UNITED ARAB EMIRATES
MINISTRY OF HEALTH & PREVENTION

UAE NATIONAL HEALTH WORKFORCE ACCOUNT (NHWA) REPORT - 2018

MINISTRY OF HEALTH & PREVENTION (MOHAP)
STATISTICS & RESEARCH CENTRE

1. CONTRIBUTORS

- Ministry of Health & Prevention
- Ministry of Education
- Ministry of Education – Higher Education
- Ministry of Presidential Affairs
- Commission for Academic Accreditation
- Dubai Health Authority
- Dubai Healthcare City
- Department of Health - Abu Dhabi
- Federal Authority for Government Human Resources
- World Health Organization

2. KEY INDIVIDUALS

2.1 AUTHORS

Varunendra Swarup Verma

Business Analyst

Statistics and Research Centre

Ministry of Health & Prevention

Rahul Patil

Business Analyst

Statistics and Research Centre

Ministry of Health & Prevention

2.2 REVIEWERS

Dr. Alya Zaid Mohammed Harbi

Director

Statistics & Research Centre

Ministry of Health & Prevention

Dr. Lubna Ali AlShaali

Director

Public Health Policies Department

Ministry of Health & Prevention

Adnan Yaqoot Ali Suwaid AlReyami

Director

Human Resources Department

Ministry of Health & Prevention

Saqr AlHemeiri

Director

Training & Development Centre

Ministry of Health & Prevention

Dr. Sumaya Mohamed Abbas

Director

Nursing Department – Hospitals Sector

Ministry of Health & Prevention

Dr. Shaikha Abdulkareem Abdool

Head of Data Science and Informatics Section

Statistics and Research Centre

Ministry of Health & Prevention

Abeer Adel Mohamed Abdul Ghani

Acting Director

Organizing, Licensing & Advertising Department

Ministry of Health & Prevention

Hend Ali Ibrahim Al Mulla

Head of Statistics Section

Statistics and Research Centre

Ministry of Health & Prevention

3. ACKNOWLEDGEMENT

We would like to express our sincere thanks and appreciation to all departments of the Ministry of Health and Prevention, esteemed Ministries and other Governmental and Private authorities, who contributed generously towards the collection and confirmation of the data in this report. Without their support and experience, this report would not have been possible.

4. FOREWORD

The Statistics and Research Centre (SARC) of MOHAP have prepared the report for the World Health Organization (WHO) devised National Health Workforce Account (NHWA) programme for UAE for the calendar year 2018. Technical details of this entire programme can be viewed at https://www.who.int/hrh/documents/brief_nhwa_handbook/en/

This report contains information about the below areas of NHWA:

- Definition, characteristics and purpose behind implementation of this programme for UAE.
- Indicator values affecting health labour market cutting across education, labour workforce and population needs.
- Module wise detailed description and values of each indicator.
- Key comparisons of NHWA indicator values between UAE and other countries.
- MOHAP recommendations for addressing areas of concern with health workforce.
- Challenges faced by us during implementation.

The rationale behind presenting this report is for obtaining a holistic view of the UAE health workforce situation in terms of workforce statistics, skill and specialization adequacy, key policy regulations and information systems. We present the distinguishing aspects of UAE health workforce along with challenges and improvement areas, when addressed will catapult UAE's health workforce to the greatest heights of population satisfaction and worker efficacy.

One of the limitations of this report is that we could not publish results for all of the NHWA indicators because those data items were not available with the identified stakeholders. This has been highlighted in the chapter 12 relating to Challenges with NHWA implementation. We are highly optimistic that these pending areas shall be addressed in the subsequent NHWA UAE Report for 2019.

5. ABBREVIATIONS & ACRONYMS

Abbreviation	Full Form
CPD	Continuing Professional Development
DHA	Dubai Health Authority
DHCC	Dubai Health Care City
DOH	Department of Health – Abu Dhabi
FAHR	Federal Authority for Government Human Resources
FCSA	Federal Competitiveness and Statistics Authority
HIS	Health Information System
HRHIS	Human Resource for Health Information System
HWF	Health Workforce
IHR	International Health Regulation
IPE	Inter-professional Education
MOE	Ministry of Education
MOE – HE	Ministry of Education – Higher Education
MOHAP	Ministry of Health & Prevention
MOHRE	Ministry of Human Resources & Emiratisation
SDG	Sustainable Development Growth
UHC	Universal Health Coverage
WHO	World Health Organization

6. TABLE OF CONTENTS

7. LIST OF FIGURES

8. LIST OF TABLES

9. CHAPTER 1: INTRODUCTION TO NATIONAL HEALTH WORKFORCE ACCOUNT

9.1 Definition

The National Health Workforce Account (NHWA) is a system developed under the direction of the World Health Organization (WHO) Health Workforce Department using which countries can collect evidence-based data pertaining to the health workforce, which is progressively monitored using a set of indicators. The health workforce data collected encompasses areas such as health workforce stock and distribution, education and training - capacity, regulations and finances, employment characteristics and working conditions, workforce expenditure and remuneration, skill-mix distribution, governance & policies and human resource information systems.

9.2 Characteristics

The NHWA is a data-intensive programme which has the below mentioned characteristics:

- Provides a harmonized and integrated method for health workforce data collection.
- Technically defines a set of indicators for precise data acquisition and analysis.
- Promotes a multi-stakeholder synergistic environment for holistic data generation.
- Improves the interoperability of health information systems spread across multiple public and private entities.
- Creates an official platform for secure dissemination of health workforce indicator data.

9.3 Purpose

The primary purpose of the NHWA programme is to facilitate the standardization and interoperability of health workforce data and track performance towards Universal Health Coverage (UHC).

The health workforce indicator data is collected, reconciled, analyzed, verified and reported in order to meet below objectives:

Figure 1 - NHWA Purpose

The implementation of NHWA programme shall serve following purposes for UAE:

- Achieve the Universal Health Coverage and Sustainable Development Goals milestones.
- First country to report on all NHWA modules.
- Provide best in class services and attain top global leadership in healthcare.
- Achieve holistic development of healthcare education and systems.
- Better planning for dealing with increasing healthcare demand.

9.4 Benefits

The implementation of NHWA provides benefits global, national and regional levels.

Figure 2 - NHWA Benefits

At Global level, NHWA implementation results in below benefits:

- Formulation of evidence-based health workforce plans and policies.
- Data Standardization and interoperability.
- Establishment of a benchmark for health workforce data standards.
- Facilitation of standardized data comparisons against other countries.

At National Level, NHWA implementation results in below benefits:

- Review of National health workforce data.
- Identification of gaps, shortages and mismatches in health workforce data.
- Assessment of existing policies and plans that impact the health workforce.
- Strengthened multi-stakeholder collaboration resulting in creation of inter-sectoral policies, strategies and plans.

At Regional Level, NHWA Implementation results in below benefits:

- Accurate capture of region level health workforce data.
- Facilitation of cross-country capacity building, information and data exchange.
- Aid in sophisticated research about future trends of health workforces regionally.

10. CHAPTER 2: NHWA MODULES

The NHWA contains a set of 78 core indicators, spread over 10 modules that aim to support national-level HWF policies to progress towards UHC and SDGs. The indicators in the 10 modules feed into three crucial labour market components: the education component, the labour force component and the component serving population health needs.

