Report on palliative care development in Benin based on WHO indicators

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Acronymes

- **WHO:** World Health Organization
- **ICS:** Institute for Culture and Society
- **PC:** Palliative Care
- **CNHU-HKM:** National Hospital and University Centre Hubert Koutoukou Maga
- **PNLMNT:** National Programme for fighting non-communicable diseases
- **CNHU:** National Hospital and University Centre
- **PHC:** Primary Health Care
- **PNSP:** National Palliative Care Programme
- **PQSP:** Five-Year Palliative Care Plan
- **SDGs:** Sustainable development goals

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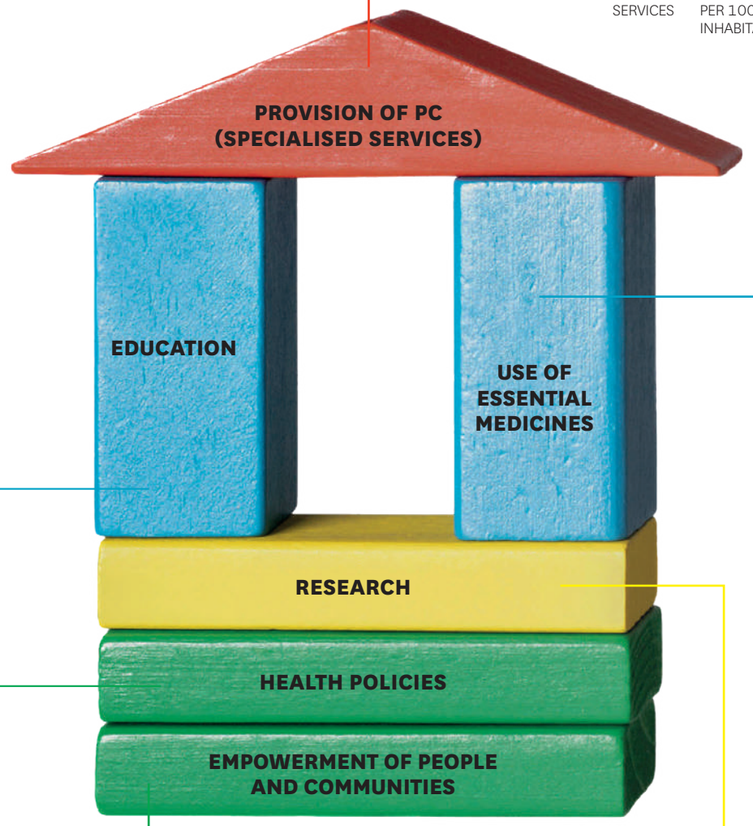
Benin

Monitoring framework for Palliative Care

6 dimensions and 18 indicators to measure the development of Palliative Care



Adult PC specialized services

1

11 / 0.08

SERVICES — PER 100,000 INHABITANTS

Pediatric PC specialized services

1

0

Distribution and variety of PC services

2

YES — **NO**

0/2

Medical schools with a dedicated mandatory

1

0/2

Nursing schools with a dedicated mandatory PC subject

1

Recognition of PC specialty

1

YES — **NO**

Annual opioids consumption

1

0,18 mg

CAPITA/YEAR

Accessibility to immediate-release oral morphine by patients*

1

34,5%

*Data correspond to the three main hospitals (Zou, Comé, Cotonou)

Availability of essentials medicines across health centers

1

16,5%

Availability of oral morphine in hospitals

1

15,9%

30,8 (Urban areas)
9,7 (Rural areas)

National PC plan or strategy

4

YES — NO

Responsible authority for PC in the ministry of health

4

YES — NO

Inclusion of PC in the basic health package at the primary care level

3

YES — NO

Groups promoting the rights of PC patients

4

YES — NO

Advance care planning-related policies

1

YES — **NO**

PC-related research articles

1

0

Active PC research group

1

YES — **NO**

National PC congress

4

YES — NO

Executive Summary

Palliative care (PC) is increasingly seen as a global health issue. This report examines the current state of PC in Benin, Africa, and the challenges the country faces in providing accessible and effective PC to its citizens.

It has been estimated that more than 62,000 Beninese people need PC every year. The report highlights the importance of PC and the efforts of organisations such as the World Health Assembly, the Lancet Commission and the Astana Declaration to encourage governments to integrate PC into their health plans and make it accessible to all.

A two-day hybrid meeting was organised in Cotonou by the WHO Collaborating Centre ATLANTES with WHO-Geneva, WHO-AFRO and WHO-Benin to examine and adapt a set of indicators to cultural realities. The WHO chose Benin and involved stakeholders from the health system, secondary education, vocational training and higher education sectors, as well as the Benin PC Association. ATLANTES provided a data collection tool based on the WHO Conceptual Framework and a four-level rating system: early, intermediate, established and advanced stage. The report highlights the strengths and weaknesses of each indicator and provides a summary of the level of implementation in each area.

The empowerment of individuals and communities is highlighted by two indicators. The first shows a strong national and sub-national presence of PC advocates and patients' rights promoters (advanced stage). The second (early stage) indicates the absence of a national guideline for advance care planning.

With regard to health policies, the Five-Year Plan for PC was validated in 2022 (advanced stage). PC services are included on the list of health services designated as primary care in the General Health Law, but there is as yet no monitoring mechanism for access to these services. A national authority coordinates PC, attached to the Ministry of Health (advanced stage). It has a good scientific and technical structure, as well as an appropriate budget and staff.

As far as research is concerned, there is a National PC Conference planned every year (advanced stage). However, there have been no scientific publications and there are yet no PC-related research groups (early stage).

