



Strengthening human resources for health in the Caribbean



Report on HRH core indicators



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Foreword

The COVID-19 pandemic has brought much-needed attention to the challenges of human resources for health (HRH) and highlighted the need for the Caribbean region to implement evidence-based interventions supported by policy action at the highest level.

The new permanent HRH Caribbean Commission, approved by the Council for Human and Social Development (COHSOD) in September 2022, gives evidence of the commitment of countries of the Caribbean to have united actions in addressing these challenges. The Pan American Health Organization (PAHO) has made a commitment to support HRH development in the region, including the strengthening of HRH health information systems, and has made substantial investments in research, training, and policy development in the Region of the Americas.

The identification of indicators for monitoring the status of HRH in the Caribbean represents an important step toward curtailing some of the issues of migration of health workers, financial and human resource limitations, and ineffective distribution of staff within health systems. It is an opportunity for ministries of health within the region to have accurate and up-to-date data to guide policy actions at the national and regional levels.

PAHO is grateful for the opportunity to be a part of this journey and reaffirms its commitment to supporting the strengthening of HRH within the Caribbean region.



Dean Chambliss

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Special recognition is given to Ms. Curvelle David and Ms. Beverly Reynolds and the teams from the CARICOM Secretariat for their exceptional leadership and support in the organization of the Technical Working Group (TWG) and the identification of core indicators for the Caribbean region.

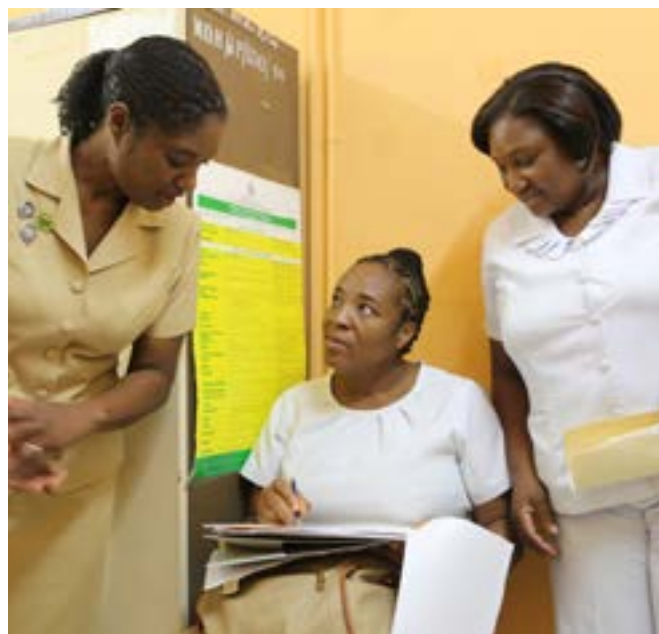
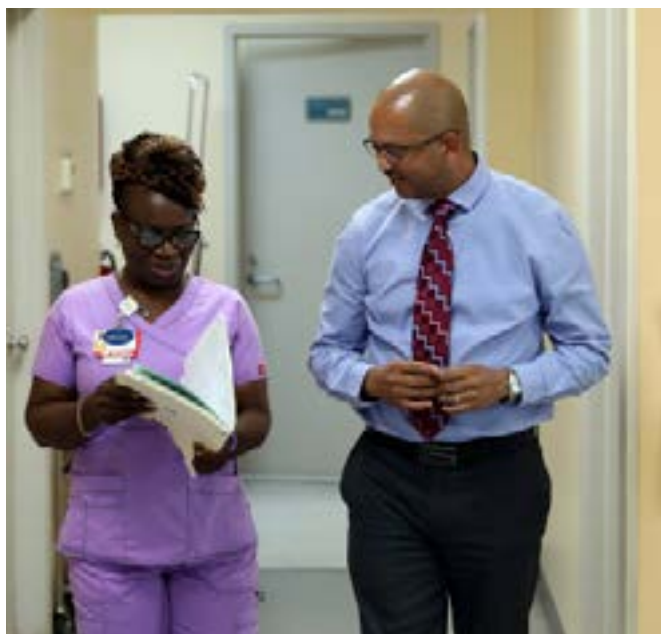
Members of the TWG were drawn from the official delegates of the HRH Action Task Force, with delegates from six countries (Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada), three academic institutions (The University of the West Indies, University of Guyana, Dalhousie University), and PAHO/WHO staff from PAHO Headquarters, the Subregional Office for the Caribbean as well as the CARICOM Secretariat.

The authors express their sincere appreciation to the WHO team in charge of the National Health Workforce Accounts (NHWA) for their support with training on the NHWA platform.

Abbreviations and acronyms

CARICOM	Caribbean Community
COHSOD	Council for Human and Social Development
CPD	continuing professional development
GSHRH	Global Strategy on Human Resources for Health: Workforce 2030
HRH	human resources for health
HRH-ATF	HRH-Action Task Force
HRHIS	human resources for health information system
HWF	health workforce
ISCO	International Standard Classification of Occupations
NHWA	National Health Workforce Accounts
PAHO	Pan American Health Organization
PHC	primary health care
SDG	Sustainable Development Goal
TWG	technical working group
UHC	universal health coverage
UN	United Nations
WHO	World Health Organization

1. Introduction



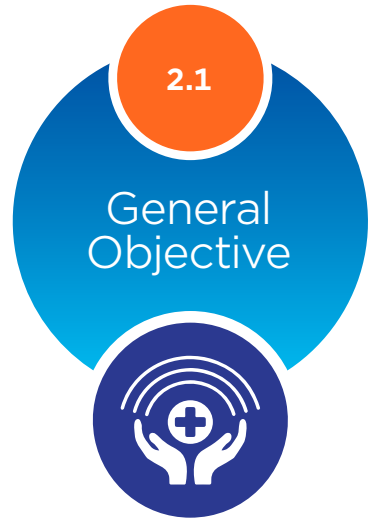
Indicators within the field of human resources for health (HRH) play a vital role in understanding the needs of ministries of health and highlighting potential areas for improvement. HRH indicators provide tangible goals for countries to work toward that can benefit knowledge of HRH planning forecasting (1).

