, TB Community, Right and Gender Assessment in Democratic Republic of the Congo 2018 Report, 2018, [url](#), p. 49

<sup>695</sup> PNDS, Plan National de Développement Sanitaire recadré pour la période 2019-2022, Ministère de la Santé République Démocratique du Congo, November 2018, [url](#), p. 41

<sup>696</sup> PNLT, "Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020," Ministry of Public Health, 2017, pp. 149

<sup>697</sup> PNLT, "Plan Stratégique National de Lutte Contre La Tuberculose 2018-2020," Ministry of Public Health, 2017

<sup>698</sup> Defined by WHO as "expenditure is catastrophic if a household's financial contributions to the health system exceed 40% of income remaining after subsistence needs have been met", n.d, [url](#)

<sup>699</sup> WHO, World Health Organization, Tuberculosis Country Profile, 2020, [url](#)

<sup>700</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>701</sup> WHO, World Health Organization, Global Tuberculosis Report 2020 [url](#), p. 141

<sup>702</sup> WHO, World Health Organization, Global Tuberculosis Report 2020 [url](#), p. 142

<sup>703</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>704</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

Cost of treatment	Public outpatient treatment price	Public inpatient treatment price	Private outpatient treatment price	Private inpatient treatment price	Reimbursement / special programme / free
TB specialist	USD 12.5	USD 12.5	USD 40	USD 40	Free in all public facilities supported by the PNLT
<b>Medical imaging</b>					
PET Scan	Not available	Not available	Not available	Not available	No
Radiography	USD 25-40	USD 25-40	USD 40-45	USD 40-45	No
<b>Laboratory tests</b>					
Resistance test for tuberculosis drugs	USD 5-10	USD 5-10	USD 7.5 (Colouration gram) USD 25 – 40 (standard culture and Lowenstein culture)	USD 7.5 (Coloration gram) USD 25 – 40 (standard culture and Lowenstein culture)	No
Sputum smear microscopy			USD 7.5	USD 7.5	Free in all public facilities supported by the PNLT

## 18.4 Cost of Medication

National procurement of TB medications is supported by the Global Drug Facility (GDF) of the Stop TB partnership.<sup>705</sup> The GDF facilitates pooled procurement of medications to decrease drugs prices and directly procures medications for some countries including DRC.<sup>706</sup>

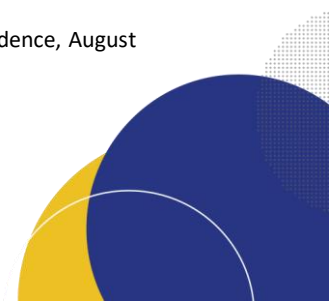
TB medications are closely controlled and governed by the Ministry of Health. They are stored in a central warehouse in Kinshasa and dispersed to registered health centres according to need. In order to reduce the number of cases of MDR-TB, medications are only administered from facilities supported by the PNLT through directly observed treatment protocols.<sup>707</sup> However, drug shortages are relatively common, particularly in rural Health Centres, which in turn increases the likelihood that patients develop MDR-TB.<sup>708</sup>

<sup>705</sup> The Global Development Facility, Stop TB Partnership, n.d, [url](#)

<sup>706</sup> The Global Development Facility, Stop TB Partnership, n.d, [url](#)

<sup>707</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020

<sup>708</sup> EASO4, Medical Doctor and Monitoring and Evaluation officer in the Ministry of Health, Email Correspondence, August 2020