In relation to the use of essential medicines, the reported annual consumption of opioids in oral morphine equivalent per person is 0.18 milligrams (early stage) and 34% of healthcare establishments, at all levels, have essential medicines for pain and PC. Approximately 16.5% of patients with palliative needs have access to oral morphine in the community or hospital each year (early stage).

As far as training is concerned, none of the medical or paramedical schools offers a compulsory or optional module in PC for basic training (early stages), and there is no official specialisation in palliative medicine for doctors.

The level of PC services (integrated services) is at an intermediate stage: there are 11 specialist PC teams throughout the country (0.08/100,000 inhabitants) but there are as yet no specialist paediatric programmes at the national level.

In conclusion, this assessment highlighted the strengths and weaknesses, as well as areas for improvement in public policy. Despite growing political, professional and community commitment, there are shortcomings in education, research, access to essential medicines and training for future healthcare professionals. The level of availability of PC teams still reflects very poor access to PC for citizens.

Introduction

The WHO technical report "Assessing the development of palliative care worldwide: a set of practical indicators", published in 2021, provides Member States with a robust and globally applicable set of 18 palliative care (PC) indicators that can be used to assess and monitor the development of PC services in countries around the world.

These indicators are based on a Primary Health Care (PHC) approach and include equitable access to an essential package of PC medicines, educational programmes, regulations, health policies, individual and community engagement in decision-making processes, advocacy and research.

The WHO has chosen Benin to pilot the indicators for the first time, in agreement with the national health and education authorities, those responsible for the National Palliative Care Plan and the Benin National Association of PC. The aim of this document is to present a report on the current situation in Benin with regard to palliative care so that planning can be improved and prioritised.

Methodology

Following the report, which already proposed questions for exploration and possible sources of data, a survey was designed, specifying the questions, and the different criteria in order to specifically analyse the state of the aspect considered and establishing four levels of development (depending on the response) for each criterion: early, intermediate, established and advanced stage. The survey was initially designed in English and then translated into French.

The aim of the ATLANTES-WHO Collaborating Centre team, in collaboration with WHO-Geneva and WHO-AFRO authorities and WHO representatives in Benin, was to help countries set up indicators to assess the development of PC in their environments. The project organised a two-day workshop in Cotonou with the ultimate aim of identifying relevant and feasible indicators for the countries. The workshop was attended by 36 people from different parts of the country and with different profiles: Ministry of Health=9, NGOs=1, Universities=3, WHO=6, ATLANTES technical office=5, consultants=1, clinicians=4, national associations=2, and others=5. (See the full list here).

(ATLANTES- CCOMS)

Opening the workshop by the WHO representative residing in Benin, Tania René Bissoumaledjou (in the center), the representative from the Ministry of Health, Ali Imorou Bah Chabi (on the right), and Professor Carlos Centeno (on the left).

To optimise the meeting, a toolkit including a draft questionnaire, the report, an explanatory video and key reference documents were distributed to participants in advance. The meeting/workshop was held to explain all the indicators and the survey, to adapt the indicators culturally and linguistically and to clear up any ambiguities. To choose the most relevant and usable indicators, 13 participants voted on relevance (R) and feasibility (F) of the indicators on a scale of 1 to 5 (1=least, 5=the most).

This makes it possible to calculate a number of statistical measures to ensure the validity of the set of indicators: median (R=5, F=4), content validity index (R=0.85, F=0.23), and disagreement index (R=0.09, F=0.24).

It was also important during this workshop to discuss and evaluate (I) the best sources of data for the indicators (II) and the methods of data collection by the consultant (Dr Freddy Gnangnon).

INDICATORS	DATA SOURCE
I1. PC rights promotion groups	PC National Program
I2. ACP policies	PC legal adviser (sometimes programme, law, other policies)
I3. PC national strategy	Ministry of Health
I4. Inclusion of PC in the list of health services provided at the primary care level	National primary care agency (ANSSP)
I5. National PC coordinating authority	Ministry of Health
I6. National PC congress	National PC Association and literature
I7. Research	Biomedical database
I7.1 Groups dedicated to research	Key informants and National PC association
I8. Opioids consumption	International Narcotics Control Board (INCB)
I9 et 10. Essential medicines and oral morphine at the first level of healthcare	National PC programme
I11. Education in medical and nursing schools	Direct contact with medical and nursing schools
I12. Specialisation	Ministry of Health and higher education
I13 and 14. Specialised PC teams (adults and children)	Ad hoc consultant (after agreement with the Ministry of Health and the National PC Association)

Methodology

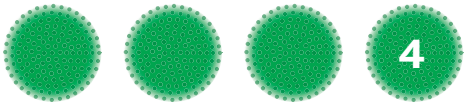
At the initial meeting, the consultant developed the data collection process for the month of April 2023, working online with ATLANTES, WHO Africa, WHO Benin, and Dr Anthelme Agbodandé coordinator of the National Palliative Care Programme. The ATLANTES team then carried out a joint analysis of the data obtained, ensuring data quality control and the accuracy of the analysis.

A national report on the implementation of the palliative care indicators was drawn up and then presented, identifying the current situation of the development of palliative care in Benin, as well as the gaps and suggesting interventions to be included in an action plan for the future. It is important to note that the data sources used are predominantly official (as anticipated), and have only changed for indicators 9 and 10, where the source was a questionnaire sent to the 34 coordinating doctors in the health zones (32 doctors responded to the request. Although nationally representative information is very difficult to obtain (access to morphine for PC patients), this data is the most relevant and representative of the reality in Benin.

Empowerment of people and communities

INDICATOR 1

Existence of groups promoting the rights of patients with PC needs, families, caregivers ad survivors of illness.