With the emergence of the COVID-19 pandemic, the heightened strain on ministries of health has shown the importance of HRH moving forward. In November 2020, the 39th Caribbean Community (CARICOM) Council for Human and Social Development (COHSOD) approved the establishment of an HRH-Action Task Force (HRH-ATF), which was officially launched in April 2021.

The HRH-ATF was established to advise and monitor the development of critical public policy within the Caribbean and show a united and concerted regional effort to strengthen HRH in the Caribbean. Following the establishment of the HRH-ATF, the Pan American Health Organization (PAHO) and CARICOM supported the development of two policy briefs to strengthen HRH to respond to COVID-19 and other emerging pandemics and to address vaccine hesitancy among healthcare workers. In October 2021, during the 41st COHSOD, ministers of health of CARICOM approved the two policy briefs and mandated Member States to implement the policy actions with support from CARICOM and PAHO.

The policy brief *Strengthening Human Resources for Health (HRH) to respond to COVID-19 and other emerging pandemics in the Caribbean* recommended that Member States respond to the COVID-19 pandemic and other pandemics by enhancing supply, capacity, training, and development within HRH (2). The policy included four policy actions. Policy Action 1 specifically relates to the “Planning and forecasting of HRH staffing needs to respond to COVID-19 and other emerging pandemics”. To achieve this policy action, countries need to strengthen their HRH information systems (HRHIS), and identifying a set of indicators that support decisionmaking is one of the most important elements.

2. Objectives



To support the strengthening of human resources for health information systems.



To compose a list of core indicators for implementation in the Caribbean, in order to strengthen the forecasting and planning of HRH.

3. Methods

Following the mandate that came out of the policy brief *Strengthening Human Resources for Health (HRH) to respond to COVID-19 and other emerging pandemics in the Caribbean*, the HRH-ATF met and proposed a plan of interventions to implement the policy actions. For Policy Action 1 on HRH planning and forecasting, delegates of the HRH-ATF identified the need to establish a list of HRH core indicators to support planning and forecasting. During its fourth meeting, the HRH-ATF nominated members to serve as part of a technical working group (TWG) to develop a list of proposed indicators for the Caribbean region.

The TWG was composed of delegates from six countries, three academic institutions, PAHO/WHO staff from PAHO Headquarters and the Subregional Office for the Caribbean, as well as CARICOM staff.

Prior to their first meeting, HRH experts from PAHO shared with the TWG a set of basic indicators that were deemed relevant for the Caribbean. These indicators were selected from the World Health Organization (WHO) National Health Workforce Accounts (NHWA). The NHWA presents an opportunity for standardisation and interoperability of health information and will enable comparison of health workforce information nationally, regionally, and globally. It defines standardised indicators for generating reliable evidence regarding HRH to guide planning efforts and policy development. The team made use of the NHWA Handbook from 2017, which was the most up-to-date version available as of June 2022 (3).

At the first working group meeting, PAHO presented the list of proposed basic indicators and opened the floor for discussion and for individuals to propose indicators to be added or modified. After a rich discussion, the TWG recommended including several additional indicators and/or topic areas for measurement. Following the meeting, the newly proposed indicators/topic areas were matched to an existing NHWA indicator. Experts familiar with the NHWA system and PAHO staff systematically organised the full list of proposed indicators, including the definition and potential data sources for each.

Indicators were then stratified into three levels. The levels of the indicators correspond to their proposed level of difficulty in implementation, based on the number of actors involved for the accomplishment of the indicator and the importance of the proposed indicator within the Caribbean region.

After categorisation, 32 core indicators were proposed by the technical working group. The HRH core indicators were sent to the HRH-ATF delegates and the universities that participated in the TWG for further review and discussion. They were approved by the HRH-ATF and the universities that participated in the TWG on 15 June 2022.

4. Results



The list of HRH core indicators approved by the HRH-ATF delegates was classified based on information provided in the NHTA system and handbook as of June 2022. This list was subsequently harmonized with the second (2023) edition of the NHTA Handbook, resulting in a total of 30 indicators and sub-indicators distributed as follows: 13 in Level 1, 14 in Level 2, and 3 in Level 3 (4). The core indicators listed in this document represent this harmonization.

The indicators are aligned with the Caribbean Roadmap on Human Resources for Universal Health 2018-2022 (1), which was developed in consultation with CARICOM Member States, as well as with the Strategy on Human Resources for Universal Access to Health and Universal Health Coverage (5) and the Plan of Action on Human Resources for Universal Access to Health and Universal Health Coverage 2018–2023 (6), which were approved by PAHO Member States in 2017 and 2018, respectively.