Drug name	Available in DRC?	Form	Price per box	Is the drug included on lists like national essential drugs list?
<b>First line TB medicines</b>				
Combination of Isoniazid + Rifampicin + Ethambutol + Pyrazinamide (e.g. with brand name Forecox)	Yes	Tablet	Free (500 mg, 30/60/120/240 units per box) Free (1 g, 30/60/120/240 units per box)	Free in all public facilities supported by the PNLT
Combination of Isoniazid + Rifampicin	Yes	Tablet	Free (300 mg/600 mg, 75 mg/150 mg 840/1 000 units per box)	Free in all public facilities supported by the PNLT
Pyrazinamide	Yes	Tablet	Free (400 mg, 1 000 units per box) Free (500 mg, 1 000 units per box)	Free in all public facilities supported by the PNLT
Rifampicin	Yes	Tablet	Free (150 mg, 100 units per box)	Free in all public facilities supported by the PNLT
Ethambutol	Yes	Tablet	Free (400 mg, 100/ units per box)	Free in all public facilities supported by the PNLT
Isoniazid	Yes	Tablet	Free (100 mg, 1 000 units per box); for children Free (300 mg, 1 000 units per box); for adults	Free in all public facilities supported by the PNLT
<b>Second/ third line TB medicines (e.g. with MDR and XDR TB and/or HIV+TB)</b>				
Moxifloxacin	Yes	Tablet	Free (400 mg, 20 units per box)	Free in all public facilities supported by the PNLT
Amikacine	Yes	Capsule	Free (1 g, 10 units per box)	Free in all public facilities supported by the PNLT
Rifabutin	No	-	-	No
Bedaquiline	Yes	Tablet	Free (100 mg, 28 units per box)	Free in all public facilities supported by the PNLT
Linezolid	Yes	Tablet	Free (600 mg, 30 units per box)	Free in all public facilities supported by the PNLT
Terizidone	Yes	Tablet	Free (250 mg, 1 unit per box)	Free in all public facilities supported by the PNLT
Clofazimine	Yes	Tablet	Free (100 mg, 100 units per box)	Free in all public facilities supported by the PNLT
Cycloserine	Yes	Tablet	Free (250 mg, 100 units per box)	Free in all public facilities supported by the PNLT

Drug name	Available in DRC?	Form	Price per box	Is the drug included on lists like national essential drugs list?
Delamanid	Yes	Tablet	Free (100 mg, 48 units per box)	Free in all public facilities supported by the PNLT
Para aminosalicylic acid (= PAS, or 4-aminosalicylic acid)	Yes	Tablet	Free (50 mg, 16 units per box) Free (100 mg, 16 units per box)	Free in all public facilities supported by the PNLT

## 18.5 NGOs

There is a significant presence of national and international non-government organisations (NGOs) integrated into the health sector. The Health Cluster, led by the World Health Organization, coordinates agencies involved in providing health services in DRC. There are 24 international NGOs and 31 national NGOs involved in the DRC health cluster.<sup>709</sup> The majority of organisations operate in Eastern provinces and Kinshasa. As TB is a priority disease for the Ministry of Health, there is relatively significant NGO investment and cooperation relative to other disease areas.<sup>710</sup>

<sup>709</sup> WHO, World Health Organization, Health Cluster Democratic Republic of Congo, June 2020, [url](#)

<sup>710</sup> EASO1, Medical Doctor and local consultant responsible for in-country data collection of the report, Email Correspondence, August-November 2020



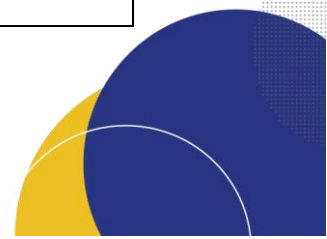
## Annex 1: Core Medicines Price List

The price of medications was collected from eight registered pharmacies based in Kinshasa.<sup>711</sup> Medicines which are only available in the informal market have not been included.

Drug name	Is it available in DRC?	Form	Price per box	Is the drug included on the national essential drugs medicines list?
<b>Painkillers</b>				
Morphine	YES	Injections	USD 7.5 (10 mg, 10 units per box)	YES
		Tablet	USD 27 (10 mg, 14 units per box) USD 30 (20 mg, 14 units per box)	
Tramadol	YES	Injections	USD 10 (50 mg, 5 vials per box).	YES
		Tablets	USD 55 (50 mg, 100 tablets per box) USD 18 (100 mg, 100 units per box)	
Oxycodone	NO	-	-	NO
Diclofenac	YES	Tablet	USD 11 (100mg, 100 units per box).	YES
		Gel	USD 4 (50 g of Gel 1%)	
		Suppository	USD 6.5 (100 mg, 10 units per box)	
<b>Antibiotics and vaccinations</b>				
Amoxicillin	YES	Injections	USD 0.5 (500 mg 1 unit per box)	YES
		Tablets	USD 3 (500 mg, 50 units per box); USD 6.5 (1 000 mg, 20 units per box)	
Trimethoprim	NO	Injections	Mostly used in combined form i.e.: Bactrim (Sulfamethoxazine+Trimethoprim)	YES
		Tablets	Mostly used in combined form i.e.: Bactrim	