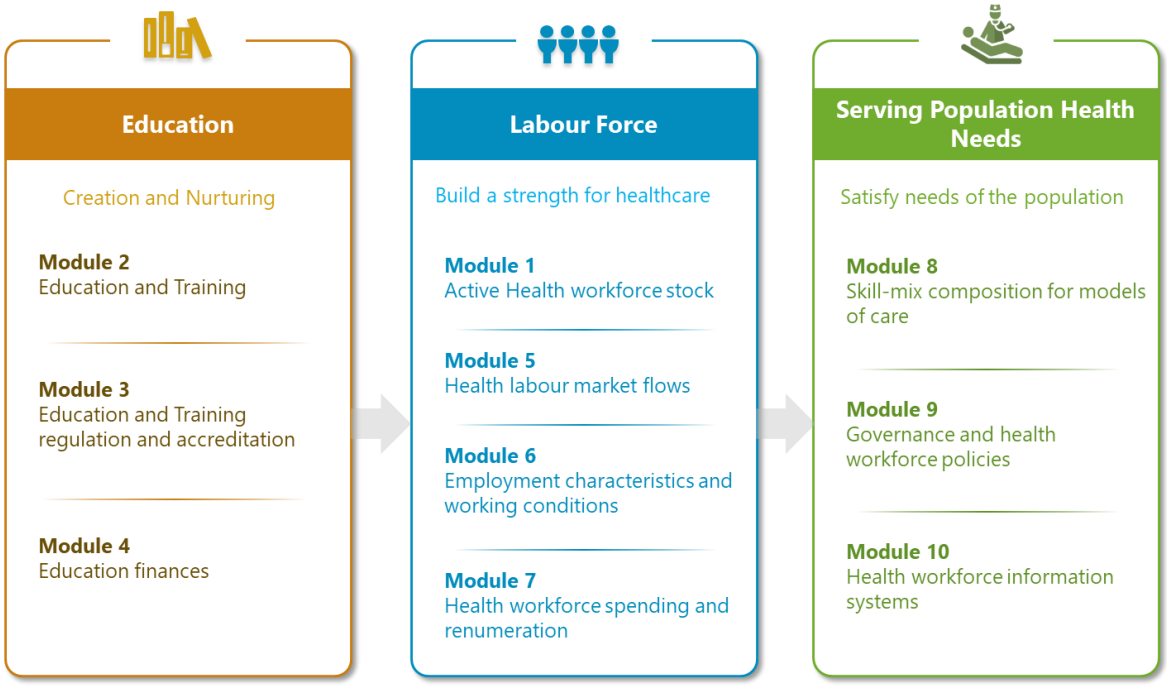

Figure 3 - NHWA Modules

11. CHAPTER 3: NHWA UAE 2018 INDICATORS VALUES

Indicator Id	Unique Reference Id	Indicator Title	Value	Unit	Data Source
1.01	ID_169	Health worker density (UAE)	**126**	per 10 000 population	MOHAP DOH DHA DHCC MOPA
1.02	ID_170	Health worker density at subnational level	Abu Dhabi : **189** Umm Al Quwain : **156** Sharjah : **120** Ajman : **116** Fujairah : **106** Dubai : **92** Ras Al Khaimah : **90**	per 10 000 population	Same as above
1.03	ID_171	Health worker distribution by age group (UAE – Public Sector Partial)	<25 : **0.29** 25–34 : **40.75** 35–44 : **33.43** 45–54 : **17.05** 55–64 : **6.70** >= 65 : **1.79**	Percent (%)	MOHAP MOPA DOH
1.04	ID_172	Female health workforce (UAE)	**64.28**	Percent (%)	MOHAP DOH DHA DHCC MOPA
1.05	ID_173	Health worker distribution by facility ownership (UAE)	Public : **34.59** Private : **65.41**	Percent (%)	Same as above
1.06	ID_174	Health worker distribution by facility type (UAE – Public Sector Partial)	Hospitals: **47.45** Ambulatory Facilities: **30.99** Retail Facilities: **9.34** Others: **5.56** Government Agencies: **3.35** Ancillary Facilities: **1.90** Residential Care Facilities : **1.41**	Percent (%)	MOHAP MOPA DOH
2.01	ID_178	Master list of accredited health workforce education and training institutions (UAE)	**Yes**	NA	MOE
3.01	ID_185	Standards for the duration and content of education and training (UAE)	**Yes**	NA	CAA
3.02	ID_186	Accreditation mechanisms for education and training institutions and their programmes (UAE)	**Partly**	NA	CAA
3.03	ID_187	Standards for social accountability (UAE)	**Yes**	NA	CAA

Indicator Id	Unique Reference Id	Indicator Title	Value	Unit	Data Source
3.04	ID_188	Standards for social accountability effectively implemented (UAE)	**Partly**	NA	CAA MOHAP
3.05	ID_189	Existence of national and/or subnational standards for the social determinants of health in accreditation mechanisms (UAE)	**Yes**	NA	CAA MOHAP
3.06	ID_190	Standards for interprofessional education (UAE)	**Partly**	NA	CAA
3.07	ID_191	Agreement on accreditation standards (UAE)	**Yes**	NA	CAA
3.08	ID_192	Continuing professional development (UAE)	**Partly**	NA	CAA MOHAP
3.09	ID_193	In-service training (UAE)	**Yes**	NA	CAA
6.01	ID_209	Standard working hours (UAE – Public Sector)	**48**	Hours per week	MOHAP
6.03	ID_211	Regulation on working hours and conditions (UAE – Public Sector)	**Yes**	NA	FAHR
6.05	ID_213	Regulation on social protection (UAE – Public Sector)	**Yes**	NA	FAHR
7.06	ID_224	Policies on public sector wage ceilings (UAE – Public Sector)	**Yes**	NA	MOHAP
7.07	ID_225	Gender wage gap (UAE – Public Sector Partial)	**0**	Percent (%)	MOHAP
8.01	ID_226	Percentage of health workforce working in hospitals (UAE – Public Sector Partial)	**47.45**	Percent (%)	MOHAP MOPA DOH
8.02	ID_227	Percentage of health workforce working in residential long-term care facilities (UAE – Public Sector Partial)	**1.41**	Percent (%)	Same as above
8.03	ID_228	Percentage of health workforce working in ambulatory health care (UAE – Public Sector Partial)	**30.99**	Percent (%)	Same as above
8.04	ID_229	Specialist surgical workforce (UAE)	**62.64**	Per 100 000 population	UAE Level

Indicator Id	Unique Reference Id	Indicator Title	Value	Unit	Data Source
8.05	ID_230	Family medicine practitioners (UAE)	**81.45**	Per 100 000 population	UAE Level
8.06	ID_231	Existence of advanced nursing roles (UAE)	**Partly**	NA	MOHAP
8.07	ID_232	Availability of human resources to implement the International Health Regulations (UAE – Public Sector)	**Sustainable Capacity**	NA	MOHAP
8.08	ID_233	Applied epidemiology training programme (UAE – Public Sector)	**Limited Capacity**	NA	MOHAP
9.01	ID_234	Mechanisms to coordinate an intersectoral health workforce agenda (UAE – Public Sector)	**Yes**	NA	MOHAP
9.02	ID_235	Central health workforce unit (UAE – Public Sector)	**Yes**	NA	MOHAP
9.03	ID_236	Health workforce planning processes (UAE – Public Sector)	**Yes**	NA	MOHAP
9.04	ID_237	Education plans aligned with national health plan (UAE – Public Sector)	**Yes**	NA	MOHAP
9.05	ID_238	Institutional models for assessing health care staffing needs (UAE – Public Sector)	**Yes**	NA	MOHAP
10.01	ID_239	HRHIS for reporting on International Health Regulations (UAE – Public Sector)	**No**	NA	MOHAP
10.03	ID_241	HRHIS for reporting on skill attendance at birth requirements (UAE – Public Sector)	**No**	NA	MOHAP
10.04	ID_242	HRHIS for reporting on outputs from education and training institutions (UAE – Public Sector)	**No**	NA	MOHAP
10.05	ID_243	HRHIS for tracking the number of entrants to the labour market (UAE – Public Sector)	**Yes**	NA	MOHAP
10.06	ID_244	HRHIS for tracking the number of active stock on the labour market (UAE – Public Sector)	**Yes**	NA	MOHAP
10.07	ID_245	HRHIS for tracking the number of exits from the	**Yes**	NA	MOHAP