The core indicators will also support Caribbean efforts in implementing the Policy on the Health Workforce 2030: Strengthening Human Resources for Health to Achieve Resilient Health Systems, which was approved by PAHO Member States in 2023 and proposes 5 strategic lines of action (7):

- 1) Strengthen governance and promote national policies and plans for human resources for health;
- 2) Develop and consolidate regulatory mechanisms related to human resources for health;
- 3) Strengthen the formation of interprofessional teams and their integration into integrated health services networks based on primary health care (PHC);
- 4) Enhance workforce capacity-building to address population health priorities and support public health emergency preparedness and response; and
- 5) Promote decent working conditions, protection of the physical and mental health of health workers, and an adequate supply of human resources for health through financing and regulation.

The above represents continuity in the work being done by the countries of the Caribbean to strengthen human resources for health in the region.

The following tables have been organized keeping in mind the NHTA handbook 2023 to facilitate correspondence with the same. Information is included on the number and line (module) of the proposed indicator/sub-indicator, its definition, and potential data sources, as provided in the handbook. This document is intended as reference to the core indicators for the Caribbean. Readers should refer to the NHTA handbook 2023 for complete details and instructions regarding reporting and entry of data onto the NHTA platform.

Level 1 HRH core indicators for the Caribbean

Level 1 indicators are the base target every country should work to achieve. Indicators at this level were selected by the HRH-ATF based on the number of factors involved in achieving the indicator and potential feasibility.

- 1 Health worker density
- 2 Health worker distribution by age group
- 3 Health worker distribution by sex
- 4 Health worker distribution by place of birth
- 5 Health worker distribution by place of training
- 6 Ratio of graduates to stock
- 7 Labour regulations and policies for health workforce
 - Existence of national/subnational policies/laws regulating compulsory service
 - Existence of advanced nursing roles
- 8 Health workforce governance and leadership capacity
 - Existence of institutional mechanisms or bodies to coordinate an intersectoral health workforce agenda
 - Existence of a health workforce unit in the Ministry of Health responsible for developing and monitoring policies and plans on health workforce
 - Existence of mechanisms and models for health workforce planning
- 9 National capacity to monitor key metrics for health workforce planning and global monitoring frameworks
 - Ability of human resources for health information systems (HRHIS) to generate information to track active stock on the labour market
 - Ability of HRHIS to generate geocoded information on the location of health facilities

Level 1 HRH core indicators for the Caribbean

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
1 Stock and flow			
1-01 Health worker density	<p>Number of health workers per 10 000 population.</p> <p>For activity level the following categories are recommended: practising health workers, professionally active health workers, and health workers licensed to practise.</p>	<ul style="list-style-type: none"> • Health workforce registry or database • Aggregate data from health facilities (routine administrative records, Health Management Information System, District Health Information System census and/or survey) • Professional council/ chamber/association registers • Labour force surveys • Population census data • United Nations Population Division 	Strategic Line 1: Strengthen governance and promote national policies and plans for HRH
1-03 Health worker distribution by age group	<p>Percentage of active health workers in the given age and sex category.</p> <p>This indicator enables countries to create the population pyramid of health workers. Age groups considered are the following: < 25, 25–34, 35–44, 45–54, 55–64, ≥ 65 years. Sex groups corresponds to male or female health workers.</p>	<ul style="list-style-type: none"> • Health workforce registry or database • Aggregate data from health facilities (routine administrative records, Health Management Information System, District Health Information System census and/or survey) • Professional council/ chamber/association registers • Labour force surveys • Population census data 	Strategic Line 1: Strengthen governance and promote national policies and plans for HRH
1-04 Health worker distribution by sex	<p>Percentage of active health workers in the given sex category.</p> <p>Sex group corresponds to male or female health workers.</p>	<ul style="list-style-type: none"> • Health workforce registry or database • Aggregate data from health facilities (routine administrative records, Health Management Information System, District Health Information System census and/or survey) • Labour force surveys • Population census data 	Strategic Line 1: Strengthen governance and promote national policies and plans for HRH

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
1-07 Health worker distribution by place of birth	<p>Percentage of active health workers by their place of birth.</p> <p>Place of birth is defined as national-born or foreign-born.</p> <p>This indicator will capture the information on the health workers coming from abroad.</p>	<ul style="list-style-type: none"> • Health workforce registry or database • Professional council/ chamber/association registers • Health facility data • Population census data 	Strategic Line 1: Strengthen governance and promote national policies and plans for HRH
1-08 Health worker distribution by place of training	<p>Percentage of active health workers by their place of training.</p> <p>Place of training is defined as either domestic-trained, foreign-trained or unknown location of training.</p> <p>The disaggregation by occupation and country of training is applicable to foreign-trained workers, and enables the monitoring of health worker migration by country of training. The disaggregation by occupation and place of birth is applicable to foreign-trained workers, and enables the monitoring of foreign-trained – national-born and foreign-trained – foreign-born workers.</p>	<ul style="list-style-type: none"> • Health workforce registry or database • Professional council/ chamber/association registers • Health facility data 	Strategic Line 1: Strengthen governance and promote national policies and plans for HRH

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
2 Education			
2-04 Ratio of graduates to stock	<p>This indicator aims to approach the graduation rate using data available on an annual basis. The exact graduation rate can also be calculated from longitudinal information on students following cohorts of students. If such data are available, the graduation rate estimated from the most recent complete cohort can be reported. In addition to the total number of graduates, distribution of graduates by sex and by ownership enables to identify potential maldistribution and inequities.</p>	<ul style="list-style-type: none"> • Databases of health education and training institutions • Health workforce registry or database • Professional council/chamber/association registers 	<p>Strategic Line 3: Strengthen the formation of interprofessional teams and their integration into integrated health services networks based on PHC</p>