Advance stage

There is a strong national and sub-national presence to defend palliative care and promote patients' rights (for example, in the form of a professional PC association).

In Benin, there are several associations involved both at the national and local levels in advocating for the rights of palliative care patients. Some of them, due to their general mission, include associations such as:

1) "SOS Cancer Benin", which since 2016, has carried out awareness-raising campaigns on early detection of breast cancer as part of d'Octobre Rose), celebrations as part of World Cancer Day.

2) the "SPH Foundation against Cancer", which also promotes campaigns and intervenes to advocate for patients' rights in general, and those suffering from cancer in particular.

There are also other specialised associations, such as L'Association Béninoise de Soins Palliatifs which was founded in 2015 following the model of Hospice Africa Uganda, which promoted holistic PC by integrating a clinical, psychosocial and scientific approach. The National PC Association promotes PC through Information Education and Communication sessions, and training at health facilities to encourage the practice of PC. The National PC Association also participates in African workshops for the management of cancer pain in the context of integrated care.

Although there is an absence of a policy on advance care planning, there are active advocacy groups for PC patients.

Other associations involved in PC are:
1. Claire Horizon, which specialises in supporting children in vulnerable situations due to their parent's illness;

2. Médécines à domicile (MEDOM) Benin, which provides home hospitalisation, including for PC patients; and

3. TODJOUMI, which helps PC patients.

The Ministry of Health National Programme for the Fight against Non-Communicable Diseases and National Palliative Care Programme (PNSP) include these organizations.

Empowerment of people and communities

INDICATOR 2

Existence of a national policy or guideline on advance care planning for medical decisions regarding the use of life-sustaining therapies or end-of-life care.

Early stage

Lack of a national policy or guidance on advance care planning.

There are no specific guidelines for advance directives, substitute decision-making, living wills or advance care planning. Although the PNSP is developing these guidelines, they have not yet been validated by the Ministry of Health. However, the **Law 2020 - 37 OF FEBRUARY 3, 2021** on the protection of the health of persons in the Republic of Benin ensures:

- Patients have the right to be informed about their health (Article 6).
- Patients have the right to accept or refuse medical interventions or treatments (Article 7).
- Patients must consent to any medical procedure or treatment (Article 9).
- Patients have the right to refuse care, treatment or medical procedures. (Article 10).
- Practitioners must respect patients' decisions (Article 10).

In relation to a clinical case

M was a 25-year-old patient admitted to the PC Unit of the CNHU-HKM in Cotonou in January 2023. She was in the pleuropulmonary metastatic phase of advanced bilateral breast carcinoma. The initial assessment identified four key problems:

- Pain: diffuse, nociceptive, permanent, intensity Visual Analog Scale 9/10, preventing her from sleep
- Rest dyspnoea: parenchymal metastases and large bilateral pleurisy abundance.
- Anorexia
- Social problems:
  – Loss of job due to illness,
  – Divorced with a 2-year-old son to support,
  – Her only financial support is her mother, who does not have the means to pay for palliative chemotherapy.

Her care in the PC Unit has made it possible to initiate the following actions:

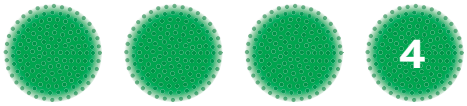
- For pain: receives free morphine oral solution and a regular assessment at home. These interventions have led to an improvement in pain of up to 2/10 continuously.
- For dyspnoea, iterative pleural punctures at home and in the day hospital (free of charge) provided relief.
- Anorexia: the removal of her social isolation helped improve her appetite.
- As far as palliative chemotherapy is concerned, her mother's efforts made it possible for her to undergo a few courses of treatment, but only in a limited way and on an irregular basis.

The patient died on 22 March 2023, but the PC Unit's interventions made it possible to humanise her departure and support her family through the difficult period of bereavement.

Health Policies

INDICATOR 3

Existence at national level of PC strategy with a well-defined implementation framework.



Advanced stage

- Updated within the last 5 years, but not actively evaluated or audited
- Existence of a validated national PC strategy that includes the following criteria: existence of an independent national PC plan AND/OR a law/legislation/government order on PC.
- A comprehensive set of interventions focused on quality PC.
- Broad involvement (but an absence of some key groups)
- Final version published and disseminated
- Guidance recognised by senior health officials as finalised and validated for implementatio
- Existence of a fully operational PC unit capable of implementing national PC plans
- There are assesment mechanisms exist but have not been updated (implemented outside the specified period)
- Detailed description of plans, processes and systems for reaching and meeting the needs of key affected and at-risk populations

Benin has an independent national PC Strategy: The Five-Year Palliative Care Plan (PQSP) in Benin 2022-2026. This plan is recent, was validated in 2022. However, it has not yet been actively evaluated[1,2]. The PQSP- 2022-2026 is the first in Benin. It constitutes a reference framework for activities to improve the quality of life of people with potentially incurable diseases. It reflects the Beninese government's desire to fulfil its commitments to implement the **Sustainable Development Goals (SDGs)**.

Implementation will allow Benin to ensure equitable access to PC, not only to relieve physical pain but also to alleviate the psychological, moral and spiritual suffering of patients and their families. The PQSP aims to guarantee all patients and their families, regardless of gender, religion, socio-economic and cultural conditions, a better quality of life in the face of an incurable, progressive and potentially fatal disease.

Challenges arising from the priority issues include the need to develop

- a normative and legal framework for PC in Benin;
- measures to facilitate patient access to opioids and other PC-specific products;
- innovative and sustainable mechanisms for resource-mobilisation (human, material, financial and infrastructural) for quality PC;
- a functional system of volunteers and professional careers at all levels of the health pyramid and especially in the community;
- a social protection system for palliative patients and their relatives.