Indicator Id	Unique Reference Id	Indicator Title	Value	Unit	Data Source
		labour market (UAE – Public Sector)			
10.08	ID_246	HRHIS for producing the geocoded location of health facilities (UAE – Public Sector)	**No**	NA	MOHAP

Table 1 - NHWA UAE 2018 Core Indicator values

12. CHAPTER 4: MODULE 1 – ACTIVE HEALTH WORK STOCK

Overview: This module provides a detailed overview of the below aspects of health workforce:

- Stock – The total health workforce within the country as well as within all regions of the country in comparison to total population. This data enables ascertaining adequacy of health workforce for delivering UHC-oriented services.
- Distribution – The bifurcation of health workforce across gender and various age groups. The distribution of health workforce based on employment in different types of facilities and facilities ownership. This data enables gap detection in certain occupational sectors and highlights mismatches in geographical or sectoral distribution.
- Migration – Focus on quantity of foreign-born and foreign-trained workers in a country thereby revealing amount of reliance on foreign health workforce. This data will assist countries in meeting the GSHRH target of halving dependency on foreign-trained health workers through implementation of WHO Global Code of Practise.

Kindly Note - We have not received data for few indicators of this module. Details are present in section: 24.2.1 Module 1 – Active Health Work Stock

12.1 Key Areas

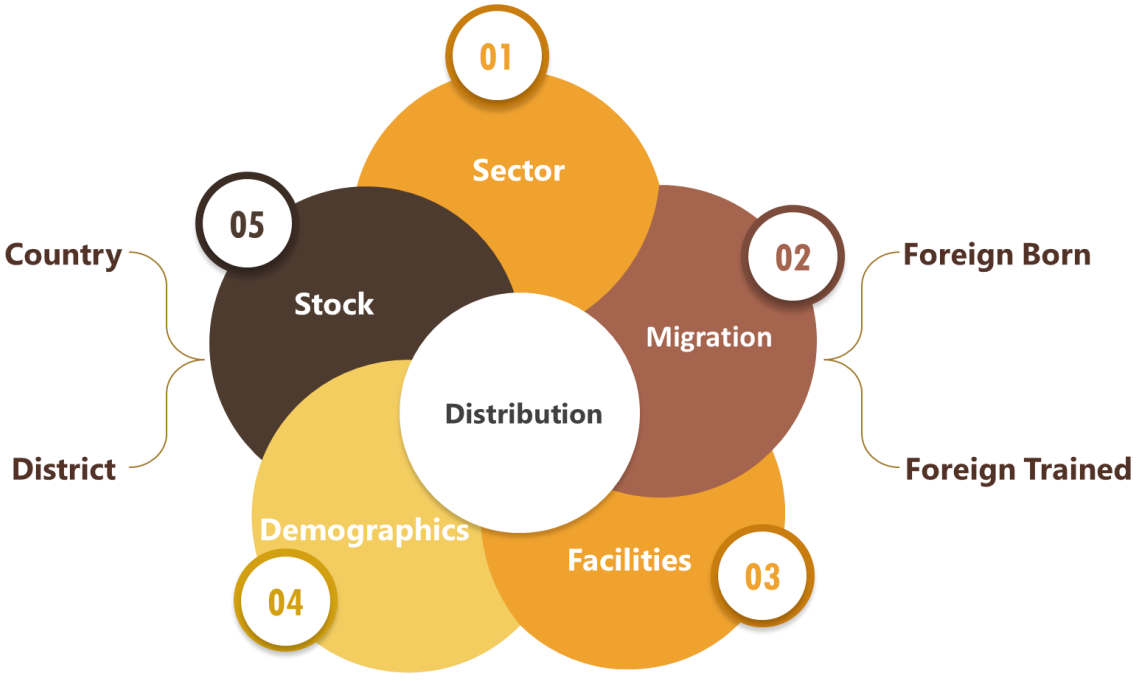

Figure 4 - Module 1 Key Areas

12.2 Indicator Data

Indicator Id	1.01
Unique Reference Id	ID_169
Name	Health worker density
Definition	Number of health workers per 10 000 population inclusive of Medical Doctors, Dentists, Nurses, Pharmacists and Technicians.
Numerator	Number of health workers, defined in headcounts
Denominator	Total population
Value	**126**
Unit	**Per 10 000 population**
Level	UAE
Data Sources	Ministry of Health and Prevention (MOHAP) Department of Health (DOH) Dubai Health Authority (DHA) Dubai Healthcare City (DHCC) Ministry of Presidential Affairs (MOPA)

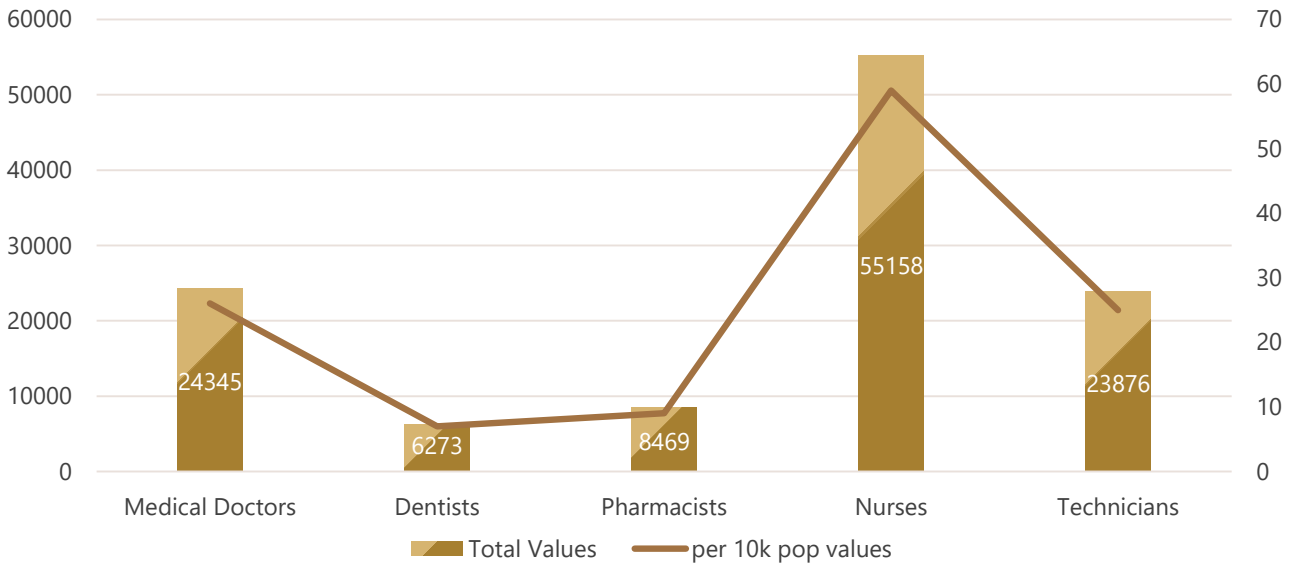

Figure 5 - Category-wise Manpower UAE chart

Category	Value	Value per 10 000 population
Medical Doctors	24345	26
Dentists	6273	7
Pharmacists	8469	9
Nurses	55158	59
Technicians	23876	25
Total	**118121**	**126**