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
4 Working conditions, governance, and leadership			
<p>4-01 Labour regulations and policy for health workforce</p> <p>4-01.5 Existence of national/subnational policies/laws regulating compulsory service</p>	<p>This indicator is a composite of twelve sub-indicators. Each sub-indicator is a self-assessment of one aspect of labour regulation and policies, primarily to protect and safeguard health and care workers. To help answer these self-assessed sub-indicators, a series of guiding questions are provided.</p> <p>Existence of national/subnational policies/laws regulating compulsory service (Yes/Partial/No)</p> <p>The following questions should guide a response to this sub-indicator: Is there a national policy or programme regarding:</p> <ul style="list-style-type: none"> • condition of service/state employment programmes for health workers? • compulsory service with incentives for health workers? • compulsory service without incentives for health workers? 	<ul style="list-style-type: none"> • Employment laws, policies and regulations • Social security records • Government or legislative records • Survey among country experts or informants • Policy and strategic documents of governments and competent authorities 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>4-01 Labour regulations and policy for health workforce</p> <p>4-01.12 Existence of advanced nursing roles</p>	<p>This indicator is a composite of twelve sub-indicators. Each sub-indicator is a self-assessment of one aspect of labour regulation and policies, primarily to protect and safeguard health and care workers. To help answer these self-assessed sub-indicators, a series of guiding questions are provided.</p> <p>Existence of advanced nursing roles (Yes/Partial/No)</p> <p>Guiding questions for this sub-indicator: Is there a commonly accepted definition of 'nurse practitioner'? Is there another commonly accepted definition of other types of nurses working in advanced roles? Are there formal requirements to become a nurse practitioner or other type of advanced-practice nurse in terms of specified training, qualifications, experience, certification/registration, etc.? Are there ad-hoc/local methods for nurses being trained "on the job" to acquire specific skills that could lead to their employment in advanced roles?</p>	<ul style="list-style-type: none"> • Employment laws, policies and regulations • Social security records • Government or legislative records • Survey among country experts or informants • Policy and strategic documents of governments and competent authorities 	<p>Strategic Line 2: Develop and consolidate regulatory mechanisms related to HRH</p>

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>4-02 Health workforce governance and leadership capacity</p> <p>4-02.1 Existence of institutional mechanisms or bodies to coordinate an intersectoral health workforce agenda</p>	<p>This indicator is a composite of five sub-indicators. Each sub-indicator is a self-assessment of one aspect of countries' governance and leadership capacity vis-à-vis of health and care workers. To help answer these self-assessed sub-indicators, a series of guiding questions are provided.</p> <p>Existence of institutional mechanisms or bodies to coordinate an intersectoral health workforce agenda (Yes/Partial/No)</p> <p>Guiding questions for this sub-indicator: Is there a coordinating mechanism or body in place for this task? Are various stakeholders (ministries, public, private, nongovernmental, international bodies) involved in the coordination process? Has an agenda been formulated? Has the agenda been approved at inter-Ministerial level (Ministries of Education, Finance, Public Service, Health)?</p>	<ul style="list-style-type: none"> • Ministry of Health, Education, Labour • Regional and/or subnational ministries of health and education • Institutions or units responsible for policies on health workforce • Relevant ministries according to the national government structure and constitutional arrangements/ level of devolution • Educational institutions • Health facilities 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>4-02 Health workforce governance and leadership capacity</p> <p>4-02.2 Existence of a health workforce unit in the Ministry of Health responsible for developing and monitoring policies and plans on health workforce</p>	<p>This indicator is a composite of five sub-indicators. Each sub-indicator is a self-assessment of one aspect of countries' governance and leadership capacity vis-à-vis of health and care workers. To help answer these self-assessed sub-indicators, a series of guiding questions are provided.</p> <p>Existence of a health workforce unit in the Ministry of Health responsible for developing and monitoring policies and plans on health workforce (Yes/Partial/No)</p> <p>Guiding questions for this sub-indicator: Are there functions to monitor health workforce policies and plans as part of the monitoring of health services development? Are there institutional mechanisms in place to coordinate an intersectoral health workforce agenda, including negotiations and intersectoral relationships with relevant other line ministries, government agencies and stakeholders?</p>	<ul style="list-style-type: none"> • Ministry of Health, Education, Labour • Regional and/or subnational ministries of health and education • Institutions or units responsible for policies on health workforce • Relevant ministries according to the national government structure and constitutional arrangements/ level of devolution • Educational institutions • Health facilities 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>4-02 Health workforce governance and leadership capacity</p> <p>4-02.3 Existence of mechanisms and models for health workforce planning</p>	<p>This indicator is a composite of five sub-indicators. Each sub-indicator is a self-assessment of one aspect of countries' governance and leadership capacity vis-à-vis of health and care workers. To help answer these self-assessed sub-indicators, a series of guiding questions are provided.</p> <p>Existence of mechanisms and models for health workforce planning (Yes/Partial/No)</p> <p>Guiding questions for this sub-indicator: Is there a coordinated communication and information flow among national level intersectoral stakeholders? Is there a dedicated and established Human Resources for Health Planning Committee, a designated entity or a specific group at the national level responsible for the health workforce? Is there a methodology established for health workforce planning? Are complete data with full coverage of the population available in a sustainable manner to provide quantitative assessment required for health workforce planning? Are policy actions based on the recommendations of the Human Resources for Health Planning Committee implemented?</p>	<ul style="list-style-type: none"> • Ministry of Health, Education, Labour • Regional and/or subnational ministries of health and education • Institutions or units responsible for policies on health workforce • Relevant ministries according to the national government structure and constitutional arrangements/ level of devolution • Educational institutions • Health facilities 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>4-05 National capacity to monitor key metrics for health workforce planning and global monitoring frameworks</p> <p>4-05.06 Ability of HRHIS to generate information to track active stock on the labour market</p>	<p>This indicator is a composite of nine sub-indicators. Each sub-indicator is a self-assessment of one aspect of the capacity of the national human resources for health information system (HRHIS) or other mechanisms to report on key metrics that are relevant for national health workforce planning and policy-making as well as for global monitoring frameworks. To help answer some of these self-assessed sub-indicators, guiding questions are provided.</p> <p>Ability of HRHIS to generate information to track active stock on the labour market (Yes/Partial/No)</p>	<ul style="list-style-type: none"> • Ministry of Health and regional ministries of health • Professional chambers • Institutions or units responsible for monitoring, or for policies on the health workforce • Ministry of Labour • National Statistical Office • National Focal Point for WHO Global Code of Practice • Ministry of Health and subnational ministries of health • Institutions collecting health workforce data 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>4-05 National capacity to monitor key metrics for health workforce planning and global monitoring frameworks</p> <p>4-05.08 Ability of HRHIS to generate geocoded information on the location of health facilities</p>	<p>This indicator is a composite of nine sub-indicators. Each sub-indicator is a self-assessment of one aspect of the capacity of the national human resources for health information system (HRHIS) or other mechanisms to report on key metrics that are relevant for national health workforce planning and policy-making as well as for global monitoring frameworks. To help answer some of these self-assessed sub-indicators, guiding questions are provided.</p> <p>Ability of HRHIS to generate geocoded information on the location of health facilities (Yes/Partial/No)</p>	<ul style="list-style-type: none"> • Ministry of Health and regional ministries of health • Professional chambers • Institutions or units responsible for monitoring, or for policies on the health workforce • Ministry of Labour • National Statistical Office • National Focal Point for WHO Global Code of Practice • Ministry of Health and subnational ministries of health • Institutions collecting health workforce data 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>