The overall budget for the PQSP is estimated at USD 5,575,919 (as of 02-04-20 The Benin Five-Year Palliative Care Plan (PQSP) 2022-2026 is by definition independent of any other plan and specific to PC. (Source: PQSP). **Law 2020 - 37 OF FEBRUARY 3, 2021 on the protection of people's health in the Republic of Benin**, in article 36, promotes PC services.

- The PQSP has a series of strategic domains split into specific actions and activities focused on quality PC[1] Strategic Axis 1: Strengthening governance, leadership, partnership and financial resource mobilisation;

1. Source: Five-Year Plan for Palliative Care.
2. Source: National Palliative Care Program.

Health Policies

- Strategic Area 2: Improving the availability of quality PC human resources at all levels of care;
- Strategic Area 3: Development of quality PC provision at all levels of the health system including community and home settings;
- Strategic Area 4: Availability of health products, technology, infrastructure and other facilities for health care provision at all levels.

Although the process of drafting the plan integrated many community components at all stages (including the Beninese Association for Palliative Care) some components (e.g. cancer patients' association) were not integrated (appendix to the Five-Year Palliative Care Plan, CN PNSP).

The final version of the PQSP has been edited and published and can be downloaded at Forum Palliafrique[1,2].

The Minister of Health, who wrote the introduction to the plan, acknowledged that the strategy contained in the PQSP was final and ready to implement[1].

Benin has a National Plan for PC, it is included in the list of primary health services and there is a national authority responsible for PC in the Ministry of Health

The National Palliative Care Programme is a fully operational PC management unit, capable of implementing national PC plans[3,4,5]. (See also Indicator 5)

The PQSP has a performance framework with specific quantified indicators and targets for each year[6].

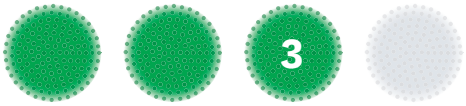
PQSP's Domain 3 contains a clear description of plans, processes and systems to reach and meet the needs of key affected and at-risk populations. The PQSP 2022- 2026 can be downloaded here.

1. Source: Five-Year Plan for Palliative Care.
2. Source: National Palliative Care Program.
3. Source: Decree Establishing the National Palliative Care Program.
4. Source: Decree of Appointment.
5. Source: List of Staff of the National Palliative Care Program.
6. Source: Performance Framework of the Five-Year Plan for Palliative Care.

Health Policies

INDICATOR 4

Inclusion of PC in the list of health services provided at the primary care level in a package of priority services for universal health coverage in the national health system.



Established stage

- PC services are included in the list of health services provided at primary care level in the General Health Act.
- Lack of a mechanism to monitor access to these services. Access to these services is not regularly monitored and is not disaggregated by gender and socio-economic status.

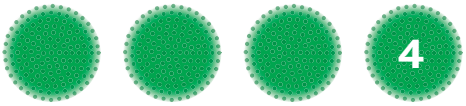
Article 36 of the law **2020-37 of 3 February 2021 on the protection of people's health in the Republic of Benin** stipulates that the state must promote access to PC. The national training guide for community health workers contains a PC module. The guide was written by the CNLS -TP which is directly attached to the Presidency of the Republic of Benin. https://sgg.gouv.bj/doc/decret-2018-149/. **(Guide de l'Agent communautaire / CNLS-TP/ Présidence de la République du Bénin).**

However, there is still no mechanism to monitor access to these PC services. Sources **(Law 2020 - 37 OF FEBRUARY 3, 2021 on the protection of people's health in the Republic of Benin,** and Guide de l'Agent communautaire / CNLS-TP/ Présidence de la Rép. du Bénin).

Health Policies

INDICATOR 5

Existence of a national PC coordinating authority (unit, service or department) within the Ministry of Health or equivalent body responsible for PC.



Advanced stage

- There is a well-defined and well-structured (scientific and technical) PC coordination entity. It is responsible for PC within the government or the Ministry of Health.
- A national coordinating authority is operating and actively implementing a work programme.
- There is an appropriate authority, budget and staff.
- There is strong sub-national/departmental operational capacity in all regions and areas.
- The mechanisms for engaging vulnerable populations with the authorities are defined.

The National Palliative Care Programme (PNSP) is the structure within the Ministry of Health that works to prevent and alleviate the suffering of adult and child patients facing problems related to life-threatening diseases. The National Palliative Care Programme is led by a Coordinator appointed by a decree of the Minister of Health. They are assisted by a Deputy Coordinator appointed under the same conditions and with a well-defined structure and budget allocation[1].

The PNSP's mission is to:

- contribute to the development of the national strategic plan for PC in Benin and ensure its implementation;
- promote PC and make them available throughout the country;
- set up PC units and make them operational;
- coordinate the implementation of their terms of reference;
- ensure the availability of inputs;
- ensure the monitoring and evaluation of the implementation of the Programme's interventions.

The PNSP comprises three departments responsible for:

- administrative, financial and supplies;
- planning, monitoring and evaluation, research, and advocacy;
- care delivery.

The PNSQ is financially autonomous with an initial financial allocation of US$ 496,944.48 made available by the Beninese state[2].

The PNSP is responsible for the coordination, monitoring, integration and implementation of national PC strategies and policies. It actively implements the PQSP[1,2].

The PNSP has an independent budget line fixed by the decree creating the PNSP and a dedicated staff[3].

Although there are operational PC units in several regions of the country, some regions have no coverage[4].