<sup>711</sup> Please refer to the Introduction for further details on the methodology of price data collection

Drug name	Is it available in DRC?	Form	Price per box	Is the drug included on the national essential drugs medicines list?
			(Sulfamethoxazine+Trimethoprim)	
Cefuroxime	YES	Injections	USD 6 (75 mg, 20 units per box)	YES
		Tablets	USD 15 (500 mg, 10 units per box) USD 11 (250 mg, 10 units per box)	
Ampicillin	YES	Injections	USD 50 (500 mg, 1 unit per box)	YES
		Tablets	USD 25 (500 mg, 20 units per box)	
Ciprofloxacin	YES	Injections	USD 7 (500 mg, 10 units)	YES
		Tablets	USD 5 (500 mg, 20 units per box) USD 9 (750 mg, 20 units per box)	
Levofloxacin	YES	Injections	USD 19 (200 mg, 10 units per box)	YES
		Tablets	USD 41 (500 mg, 10 units per box) USD 33 (500 mg, 5 units per box) USD 17.5 (500 mg, 10 units per box)	
Penicillamine	YES	Tablets	USD 35 (500 mg, 30 units per box)	YES
Amoxicillin + Clavulanic acid (combination)	YES	Injections	USD 10 (1.2g, per injection)	YES
		Tablets	USD 9 (500mg, 16 units per box)	
		Sachet	USD 11 (1000 mg, 10 sachets per box) USD 13.5 (1g, 16 sachets per box)	
Phenoxyethylpenicillin	YES	Injections	USD 19.2 (1 g, 50 units per box)	YES
		Tablets	USD 17.5 (1 g, 12 units per box)	



Drug name	Is it available in DRC?	Form	Price per box	Is the drug included on the national essential drugs medicines list?
Trimethoprim AND Sulfamethoxazole (Cotrimoxazole)	YES	Tablets	USD 5 (960, 10 units per box) USD 3 (480 mg, 20 units per box)	YES
Nitrofurantoin	YES	Tablets	USD 24 (100 mg, 50 units per box)	YES
Tetracycline	YES	Tablets	USD 4.5 (250 mg, 10 units per box)	YES
Metronidazole	YES	Tablets	USD 5 (250 mg, 20 units per box) USD 5 (500 mg, 14 units per box)	YES
Clindamycin	YES	Injections	USD 12. (600 mg, 10 units per box).	YES
		Capsules	USD 15 (300 mg, 16 units per box) USD 8 (150 mg, 12 units per box).	
Azithromycin	YES	Tablets	USD 17.5 (250 mg, 6 units per box) USD 34 (500 mg, 6 units per box). USD 23 (500 mg, 3 units per box).	YES
Clarithromycin	YES	Tablets	USD 24 (500 mg, 10 units per box). USD 10 (500 mg, 10 units per box).	YES
Diphtheria, Tetanus, Pertussis (acellular) Hib vaccine	YES	Injection	USD 60 (0.5 mg, 10 units per box).	YES
Poliomyelitis (inactivated) vaccine	YES	Injection	Free 0.5 mg. (20 units per box)	YES
Influenza vaccine	YES	Injection	USD 45 (90.5mg, 20 units per box).	NO
Measles vaccine	YES	Injection	USD 123 (0.5 mg, 500 units per box (10 vials of 50 doses)	YES
Mumps vaccine	YES	Injection	USD 123 (0.5 mg, 10 units per box)	NO

Drug name	Is it available in DRC?	Form	Price per box	Is the drug included on the national essential drugs medicines list?
Pneumococcal vaccine	YES	Injection	USD 65 (0.5 mg, 10 units per box)	NO
Rubella vaccine	YES	Injection	USD 50 (0.5 mg, 10 units per box)	NO