* Source: WHO, National Health Workforce Accounts, 2023 (4)

Level 2 HRH core supplementary indicators for the Caribbean

Indicators at this level were selected by the HRH-ATF based on the number of factors involved in achieving the indicator and potential feasibility. Indicators chosen in Level 2 are there for countries to work towards if they have already accomplished indicators in Level 1, or if they consider any Level 2 indicators a priority for the country.

- 1 Health worker density at subnational level

- 2 Health worker distribution by facility ownership

- 3 Health worker distribution by facility type

- 4 Annual inflows of health workers
 - Entry rate for foreign health workers

- 5 Health worker density
 - Family medicine practitioners

- 6 Duration of education and training

- 7 Accreditation mechanisms for education and training institutions and their programmes

- 8 Standards for education and training programmes
 - Existence of national and/or subnational standards for interprofessional education in accreditation mechanisms of training programmes
 - Existence of cooperation between health workforce education and training institutions and regulatory bodies to agree on accreditation standards
 - Existence of national systems for continuing professional development

- 9 National capacity to monitor key metrics for health workforce planning and global monitoring frameworks
 - Ability of HRHIS to monitor gender pay gap
 - Ability of HRHIS to generate information for reporting on outputs from education and training institutions
 - Ability of HRHIS to generate information to track entrants to the labour market
 - Ability of HRHIS to generate information to track exits from the labour market

Level 2 HRH core supplementary indicators for the Caribbean

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
1 Stock and flow			
1-02 Health worker density at subnational level	<p>Number of active health workers per 10 000 population in the given subnational administrative unit.</p> <p>Preferably, the subnational unit should correspond to the place of work of health workers. The use of administrative units to the first subnational level is recommended (depending on the structure of administrative units and the size of subnational territories), without overlaps between the administrative units. Examples of subnational administrative units include states, regions, provinces, counties, and districts.</p>	<ul style="list-style-type: none"> • Health workforce registry or database • Aggregate data from health facilities (routine administrative records, Health Management Information System, District Health Information System census and/or survey) • Professional council/ chamber/association registers • Population census data • Health facility database (with location) • United Nations Population Division 	Strategic Line 1: Strengthen governance and promote national policies and plans for HRH
1-05 Health worker distribution by facility ownership	<p>Percentage of active health workers employed by facility ownership (public, private not-for-profit, private for-profit).</p> <p>The categories of facility ownership can be aligned to institutional sector definitions of the System of National Accounts (<i>refer to NHWA handbook 2023 for more information</i>).</p>	<ul style="list-style-type: none"> • Health workforce registry or database • Aggregate data from health facilities (routine administrative records, Health Management Information System, District Health Information System census and/or survey) • Labour force surveys • Census 	Strategic Line 1: Strengthen governance and promote national policies and plans for HRH
1-06 Health worker distribution by facility type	<p>Percentage of active health workers employed in the given facility type. Health facility types are based on the classification of System of Health Accounts (<i>refer to NHWA handbook 2023 for more information</i>):</p> <ul style="list-style-type: none"> • Hospitals (HP.1) • Residential long-term care facilities (HP.2) • Providers of ambulatory health care (HP.3) • Ancillary services (HP.4, including transportation, emergency rescue, laboratories and others) • Retailers (HP.5, including pharmacies) • Providers of preventive care (HP.6) 	<ul style="list-style-type: none"> • Health workforce registry or database • Aggregate data from health facilities (routine administrative records, Health Management Information System, District Health Information System census and/or survey) • Labour Force Surveys • Census 	Strategic Line 1: Strengthen governance and promote national policies and plans for HRH