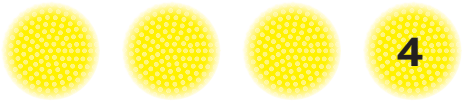
No well-defined mechanisms for vulnerable populations to engage with the authorities exist at this time[4].

1. Source: Decree Establishing the National Palliative Care Program.
2. Source: Responsibilities, Organization, and Functioning Currently 3. Being Drafted.
3. Source: List of Permanent Staff of the National Palliative Care Program.
4. Source: National Palliative Care Program.

Research

INDICATOR 6

Existence of scientific congresses or meetings at national level specifically devoted to palliative care.



Advanced stage

At least one national PC conference is held every three years.

The plan is to hold an annual national PC congress. The theme of the first Beninese PC congress, which took place in October 2022, was "Palliative care, universal health coverage and development". It was coupled with the celebration of the second World Palliative Care Day in Benin whose theme was "Healing Hearts and Communities". The 2022 Congress was jointly organised by the National Palliative Care Programme and the Beninese Association for Palliative Care and sponsored by the Beninese Minister of Health. The 2022 congress in Cotonou brought together more than 210 participants from 12 countries (Benin, Togo, Burkina Faso, Senegal, Mali, Gabon, Cameroon, Rwanda, Niger, Uganda, DRC, and France), including 192 nationals. The 2023 congress is scheduled for October 2023[1,2,3,4].

1. Source: Report of the 2022 National Congress.
2. Source: National Palliative Care Program.
3. Source: Palliative Care in Benin: Commitments Made to Heal Hearts and Communities.
4. Source: Palliative Care: Benin Holds Its First Congress.

Research

INDICATOR 7

PC research relevant to the country: estimate based on the number of peer-reviewed articles.

Early stage

0 peer-reviewed articles published in any language in the last **5** years with at least one author from the country.

No specific publications on palliative care were found in the three indexing databases (PubMed, CINHAL, and Embase) using the criteria specified in this indicator. However, there is an article about Benin (Smyth D. (2017) Politics and Palliative Care: Benin. International Journal of Palliative Nursing, 23(9), 465-465), where the author is not Beninese. There is also gray literature and articles published in non-indexed journals in these three databases. In fact, by searching in gray literature or modifying the search terms, four indexed scientific articles were found, but Benin was not the primary focus and/or the authors were not Beninese. One article addresses Benin as the primary research subject[1]: Knowledge, attitude, and nursing practice in the care of end-of-life patients in the medical services of the Hubert-K.-Maga University Hospital in Cotonou (Benin).

Other articles that have included Benin as part of a broader international African comparative analysis (Rhee, 2018: An analysis of the development of palliative care in Africa: A ranking based on specific regional macro-indicators, Rhee, 2017: Palliative care in Africa: A scoping review from 2005-16, Rhee, 2017: Publications on the development of palliative care can be used as an indicator of palliative care development in Africa).

Additionally, a national palliative care strategy has been found, which includes a summary report on the current situation at the national level (annexed with a SWOT analysis of progress in Benin)[2]. The report on the data collected to prepare the national palliative care strategy is also included (Ministry of Health of Benin. (2020). Data Collection Report for the Preparation of the First Strategic Plan of the National Palliative Care Program and National Guidelines for the Management of Patients Requiring Palliative Care). Furthermore, communications included in the Book of Abstracts of the 1st National Palliative Care Congress in Cotonou (Benin), from October 6 to 8, 2022, such as the following five:

1. Agbodande, K. A. (2022a). Knowledge and practices of health training managers in PC.
2. Agbodande, K. A. (2022b). State of pain management in Benin.
3. Agbodande, K. A. (2022c). Clinical and evolutionary socioeconomic profile of patients followed in the pilot palliative care units in Benin.
4. Palliatifs, A. B. de S. (2022). Book of abstracts of the 1st National Congress of Palliative Care Cotonou (Benin).
5. T., S. (2022). Study of the employment market related to palliative care in Benin in 2021.

1. Source: Prudencio, R. 2018.
2. Source: Ministry of Health, 2022. *Five-Year Plan for Palliative Care in Benin* 2022-2026.

Research

INDICATOR 7.1

Existence of an officially recognised PC research group.

Early stage

Lack of scientific research groups related to palliative care.

Although the country does not yet have a PC research group, PNSP is leading a project to create one[1].

Despite the absence of scientific publications or a dedicated research group for palliative care, there is a large annual national conference dedicated to palliative care.

1. Source: National Palliative Care Program, Interview with teaching researchers from medical schools involved in the field of palliative care.

Consumption of essential medicines

INDICATOR 8

Reported annual consumption of opioids - excluding methadone - in oral morphine equivalent (OME) per person.

1

Early stage

The reported annual consumption of opioids is **0.18** milligrams per person.

According to the International Narcotics Control Board, the reported annual consumption of opioids, excluding methadone, in oral morphine equivalent per person in Benin in 2020 was 0.18 mg/capita/year. It is estimated that the optimal level is higher than 200 mg/capita/year. In Africa, the average consumption is 2.03 mg, and globally, it is 31.1 mg/capita/year. Out of this 0.18 mg, morphine represents 0.14 mg, fentanyl 0.03 mg, and pethidine 0.01 mg, according to data found on the website of the Walther Global Palliative Care Center of Indiana University. There is a peak in morphine consumption after 2015. This peak can be explained by the fact that a Beninese team was trained in the production of morphine syrup under the model of Hospice Africa Uganda. Between 2014 and 2017, 19 Beninese healthcare workers were trained in Uganda, including 4 internists, 1 pharmacist, 9 nurses, 1 nurse anesthetist, 1 neurology specialist, 1 midwife, and 1 administrator.