Table 2 - Category-wise Manpower Summary

Indicator Id	1.02
Unique Reference Id	ID_170
Name	Density of active health workers per 10 000 population at subnational level
Definition	Number of active health workers at subnational administrative units.
Numerator	Number of health workers per region
Denominator	Total population per region
Value	▪ Abu Dhabi : **189** ▪ Umm Al Quwain : **156** ▪ Sharjah : **120** ▪ Ajman : **116** ▪ Fujairah : **106** ▪ Dubai : **92** ▪ Ras Al Khaimah : **90**
Unit	**Per 10 000 population**
Data Sources	Ministry of Health and Prevention (MOHAP) Department of Health (DOH) Dubai Health Authority (DHA) Dubai Healthcare City (DHCC) Ministry of Presidential Affairs (MOPA)

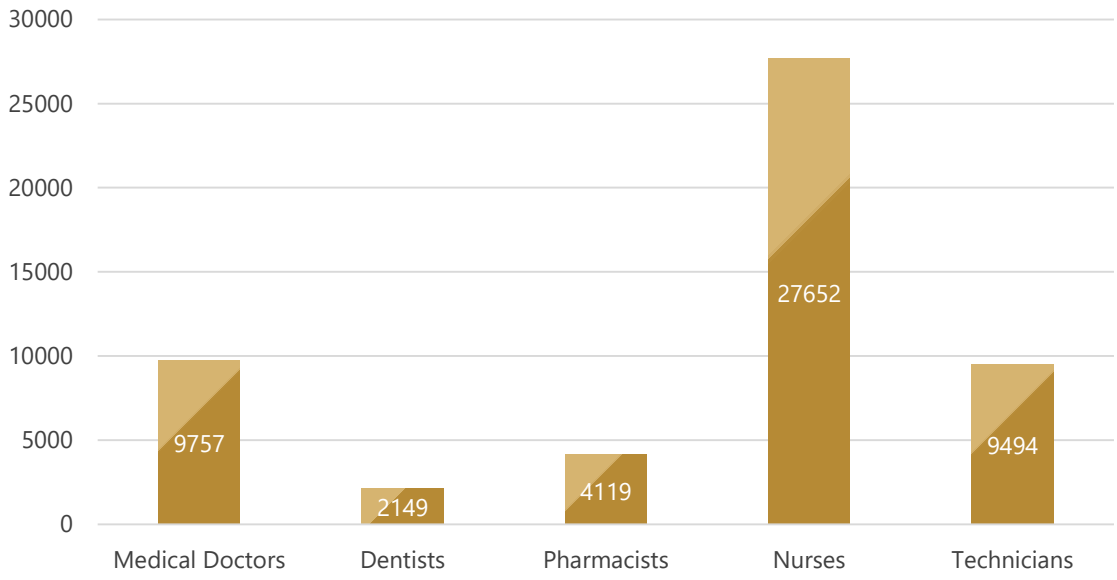

Figure 6 - Category-wise Manpower Abu Dhabi chart

Category	Value	Value per 10 000 population
Medical Doctors	9757	35
Dentists	2149	8
Pharmacists	4119	15
Nurses	27652	98
Technicians	9494	34
Total	**53171**	**189**

Table 3 - Category-wise Abu Dhabi Summary

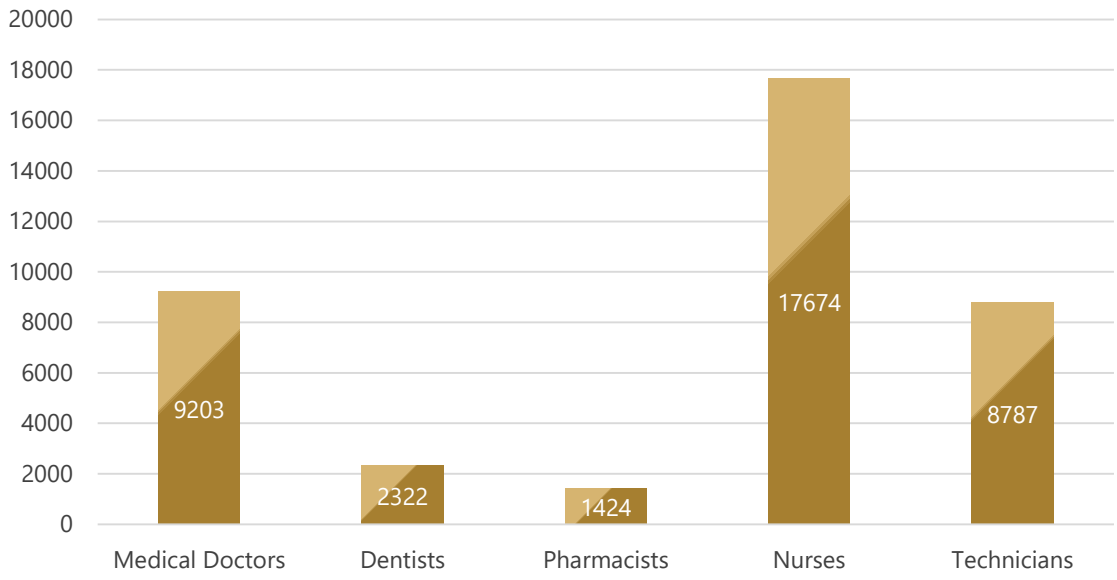

Figure 7 - Category-wise Manpower Dubai chart

Category	Value	Value per 10 000 population
Medical Doctors	9203	21
Dentists	2322	5
Pharmacists	1424	3
Nurses	17674	41
Technicians	8787	20
Total	**39410**	**92**

Table 4 - Category-wise Dubai Summary

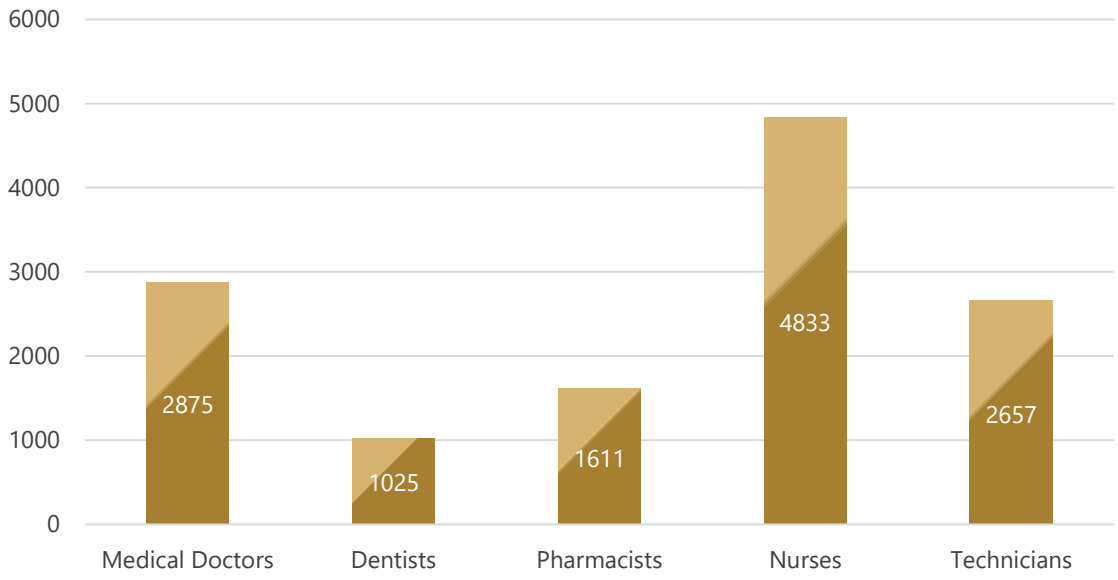

Figure 8 - Category-wise Manpower Sharjah chart

Category	Value	Value per 10 000 population
Medical Doctors	2875	26
Dentists	1025	9
Pharmacists	1611	15
Nurses	4833	44
Technicians	2657	24
Total	**13001**	**120**