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>1-09 Annual inflows of health workers</p> <p>(Entry rate for foreign health workers)</p>	<p>Newly active health workers are those who started their activity in the given profession. In case data are available only for newly licensed health workers, the total number of licensed health workers should be used as denominator regardless of availability of data on active health workers. For total number of active health workers, data at the middle or the end of the reference year should be used.</p> <p>Disaggregation by place of training (domestic-trained vs foreign-trained) enables to capture the health labour market dynamics of migration.</p>	<ul style="list-style-type: none"> • Ministry of Health database • Health workforce registry or database • Professional council/chamber/association registers • Aggregate data from health facilities (routine administrative records, Health Management Information System, District Health Information System census and/or survey) 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>
<p>1-01 Health worker density</p> <p>(Disaggregated by occupation, including family medicine practitioners)</p>	<p>Number of health workers per 10 000 population.</p> <p>For activity level the following categories are recommended: practising health workers, professionally active health workers, and health workers licensed to practise.</p> <p>Disaggregation by occupation (including family medicine practitioners), by occupation and activity level.</p>	<ul style="list-style-type: none"> • Health workforce registry or database • Aggregate data from health facilities (routine administrative records, Health Management Information System, District Health Information System census and/or survey) • Professional council/ chamber/association registers • Labour force surveys • Population census data • United Nations Population Division 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
2 Education			
2-05 Duration of education and training	Duration of health workforce education and training is the number of years required to complete a full curriculum for each health workforce education and training programme. This duration does not include specializations or time to obtain additional, optional, certifications.	<ul style="list-style-type: none"> • Ministry of Education • Database on education and training statistics • Education and training institutions 	<p>Strategic Line 3: Strengthen the formation of multidisciplinary teams and their integration into integrated health services networks based on PHC</p> <p>Strategic Line 4: Enhance workforce capacity-building to address population health priorities and support public health emergency preparedness and response</p>

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>2-06 Accreditation mechanisms for education and training institutions and their programmes</p>	<p>Existence of national and/or subnational mechanisms for accreditation of health workforce education and training institutions and their programmes (Yes/Partial/No)</p> <p>The following questions should guide a response to this indicator:</p> <ul style="list-style-type: none"> • Have national and/or subnational mechanisms for accreditation of health workforce education and training institutions and their programmes been established? • Are national and/or subnational mechanisms for accreditation of health workforce education and training institutions and their programmes compulsory? • Are there national and/or subnational mechanisms for accreditation of health workforce education and training institutions and their programmes that are not compulsory? • If established, do national and/or subnational mechanisms for accreditation of health workforce education and training institutions and their programmes take into account national education plans for the health workforce? 	<ul style="list-style-type: none"> • Ministry of Health • Ministries of Education, Higher Education or similar • National accreditation authorities • Legitimate bodies, statutory corporations • Professional council/chamber/association registers 	<p>Strategic Line 3: Strengthen the formation of multidisciplinary teams and their integration into integrated health services networks based on PHC</p> <p>Strategic Line 4: Enhance workforce capacity-building to address population health priorities and support public health emergency preparedness and response</p>

NHWI Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>2-07 Standards for education and training programmes</p> <p>2-07.03 Existence of national and/or subnational standards for interprofessional education in accreditation mechanisms of training programmes</p>	<p>This indicator is a composite of seven sub-indicators. Each sub-indicator is a self-assessment of one aspect of standards on education and training programmes. To help answer these self-assessed sub-indicators, a series of guiding questions are provided.</p> <p>Existence of national and/or subnational standards for interprofessional education in accreditation mechanisms of training programmes (Yes/Partial/No)</p> <p>Guiding question for this sub-indicator: Is interprofessional education, involving several health workforce education and training programmes, included or reflected within national and/or subnational standards?</p>	<ul style="list-style-type: none"> Ministry of Health Ministries of Education, Higher Education or similar National accreditation authorities Legitimate bodies, statutory corporations Professional council/chamber/association registers Ministries responsible for labour 	<p>Strategic Line 2: Develop and consolidate regulatory mechanisms related to HRH</p> <p>Strategic Line 3: Strengthen the formation of multidisciplinary teams and their integration into integrated health services networks based on PHC</p>
<p>2-07 Standards for education and training programmes</p> <p>2-07.04 Existence of cooperation between health workforce education and training institutions and regulatory bodies to agree on accreditation standards</p>	<p>This indicator is a composite of seven sub-indicators. Each sub-indicator is a self-assessment of one aspect of standards on education and training programmes. To help answer these self-assessed sub-indicators, a series of guiding questions are provided.</p> <p>Existence of cooperation between health workforce education and training institutions and regulatory bodies to agree on accreditation standards (Yes/Partial/No)</p> <p>Guiding questions for this sub-indicator: Is there a coordinating mechanism or body in place for this task? Are various stakeholders at national and institutional level involved in the coordination process? Are there institutional mechanisms in place to coordinate accreditation systems, including negotiations with relevant ministries, government agencies and stakeholders?</p>	<ul style="list-style-type: none"> Ministry of Health Ministries of Education, Higher Education or similar National accreditation authorities Legitimate bodies, statutory corporations Professional council/chamber/association registers Ministries responsible for labour 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p> <p>Strategic Line 2: Develop and consolidate regulatory mechanisms related to HRH</p>