Currently, oral morphine solution is produced and distributed to various palliative care units and teams. This morphine is available only for patients treated by palliative care teams. It is planned to automate the procedure for morphine production[1].

1. Source: International Narcotics Control Board (INCB).

Consumption of essential medicines

INDICATOR 9

Availability of essential pain and PC medicines in the country at all care levels (estimate).

Early stage

34% of primary health care facilities have medicines for pain and PC as defined in the WHO Model List of Essential Medicines (average of percentages). It is an unknown distribution between urban and rural areas.

Benin is divided into 12 departments, 77 communes, 546 arrondissements and 5,295 villages[1].

1. **The central level of health consists** of the Ministry of Health, its programmes and the national hospitals: the Centre National Hospitalier et Universitaire Hubert Koutoukou Maga (CNHU-HKM), the Centre National Hospitalier de Pneumo-phtisiologie (CNHPP), the Centre National Hospitalier de Neuro Psychiatrie (CNHNP) and the Hôpital de la mère et de l'Enfant - Lagune (HOMEL)

2. **The intermediate level of health consists** of the Departmental Health Directorates, their services and the departmental hospitals. The Centre Hospitalier Départemental (CHD) is the reference centre for cases referred at the departmental level.

3. **The operational or peripheral health level consists of** the health zones. Each zone combines one to four communes. Health zones are subdivided into health areas covering villages or neighbourhoods. The country has 34 health zones and 577 complete public health units [1]. The peripheral level represents the most decentralised operational entity of the health system. Each Health Zone combines a specified number of first-contact public health services: the district or commune health centres. In addition to these infrastructures, there are isolated dispensaries or maternity wards, and village health units.

We used a two-step method to determine what percentage of health facilities at the primary care level had essential medicines available. **Formulation of a query on the WHO website to establish the list of essential medicines for palliative care.**

(The 24 medical molecules thus were divided into 13 classes. As the table below shows).

CLASSES OF MEDICINES	MOLECULES
Laxatives	SENNA (*docusate* sodium) Lactulose (Duphalac)
Non-opioid analgesics	Paracetamol
Opioid analgesics	Codéine Tramadol (Trabar) Morphine Methadone Oxycodone Hydromorphone
Non-steroidal anti-inflammatory drugs	Aspirin Ibuprofen
Antispasmodics	hyoscine butylbromide (HBB) hyoscine hydrobromide

CLASSES OF MEDICINES	MOLECULES
Antidepressants	Fluoxetine
Anti-epileptics	Gabapentin
Setron-type antiemetic	Ondansetron Granisetron Tropisetron Palonosetron
Other antiemetics	Metoclopramide (Primperan)
Neuroleptics	Haloperidol
Anti-diarhoeals	Loperamide (Imodium)
Benzodiazepine/ Hypnotics	Midazolam
Corticosteroids	Dexamethazone

1. Source: National Master Plan for the Fight against Neglected Tropical Diseases.

Consumption of essential medicines

Morphine use in Benin:

Before 2014, access to oral morphine was very limited. Very few doctors dared to prescribe it. Use was therefore very limited. In hospitals, morphine and its derivatives were mainly used by anaesthetists, particularly in its oral form anaesthetists, particularly in its injectable form.

It was with the advent of palliative care in 2014 that healthcare professionals, trained in the care of the dying, began to use morphine trained in pain management began to make greater use of it use. They were available in pharmacies in the form of capsules or tablets, with tablets with a secure prescription. At the time, the cost was a barrier for many patients who were unable to obtain it or could only take it for a few days. To cover the morphine needs of PC patients, the caregivers on the care workers in the Cotonou PC Unit at the CNHU-HKM used ampoules of injectable morphine which they reconstituted into an oral solution with a 9% saline solution.

After lobbying a pharmaceutical laboratory represented in Benin, a laboratory was set up to produce an oral solution from morphine powder. Thanks to Hospice Africa Uganda, the pioneering institution for the dissemination and training of PC in Africa, the pharmacist in charge of the pharmacy at the CNHU-HKM was trained in the manufacturing process. In 2018, the became operational, enabling the local production of an oral local production of an effective oral morphine solution that is more accessible to accessible to patients.

Difficulties in obtaining supplies of morphine powder, as a result of the restrictive regulations governing the acquisition of narcotics, led to a long for many months. In 2022, Enabel, the Belgian development agency, which has been the main partner of the National Palliative Care Programme for a number of years, financed the purchase of the morphine powder which is currently used to produce the solution. Thanks to this support benefit from this analgesic free of charge to relieve their pain relief.

The challenges in relation to this issue are:

- Maintaining a regular supply of morphine powder
- Bringing the solution production laboratory up to standard
- Training prescribers to use the product efficiently

2nd) During the period from March 10th to March 31st, 2023, a questionnaire based on the list was sent to the 34 Coordinating Physicians of the Health Zones. 32 physicians responded to the request, totaling 521 peripheral health centers.

Although access to opioids is minimal (0.18 mg/capita/year) a morphine production system will be soon automatized in CNHU and 34% of health facilities have essential medicines for PC.

CLASSES OF MEDICINES	WORKFORCE	PERCENTAGE
Laxatives	1	0,2%
Non-opioid analgesics	512	98,3%
Opioid analgesics	33	6,3%
Non-steroidal anti-inflammatory drugs (NSAIDs)	516	99,0%
Antispasmodics	476	91,4%
Antidepressants	0	0,0%
Anti-epileptics	0	0,0%
Setron-type antiemetic	0	0,0%
Other antiemetics	453	86,9%
Neuroleptics	2	0,4%
Anti-diarhoeals	0	0,0%
Benzodiazepine/ Hypnotics	1	0,2%
Corticosteroids	302	58,0%

Salami L, Ouendo EM, Fayomi B. Quality of the information and monitoring system for health interventions in areas exposed to outcome-based financing in 2014 in Benin. Pan Afr Med J. 2017 22;28:257.