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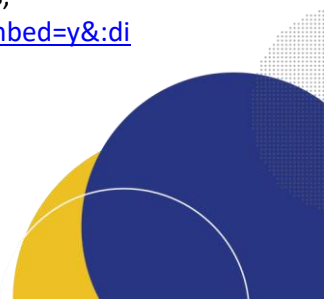
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# Annex 3: Terms of Reference for the MedCOI report on the Democratic Republic of Congo (DRC)

## Topical reports:

- HIV
- TB
- Hepatitis B/C
- Psychiatry (depression, anxiety disorders like PTSD, psychotic disorders like schizophrenia, bipolar disorder, sleeping disorders)
- Neurology (epilepsy, CVA)
- Diabetes
- Cardiovascular diseases (hypertension, myocardial infarction, heart failure, heart rhythm disorders)
- Nephrology (kidney diseases; renal failure)
- Pulmonology (asthma, COPD, sleep apnoea)
- Haematology (anaemia; like iron deficiency anaemia and sickle cell anaemia, + blood clotting disorders)

## Detailed content instructions topical reports:

### General information

- Prevalence and incidence of diseases (epidemiologic data)
- How is the health care organized for this disease?
  - How is the disease treated – at specific centres, in primary health care centres, secondary care / hospitals, tertiary care etc.?
  - Which kinds of facilities can treat the disease (public, private not for profit (e.g. hospitals run by the church), private for profit sector)?
- How are the resources organized in general to treat patients with this disease? Are there sufficient resources available to treat all patients?
- Is treatment of this disease possible in public hospitals?
- Are there any national plans or programmes for this disease?
- Are there any international plans or (donor) programmes for this disease?

### Access to treatment:

- Specific treatment programmes?
- Specific state (eg insurance or tax) covered programmes? Are there any factors limiting the access to healthcare for patients? If so, are they economic, cultural, geographical, etc.? Are there any policies to improve access to healthcare and/or to reduce the cost of treatments and/or medication? What is the number of people having access to treatment?
- Is the treatment geographically accessible in all regions?



- What is the 'typical route' for a patient with this disease (after being diagnosed with the disease)? In other words: for any necessary treatment, where can the patient find help and/or specific information? Where can he receive follow-up treatment?
- What must the patient pay and when?
- Is it the same scenario for a citizen returning to the country after having spent a number of years abroad?
- What financial support can a patient expect from the government, social security or a public or private institution? Is treatment covered by social protection or an additional/communal health insurance? If not, how can the patient gain access to a treatment?
- Any occurrences of discrimination for people with this disease?

**Insurance and national programmes:**

- National coverage (state insurance)
- Programmes funded by international donor programmes, e.g. Global Fund, UNAIDS, Unicef, Gates foundation, Clinton foundation etc
- Include any insurance information that is specific for patients of this disease

**Cost and coverage of available treatments:**

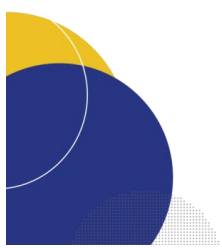
- In the table, indicate the price for inpatient and outpatient treatment in public and private facility and if the treatments are covered by any insurance.
- For inpatient, indicate what is included in the cost (bed/daily rate for admittance, investigations, consultations...).
- Is there a difference with respect to prices between the private and public facilities?
- Are there any geographical disparities?
- Are the official prices adhered to in practice?

**Medication costs:**

- Of the available medicines
- Are the available medicines in general accessible in the whole country or are there limitations?
- Are the medicines registered in DRC? If yes, what are the implications of it being registered?
- Indicate in the table:
  - o generic name, brand name, dosage, form, pills per package, official prices, source, insurance coverage:
    - Are (some of the) medicines mentioned on any drug lists like national lists, insurance lists, essential drug lists, hospital lists, pharmacy lists etc.?
      - If so, what does such a list mean specifically in relation to coverage?
    - Are there other kinds of coverage, e.g. from national donor programmes or other actors?

**NGOs**

- Are any NGOs or international organisations active for patients of this disease? What are the conditions to obtain help from these organisations? What help or support can they offer?





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Doi: 10.2847/40625