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>2-07 Standards for education and training programmes</p> <p>2-07.05 Existence of national systems for continuing professional development</p>	<p>This indicator is a composite of seven sub-indicators. Each sub-indicator is a self-assessment of one aspect of standards on education and training programmes. To help answer these self-assessed sub-indicators, a series of guiding questions are provided.</p> <p>Existence of national systems for continuing professional development (Yes/Partial/No)</p> <p>Guiding questions for this sub-indicator: Are there existing national and/or subnational systems for continuing professional development (CPD)? If national and/or subnational systems for CPD exist, are they compulsory and linked to re-licensure? For occupations that have a national and/or subnational system for CPD, is it integrated into national education plans for the health workforce, for that occupation?</p>	<ul style="list-style-type: none"> • Ministry of Health • Ministries of Education, Higher Education or similar • National accreditation authorities • Legitimate bodies, statutory corporations • Professional council/chamber/association registers • Ministries responsible for labour 	<p>Strategic Line 4: Enhance workforce capacity-building to address population health priorities and support public health emergency preparedness and response</p>
<p>4 Working conditions, governance, and leadership</p>			
<p>4-05 National capacity to monitor key metrics for health workforce planning and global monitoring frameworks</p> <p>4-05.09 Ability of HRHIS to monitor gender pay gap</p>	<p>This indicator is a composite of nine sub-indicators. Each sub-indicator is a self-assessment of one aspect of the capacity of the national human resources for health information system (HRHIS) or other mechanisms to report on key metrics that are relevant for national health workforce planning and policy-making as well as for global monitoring frameworks. To help answer some of these self-assessed sub-indicators, guiding questions are provided.</p> <p>Ability of HRHIS to monitor gender pay gap (Yes/Partial/No)</p>	<ul style="list-style-type: none"> • Ministry of Health and regional ministries of health • Professional chambers • Institutions or units responsible for monitoring, or for policies on the health workforce • Ministry of Labour • National Statistical Office • National Focal Point for WHO Global Code of Practice • Ministry of Health and subnational ministries of health • Institutions collecting health workforce data 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>

NHWI Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>4-05 National capacity to monitor key metrics for health workforce planning and global monitoring frameworks</p> <p>4-05.04 Ability of HRHIS to generate information for reporting on outputs from education and training institutions</p>	<p>This indicator is a composite of nine sub-indicators. Each sub-indicator is a self-assessment of one aspect of the capacity of the national human resources for health information system (HRHIS) or other mechanisms to report on key metrics that are relevant for national health workforce planning and policy-making as well as for global monitoring frameworks. To help answer some of these self-assessed sub-indicators, guiding questions are provided.</p> <p>Ability of HRHIS to generate information for reporting on outputs from education and training institutions (Yes/Partial/No)</p> <p>Guiding questions for this sub-indicator: Is there a master list of accredited education and training institutions at national level? If yes, is this master list geocoded? Is this master list updated on a regular basis? Do education and training institutions record the number of graduates by health workforce education and training, and by sex? Is information on the number of graduates provided to the relevant national body on an annual basis?</p>	<ul style="list-style-type: none"> • Ministry of Health and regional ministries of health • Professional chambers • Institutions or units responsible for monitoring, or for policies on the health workforce • Ministry of Labour • National Statistical Office • National Focal Point for WHO Global Code of Practice • Ministry of Health and subnational ministries of health • Institutions collecting health workforce data 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>
<p>4-05 National capacity to monitor key metrics for health workforce planning and global monitoring frameworks</p> <p>4-05.05 Ability of HRHIS to track entrants to the labour market</p>	<p>This indicator is a composite of nine sub-indicators. Each sub-indicator is a self-assessment of one aspect of the capacity of the national human resources for health information system (HRHIS) or other mechanisms to report on key metrics that are relevant for national health workforce planning and policy-making as well as for global monitoring frameworks. To help answer some of these self-assessed sub-indicators, guiding questions are provided.</p> <p>Ability of HRHIS to generate information to track entrants to the labour market (Yes/Partial/No)</p>	<ul style="list-style-type: none"> • Ministry of Health and regional ministries of health • Professional chambers • Institutions or units responsible for monitoring, or for policies on the health workforce • Ministry of Labour • National Statistical Office • National Focal Point for WHO Global Code of Practice • Ministry of Health and subnational ministries of health • Institutions collecting health workforce data 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>

* Source: WHO, National Health Workforce Accounts, 2023 (4)

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>4-05 National capacity to monitor key metrics for health workforce planning and global monitoring frameworks</p> <p>4-05.07 Ability of HRHIS to track exits from the labour market</p>	<p>This indicator is a composite of nine sub-indicators. Each sub-indicator is a self-assessment of one aspect of the capacity of the national human resources for health information system (HRHIS) or other mechanisms to report on key metrics that are relevant for national health workforce planning and policy-making as well as for global monitoring frameworks. To help answer some of these self-assessed sub-indicators, guiding questions are provided.</p> <p>Ability of HRHIS to generate information to track exits from the labour market (Yes/Partial/No)</p>	<ul style="list-style-type: none"> • Ministry of Health and regional ministries of health • Professional chambers • Institutions or units responsible for monitoring, or for policies on the health workforce • Ministry of Labour • National Statistical Office • National Focal Point for WHO Global Code of Practice • Ministry of Health and subnational ministries of health • Institutions collecting health workforce data 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>

Level 3 HRH core supplementary indicators for the Caribbean

Indicators at this level were selected by the HRH-ATF based on the number of factors involved in achieving the indicator and potential feasibility. Level 3 indicators are there for countries to work toward if they have already accomplished indicators in Level 1 and Level 2, or if they consider any Level 3 indicators a priority for the country.