Table 5 - Category-wise Sharjah Summary

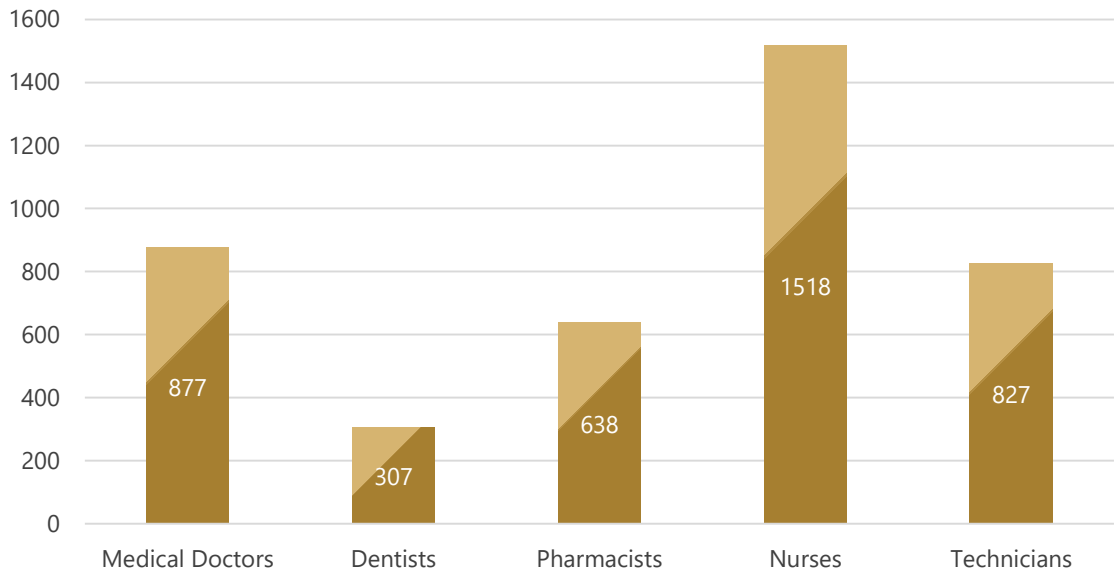

Figure 9 - Category-wise Manpower Ajman chart

Category	Value	Value per 10 000 population
Medical Doctors	877	24
Dentists	307	9
Pharmacists	638	18
Nurses	1518	42
Technicians	827	23
Total	**4167**	**116**

Table 6 - Category-wise Ajman Summary

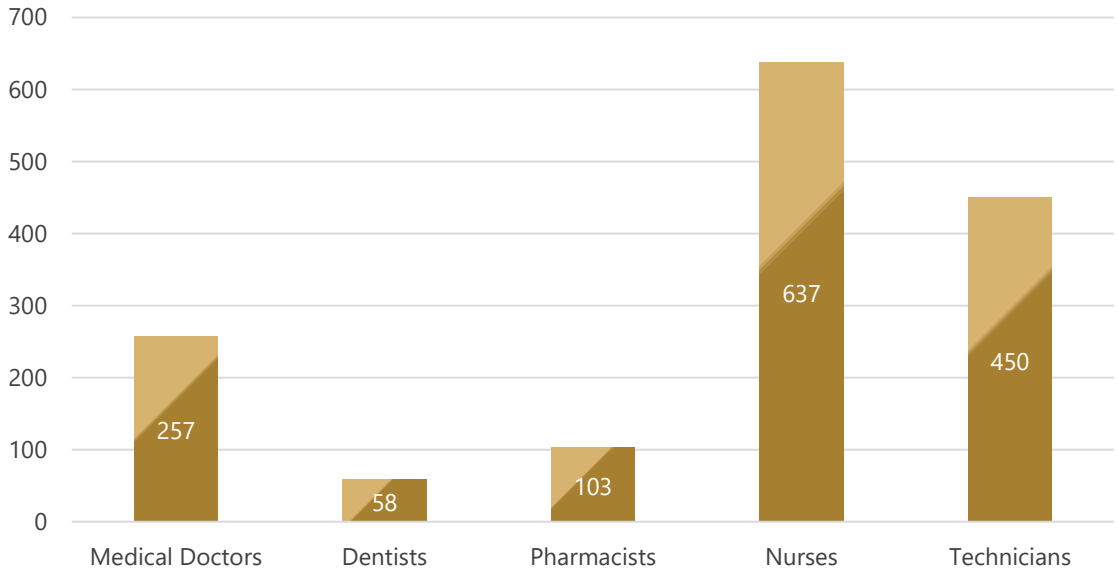

Figure 10 - Category-wise Manpower Umm Al Quwain chart

Category	Value	Value per 10 000 population
Medical Doctors	257	27
Dentists	58	6
Pharmacists	103	11
Nurses	637	66
Technicians	450	47
Total	**1505**	**156**

Table 7 - Category-wise Umm Al Quwain Summary

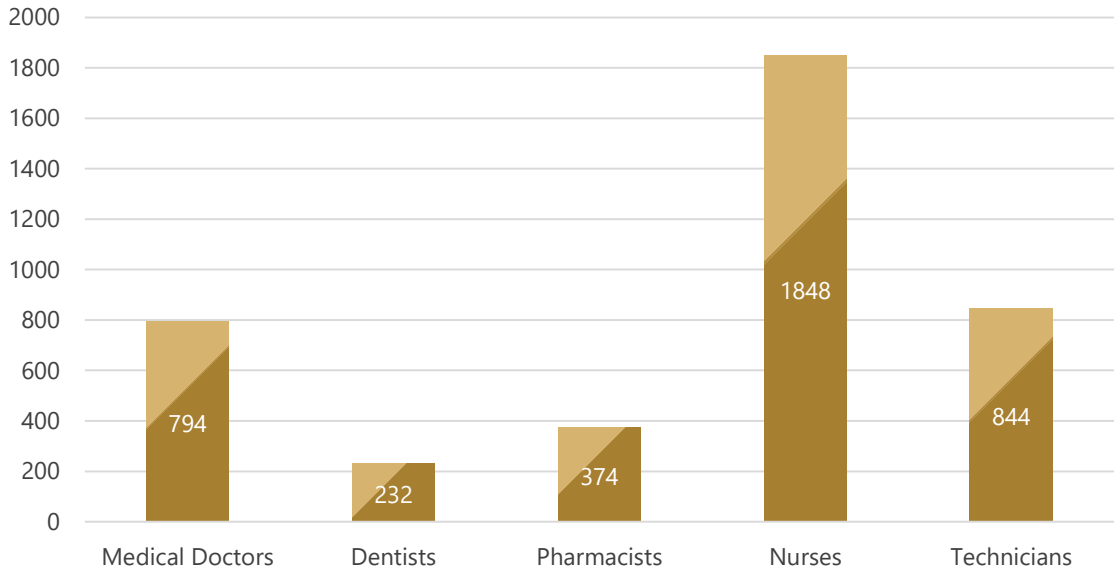

Figure 11 - Category-wise Manpower Ras Al Khaimah chart

Category	Value	Value per 10 000 population
Medical Doctors	794	18
Dentists	232	5
Pharmacists	374	8
Nurses	1848	41
Technicians	844	19
Total	**4092**	**90**