Consumption of essential medicines

INDICATOR 10

Percentage of patients who have access to immediate-release oral morphine (liquid or tablets) available either in the community or in hospital per year (estimate).

1

Early stage

The exact proportion of patients requiring immediate-release oral morphine and who have it available could not be determined. However, it has been estimated that 16.5% of patients with PC needs have access to immediate-release oral morphine (in liquid or tablet form), either in the community or in hospital, per year

- 15.9% of all hospitals in Benin stock morphine
- 30.8% of urban hospitals
- 9.7% of rural hospitals.

Percentage of patients who have access to immediate-release oral morphine: Information was available from 3 PC units. It was not possible to distinguish between patients who received morphine in the community and those who received it in the hospital. Details are given in the table below. The formula used is: 100*113 / (353+331).

HEALTH TRAININGS	TOTAL NUMBER OF PATIENTS WHO RECEIVED ORAL MORPHINE (IN HOSPITAL AND IN THE COMMUNITY)	NUMBER OF PATIENTS FOLLOWED IN HOSPITAL	NUMBER OF PATIENTS FOLLOWED IN THE COMMUNITY
PC unit Departmental Hospital Center Zou	58	114	36
PC unites in National Hospital and University Centers	45	199	229
Palliative Care Unit in Zonal Hospitals	10	18	18
TOTAL	**113**	**331**	**353**

Percentage of hospitals that stock immediate-release oral morphine: Benin's health pyramid[1] includes three types of hospitals: the University Hospitals, the Departmental Hospitals and the Zonal Hospitals. The first two serve urban populations while the Zonal Hospitals cover mainly rural populations. Some denominational hospitals have been set up as Zonal Hospitals.

- 4 out of 13 urban hospitals stock oral morphine, i.e. 30.8% [2,3,4].
- 3 out of 31 rural hospitals stock oral morphine, i.e. 9.7% [2,3,4].
- 7 out of 44 total hospitals stock oral morphine, i.e. 15.9%.

1. Source: Decree No. 2022-148 of March 2, 2022.
2. Source: Number of hospitals with oral morphine available.
3. Source: National Palliative Care Program.
4. Source: Total number of hospitals in the country: DNHES (Note: Lacroix de ZINVIE Hospital - Confessional hospital on the outskirts of Cotonou, providing care for numerous patients with various pathologies, including cancer).

Education

INDICATOR 11

Proportion of medical and nursing schools that include PC training in their core curriculum.

Early stage

0/2 medical schools provide mandatory or elective PC courses (with or without other electives).
0/2 nursing schools provide compulsory or optional PC courses (with or without other optional courses).

The country has two medical schools: The Faculty of Health Sciences of the University of Abomey-Calavi in the South and the Faculty of Medicine of the University of Parakou in the North. The University of Parakou was created on 18 September 2001.

To date, none of these institutions has a compulsory or optional PC module in its basic training curriculum. However, the Faculty of Medicine in Parakou is planning a PC module (ECU) in 2024[1] Also, in the National Medical and Health Institute of the University of Abomey-Calavi, **a master's degree in PC has been created for nurses in August 2021[2].**

The country also has two training schools for nurses: The Institut National Médico-Sanitaire of the University of Abomey-Calavi in the south where the master's degree in PC was created in August 2021 and the Institut de Formation en Soins infirmiers et Obstétricaux in the north, at the University of Parakou, created in 2015.

1. Source: Interview with palliative care instructors, deans of medical faculties, and directors of nursing schools.

Education

INDICATOR 12

Specialisation in palliative medicine for physicians.

Early stage

Lack of formal specialisation in palliative medicine for doctors.

There is no accredited specialisation course in palliative medicine for doctors. There is a Masters degree in PC at National Medical and Health Institute of the University of Abomey-Calavi, but it is not primarily intended for doctors[1].

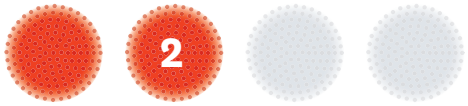
None of the medical and paramedical schools have training in PC and there is no official recognition of PC specialisation. However, a Master in PC has been created in August 2021.

1. Source: Interview with palliative care instructors, deans of medical faculties, and directors of nursing schools.
2. Source: Master's Program in Palliative Care Curriculum at the National Medical and Health Institute of the University of Abomey-Calavi.