1 Vacancy rate

2 Annual outflows of health workers

- Active health workers who became inactive in the health labour market due to voluntary reason
- Active health workers who became inactive in the health labour market due to involuntary reason

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
1 Stock and flow			
1-11 Vacancy rate	Ratio of unfilled posts to total number of posts. By limiting the count of unfilled posts for at least twelve months, this indicator enables to distinguish between a systematic job vacancy situation versus potential rapid turnover of staff.	<ul style="list-style-type: none"> • Labour force surveys • Health facility assessments • Employment offices and/or job agencies 	Strategic Line 1: Strengthen governance and promote national policies and plans for HRH

NHWA Indicator/sub-indicator*	Definition*	Potential Data Sources*	Alignment with Policy on the Health Workforce 2030
<p>1-10 Annual outflows of health workers</p> <p>Percentage of active health workers who became inactive in the health labour market due to voluntary reason</p>	<p>Percentage of active health workers who became inactive in the health labour market due to voluntary reason or involuntary reason</p> <p>The disaggregation by type of exit has two categories: voluntary exit or involuntary exit.</p> <p>Voluntary exit corresponds to the following situations: emigration, temporary leave, change of sector, early retirement or other voluntary reason. Only early retirement should be considered as voluntary exit; retirement at standard age is to be counted in the involuntary exit.</p> <p>For the total number of active health workers, data at the end of the previous year should be used.</p>	<ul style="list-style-type: none"> • Health workforce registry or database • Professional council/chamber/association registers • Aggregate data from health facilities (routine administrative records, Health Management Information System, District Health Information System census and/or survey) • Data from pension and/or retirement administration units • Mortality records 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>
<p>1-10 Annual outflows of health workers</p> <p>Percentage of active health workers who became inactive in the health labour market due to involuntary reason</p>	<p>Percentage of active health workers who became inactive in the health labour market due to voluntary reason or involuntary reason</p> <p>The disaggregation by type of exit has two categories: voluntary exit or involuntary exit.</p> <p>Involuntary exit corresponds to the following situations: death, retirement (excluding early retirement), suspension from work, long-term illness or other involuntary reason.</p> <p>For the total number of active health workers, data at the end of the previous year should be used.</p>	<ul style="list-style-type: none"> • Health workforce registry or database • Professional council/chamber/association registers • Aggregate data from health facilities (routine administrative records, Health Management Information System, District Health Information System census and/or survey) • Data from pension and/or retirement administration units • Mortality records 	<p>Strategic Line 1: Strengthen governance and promote national policies and plans for HRH</p>

* Source: WHO, National Health Workforce Accounts, 2023 (4)

5. Conclusions and Recommendations

The proposed indicators are in line with the Plan of Action on Human Resources for Universal Access to Health and Universal Coverage, which proposed three strategic lines of action to strengthen and consolidate governance and leadership in HRH, develop conditions and capacities to expand HRH, and partner with the education sector to respond to the needs of health systems in working to achieve universal coverage (6). Furthermore, the indicators are aligned with the priorities and overall goal highlighted in the Caribbean HRH Roadmap, which outlines the need for continued collaboration to build upon HRH agendas within the subregion of the Caribbean (1).

Additionally, the need to strengthen health information systems, and define and work toward the attainment of HRH indicators is aligned with priorities identified by official delegates of the HRH-ATF and PAHO (survey in Qualtrics carried out before the third meeting of the HRH-ATF). Among others, health workforce planning and HIS strengthening were considered as areas of high importance and that require additional technical cooperation and financing.

The indicators selected will aid the Caribbean in achieving the implementation of national health policies and actions, and the Policy on the Health Workforce 2030: Strengthening Human Resources for Health to Achieve Resilient Health Systems (7). The categorization of indicators by level allows countries to plan how to incorporate core supplementary indicators (levels 2 and 3) based on their needs, priorities, and readiness.

Achievement of the proposed indicators will be different for every country and based on the level of development of each country's HRHIS and involvement and readiness of the HRH departments and units.

It is recommended that every country designate a focal point to input data onto the NHTWA platform. Furthermore, the level of NHTWA reporting a country provides (basic, mid, high) gives insight into which indicator level they should focus on. The core indicators also are meant to match the current needs of a country in terms of supporting decisionmaking on HRH planning and forecasting, recruitment, and retention of personnel.

To address the country's needs and strengthen HRH and HIS within the Caribbean, it is necessary to encourage collaboration between countries and draw on similar experiences and needs within countries and territories. PAHO and CARICOM have the mandate and capability to support the sharing of information.

This list does not represent the only HRH indicators that the countries of the Caribbean may need. Rather, it is a guide for identifying and selecting core indicators that can be added to those already being monitored. Therefore, countries must be proactive in identifying their specific needs and making recommendations for changes to the list of core indicators to better support those needs.

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The Caribbean has a serious need to improve the health information system, and in particular related to human resources for health. PAHO has been working with country focal points to report on the HRH indicators included in the WHO National Health Workforce Accounts (NHWA) platform. However, not all indicators in the NHWA are relevant to the Caribbean or can be reported due to limitations in data collection and available information. The HRH Action Task Force (now HRH Caribbean Commission), with support from PAHO identified a set of 30 core indicators and sub-indicators for the Caribbean, classified in three levels of importance and complexity. This publication systematizes the process and includes the chosen core indicators and sub-indicators.