Table 8 - Category-wise Ras Al Khaimah Summary

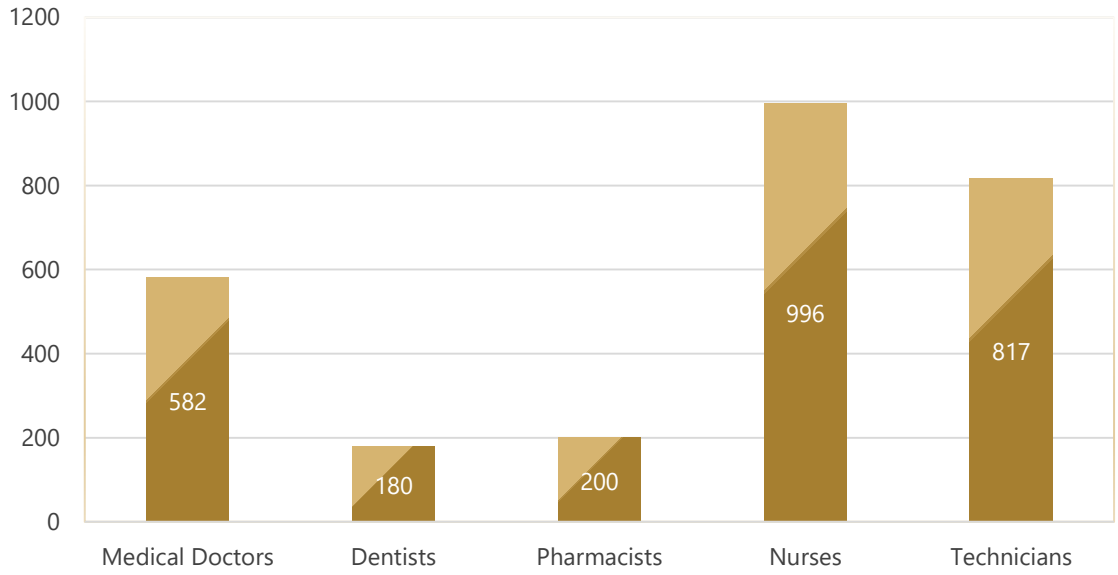

Figure 12 - Category-wise Manpower Fujairah chart

Category	Value	Value per 10 000 population
Medical Doctors	582	22
Dentists	180	7
Pharmacists	200	8
Nurses	996	38
Technicians	817	31
Total	**2775**	**106**

Table 9 - Category-wise Fujairah Summary

Indicator Id	1.03
Unique Reference Id	ID_171
Name	Health worker distribution by age group
Definition	Percentage of active health workers in different age groups as mentioned below: ▪ <25 ▪ 25–34 ▪ 35–44 ▪ 45–54 ▪ 55–64 ▪ >=65
Numerator	Number of active health workers in a specific age group
Denominator	Total number of active health workers, defined in headcounts
Value	▪ <25 : 0.29 ▪ 25–34 : 40.75 ▪ 35–44 : 33.43 ▪ 45–54 : 17.05 ▪ 55–64 : 6.70 ▪ >= 65 : 1.79
Unit	**Percent (%)**
Level	UAE Public Sector - Partial
Data Sources	Ministry of Health and Prevention (MOHAP) Ministry of Presidential Affairs (MOPA) Department of Health (DOH)

Indicator Id	1.04
Unique Reference Id	ID_172
Name	Female health workforce
Definition	Percentage of female health workers in active health workforce.
Numerator	Number of active female health workers
Denominator	Total number of active male and female health workers, defined in headcounts
Value	**64.28**
Unit	**Percent (%)**
Level	UAE
Data Sources	Ministry of Health and Prevention (MOHAP) Department of Health (DOH) Dubai Health Authority (DHA) Dubai Healthcare City (DHCC) Ministry of Presidential Affairs (MOPA) Other local government

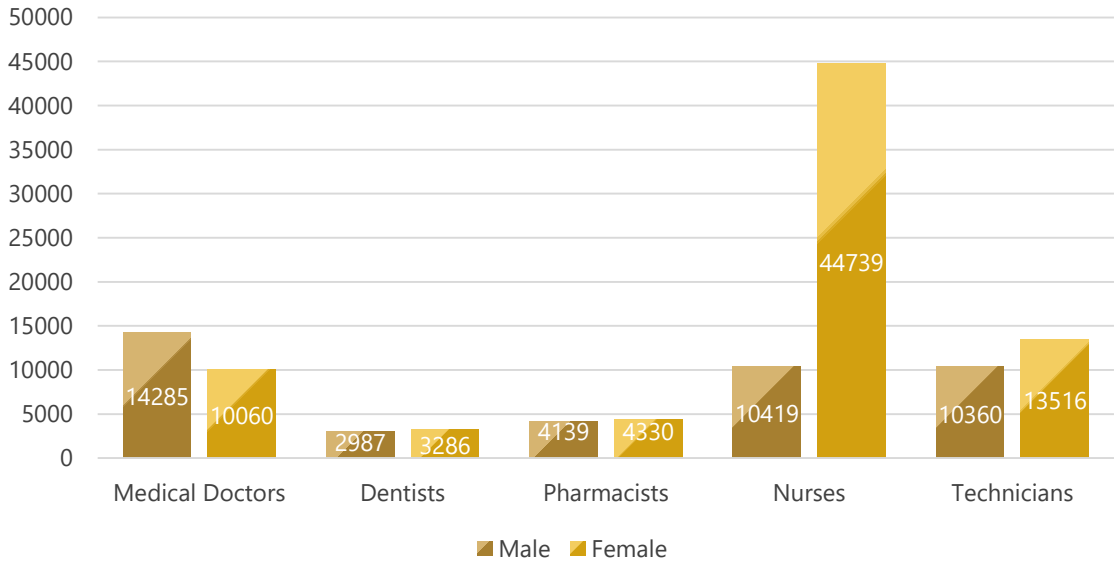

Figure 13 - Gender-wise Manpower chart

Category	Total	Male	Female
Medical Doctors	24345	14285	10060
Dentists	6273	2987	3286
Pharmacists	8469	4139	4330
Nurses	55158	10419	44739
Technicians	23876	10360	13516
Total	**118121**	**42190**	**75931**

Table 10 - Gender-wise Manpower Summary

Indicator Id	1.05
Unique Reference Id	ID_173
Name	Health worker distribution by facility ownership
Definition	Percentage of active health workers employed by type of facility ownership.
Numerator	Number of active health workers, defined in headcounts, working in facilities owned by the given institutional sector
Denominator	Total number of active health workers, defined in headcounts
Value	Public : **34.59** Private: **65.41**
Unit	**Percent (%)**
Level	UAE
Data Sources	Ministry of Health and Prevention (MOHAP) Department of Health (DOH) Dubai Health Authority (DHA) Dubai Healthcare City (DHCC) Ministry of Presidential Affairs (MOPA) Other local government