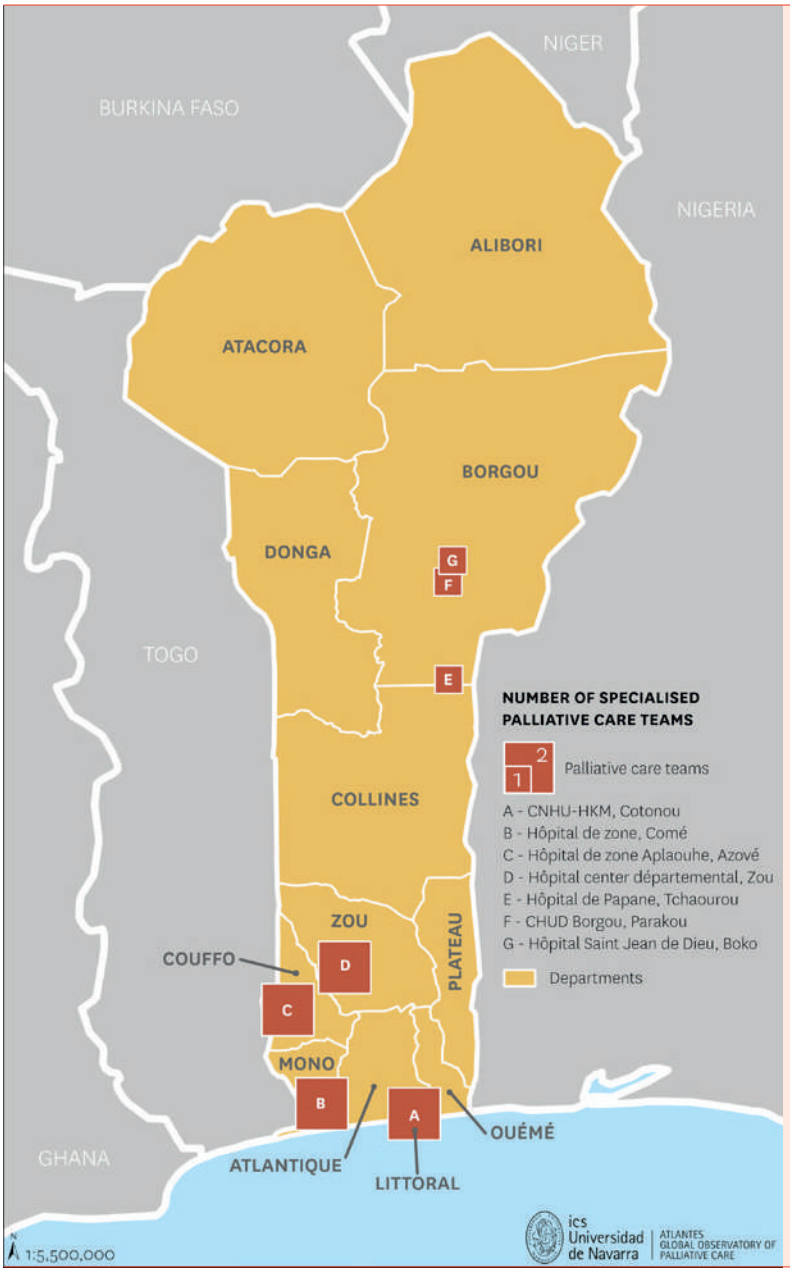
Palliative care services
(Integrated services)

INDICATOR 13

Number of specialised PC teams (nationwide) in relation to population.



Intermediate stage



- Specialist PC teams are available in many parts of the country, but with some gaps.
- There are teams in many urban and rural areas
- Available in a growing number of public sector hospitals, e.g. for hospital-based PC teams (providing consultations) and PC units (with a certain number of beds) to give just a few examples.
- There are no independent hospices (including hospices with inpatient beds).
- There are home care teams (specialised in PC) in most parts of the country in the community (at primary health care level), as independent services or linked to hospitals or hospices.

Palliative care services (Integrated services)

11 specialised PC teams are distributed as follows: Cotonou 2, Abomey 2, Aplahoué 2, Comé 2, Parakou 1, Boko 1, Papaney 1. The latest population data published by the World Bank (12,996,895) shows the ratio of services is **0.08 per 100,000 inhabitants.** Services. The teams include at least one doctor, one nurse and one administrative vehicle driver. Sometimes the team also includes volunteers and students[1].

The territorial distribution of the municipalities covered by the PS teams is shown on the map below.

There is a system of specialist PC teams in many urban areas (e.g. Cotonou, Abomey, Parakou) and in many rural areas (e.g. Papaney-Boko).

Many public hospitals (e.g. CNHU-HKM, Hôpital de COVE, Borgou-Alibori Departmental Hospital Center) and some private hospitals (e.g. Hôpitaux de BOKO et PAPANEY) have a system of specialised PC teams.

Although there are no independent hospices dedicated to PC, there are currently building projects supported by the PNSP.

Mobile PC teams are available in 4 regions of the country. NB: the country used to have 6 departments, but a new division distinguishes 12 regions. The mobile units are associated with the former regions[1].

There are not enough teams to cover the need, but more and more teams are being created in many regions: today there are 11 specialised teams in Benin available.

1. Source: National Palliative Care Program

Palliative care services (Integrated services)

INDICATOR 14

Number of specialized paediatric PC programmes in the country relative to population.

Stade précoce

There are no specialised pediatric PC programmes with national reach provided by different service delivery platforms.

Although there are no specialised paediatric PC teams or programmes, Benin has two paediatric oncologists trained with the help of GFAOP (Groupe Franco-Africain d'Oncologie Pédiatrique) and a paediatric oncology unit located in the Centre Hospitalier Universitaire Départemental -Ouémé-Plateau located in the city of Porto-Novo, in the east of the country (2022)[1].

Over the past 20 years, the Franco-African Pediatric Oncology Group has developed experience in training personnel working with children with cancer in Africa. Within the framework of the GFAOP's African School of Paediatric Oncology programmes, more than 800 training courses have been provided for doctors, nurses, midwives and health workers[2].

At the 5th congress of the Beninese Pediatric Society (SoBePed), held in Cotonou from May 23rd to 26th, 2023, a joint session was convened involving the Pediatric Oncology Unit of the Ouémé-Plateau Departmental University Hospital Center, the Franco-African Pediatric Oncology Group, the National Palliative Care Program, and the Beninese Pediatric Society. The purpose of this session was to promote pediatric palliative care[3].

1. Source: Programme National des Soins Palliatifs.
2. Source: Oncopédiatre Centre Hospitalier Universitaire Départemental Ouémé-Plateau qui est la seule unité fonctionnelle d'oncologie pédiatrique dans le pays.
3. Source: Société Béninoise de Pédiatrie.

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