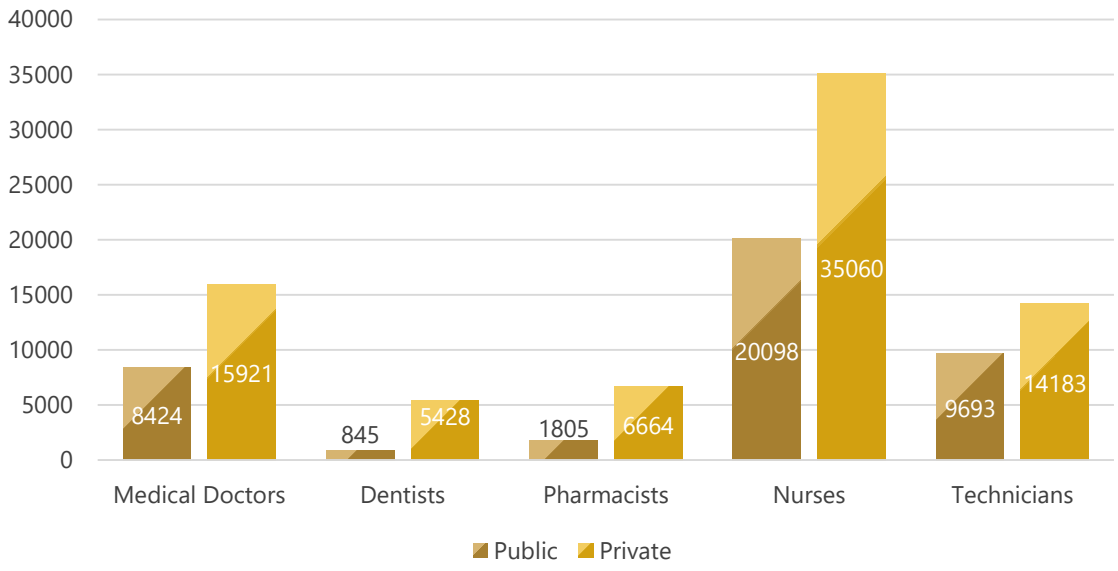

Figure 14 - Sector-wise Manpower chart

Category	Total	Public	Private
Medical Doctors	24345	8424	15921
Dentists	6273	845	5428
Pharmacists	8469	1805	6664
Nurses	55158	20098	35060
Technicians	23876	9693	14183
Total	**118121**	**40865**	**77256**

Table 11 - Sector-wise Manpower Summary

Indicator Id	1.06
Unique Reference Id	ID_174
Name	Health worker distribution by facility type
Definition	Percentage of active health workers employed by facility type.
Numerator	Number of active health workers, defined in headcounts, working in a specific facility type
Denominator	Total number of active health workers, defined in headcounts
Value	▪ Hospitals : **47.45** ▪ Ambulatory Facilities : **30.99** ▪ Retail Facilities : **9.34** ▪ Others : **5.56** ▪ Government Agencies : **3.35** ▪ Ancillary Facilities : **1.90** ▪ Residential Care Facilities : **1.41**
Unit	**Percent (%)**
Level	UAE Public Sector - Partial
Data Sources	Ministry of Health & Prevention (MOHAP) Ministry of Presidential Affairs (MOPA) Department of Health (DOH)

12.3 Module Summary

Key Summary for Active Health Work Stock

- The UAE has health worker density of ***126 per 10 000 population***.
- Majority of skilled health workforce is functioning in ***Abu Dhabi*** emirate with worker density of ***189 per 10 000 population***.
- ***64.28%*** of active health workforce is ***Female*** majorly working in the ***Nursing sector***.
- The health workforce majorly functions in the ***Hospital*** settings of ***Private sector***.
- ***40.75%*** of health workforce belong to ***25-34*** youth age group.

13. CHAPTER 5: MODULE 2 – EDUCATION & TRAINING

Overview: This module addresses capacity, quality and gender equality in health workforce education and training along with graduation success rate. The benefits of data acquired in this module includes below key areas:

- Enables planning and monitoring for policies related to:
  - Student Selection
  - Admissions
  - Enrolments
  - Teaching staff
- Creates pool of qualified health workers based on successful graduation

Kindly Note - We have not received data for majority of the indicators of this module. Details are present in section: **24.2.2 Module 2 – Education & Training**

13.1 Key Areas

Figure 15 - Module 2 Key Areas

13.2 Indicator Data

Indicator Id	2.01
Unique Reference Id	ID_178
Name	Existence of a master list of accredited health workforce education and training institutions that is up to date and available in the public domain
Possible Values	Yes/No/Partly
Definition	Existence of a master list of accredited health workforce education and training institutions that is up to date and available in the public domain.
Value	**Yes**
Level	UAE
Data Sources	Ministry of Education (MOE)

13.3 Module Summary

Key Summary for Education and Training Regulation & Accreditation

- *3245* applications made in the MOE licensed higher health education and training institutions.
- *8265* enrollments made in the MOE licensed higher health education and training institutions.
- *82.52%* of health education graduates are ***Females*** majorly specializing in ***Pharmacy***.
- *92.69%* of health education graduates studied in ***Private*** institutions majorly specializing in ***Pharmacy***.
- Existence of ***Master List*** of licensed health education and training institutions.

14. CHAPTER 6: MODULE 3 - EDUCATION & TRAINING REGULATION AND ACCREDITATION

Overview: This module chiefly focuses on the regulation and accreditation standards for education and training institutes and their programmes and the incorporation of social aspects and inter-professional education in those standards. The benefits of data acquired in this module includes below key areas:

- Solidifies accreditation process of education institutes
- Aids in Inter-sectoral health workforce agenda creation
- Validates national education plan alignment with national health plan
- Assesses skills taught to population needs
- Enhances quality and relevance of education and training

14.1 Key Areas

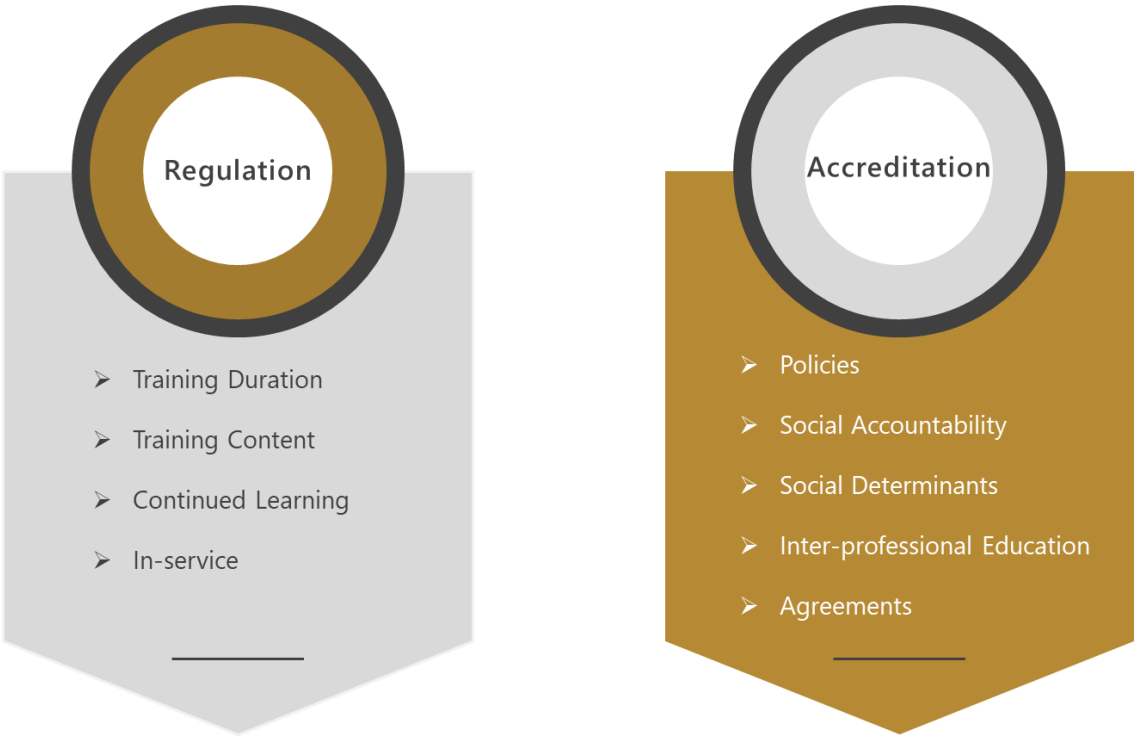

Figure 16 - Module 3 Key Areas

14.2 Indicator Data

Indicator Id	3.01
Unique Reference Id	ID_185
Name	Existence of national and/or subnational standard on the duration and content of health workforce education and training
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of national and/or subnational standard on the duration and content of health workforce education and training

Supporting Question	Answer
Are entry requirements to health workforce education and training programmes established concerning age, previous studies, previously acquired competence by study and past professional experience?	**Yes**
Are the total number of hours to be spent on health workforce education and training established?	**Yes**
Is there a list of knowledge, skills and competencies to be acquired during health workforce education and training?	**Yes**

Value	**Yes**
Level	UAE
Data Sources	Commission for Academic Accreditation (CAA)

Indicator Id	3.02
Unique Reference Id	ID_186
Name	Existence of national and/or subnational mechanisms for accreditation of health workforce education and training institutions and their programmes
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of national and/or subnational mechanisms for accreditation of health workforce education and training institutions and their programmes

Supporting Question	Answer
Have national and/or subnational mechanisms for accreditation of health workforce education and training institutions and their programmes been established?	**Yes**
Are national and/or subnational mechanisms for accreditation of health workforce education and training institutions and their programmes compulsory?	**Yes**
Are there national and/or subnational mechanisms for accreditation of health workforce education and training institutions and their programmes that are not compulsory?	**No**
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?	**Yes**

Value	**Partly**
Level	UAE
Recommendation	*23.2.1 Recommendation for Accreditation of non-compulsory education and training institutions*
Data Sources	Commission for Academic Accreditation (CAA)

Indicator Id	3.03
Unique Reference Id	ID_187
Name	Existence of national and/or subnational standards for social accountability in accreditation mechanisms
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of national and/or subnational standards for social accountability in accreditation mechanisms

Supporting Question	Answer
Is social accountability included or reflected within national and/or subnational standards	**Yes**
Is there an involvement of civil society, other social stakeholders and communities in accreditation mechanisms?	**Yes**

Value	**Yes**
Level	UAE
Data Sources	Commission for Academic Accreditation (CAA)

Indicator Id	3.04
Unique Reference Id	ID_188
Name	National and/or subnational standards for social accountability in accreditation mechanisms are effectively implemented
Possible Values	Yes/No/Partly
Definition	The following questions help determine the effective implementation of National and/or subnational standards for social accountability in accreditation mechanisms

Supporting Question	Answer
Do national and/or subnational mechanisms for accreditation of health workforce education and training institutions and their programmes require compulsory reporting on implementation of national or subnational standards on social accountability?	**Yes**
Do the communities served by the health workforce education and training institutions participate in the decision-making of these institutions?	**Yes**
Do students learn and train in the communities that the health workforce education and training institution serves (community placements)?	**Yes**
Do health workforce education and training institutions measure their impact on the health system and populations they serve?	**Partly**

Value	**Partly**
Level	UAE
Recommendation	*23.2.2 Recommendation for measurement of Impact of health training on health system and population*
Data Sources	Commission for Academic Accreditation (CAA) Ministry of Health and Prevention (MOHAP) – Training & Development Centre

Indicator Id	3.05
Unique Reference Id	ID_189
Name	Existence of national and/or subnational standards for the social determinants of health in accreditation mechanisms
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of national and/or subnational standards for the social determinants of health in accreditation mechanisms

Supporting Question	Answer
Are the social determinants of health included or reflected within national and/or subnational standards?	**Yes**
Do health workforce education and training institutions measure social determinants of health in the populations they serve?	**Yes**
Do health workforce education and training institutions adapt curricula according to social determinants of health in their communities?	**Yes**

Value	**Yes**
Level	UAE
Data Sources	Commission for Academic Accreditation (CAA)

Indicator Id	3.06
Unique Reference Id	ID_190
Name	Existence of national and/or subnational standards for interprofessional education in accreditation mechanisms
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of national and/or subnational standards for interprofessional education in accreditation mechanisms **Supporting Question** — **Answer** Is interprofessional education included or reflected within national and/or subnational standards? — **Partly**
Value	**Partly**
Level	UAE
Recommendation	*23.2.3 Recommendation for implementation of accreditation standards for IPE*
Data Sources	Commission for Academic Accreditation (CAA)

Indicator Id	3.07
Unique Reference Id	ID_191
Name	Existence of cooperation between health workforce education and training institutions and regulatory bodies to agree on accreditation standards
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of cooperation between health workforce education and training institutions and regulatory bodies to agree on accreditation standards

Supporting Question	Answer
Is there a coordinating mechanism or body in place for this task?	**Yes**
Are various stakeholders at national and institutional level involved in the coordination process?	**Yes**
Are there institutional mechanisms in place to coordinate accreditation systems, including negotiations with relevant ministries, government agencies and stakeholders?	**Yes**

Value	**Yes**
Level	UAE
Data Sources	Commission for Academic Accreditation (CAA)

Indicator Id	3.08
Unique Reference Id	ID_192
Name	Existence of national systems for continuing professional development
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of national systems for continuing professional development

Supporting Question	Answer
Are there existing national and/or subnational systems for continuing professional development (CPD)?	**Yes**
If national and/or subnational systems for CPD exist, are they compulsory	**Yes**
If compulsory, are they linked to relicensure?	**Yes**
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?	**No**

Value	**Partly**
Level	UAE
Recommendation	*23.2.4 Recommendation for integration of CPD into National Education Plan*
Data Sources	Commission for Academic Accreditation (CAA) Ministry of Health and Prevention (MOHAP) – Training & Development Centre

Indicator Id	3.09
Unique Reference Id	ID_193
Name	Existence of in-service training as an element of national education plans for the health workforce
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of in-service training as an element of national education plans for the health workforce

Supporting Question	Answer
Is in-service training integrated into larger national education-wide sector policies, strategies and plans?	**Yes**
Does in-service training consider and take into account national policies, strategies and plans for transforming professional, technical and vocational education and training?	**Yes**
Does in-service training consider and take into account national policies, strategies and plans for adult learning and higher education?	**Yes**

Value	**Yes**
Level	UAE
Data Sources	Commission for Academic Accreditation (CAA)

14.3 Module Summary

Key Summary for Active Health Work Stock

- National Standards for ***entry criteria, hours spent and knowledge outcomes*** are well defined for Health Education Institutions.
- National ***Accreditation standards*** and mechanisms for quality control of Health Education Institutes and their programmes exist with below salient features
  - Defined based on multi-stakeholder and inter-sectoral agreement.
  - Holistic in nature because of inclusion of social accountability and determinants of health.
  - Attuned towards life-long learning due to CPD and Inter-professional education.
- ***Areas of improvement*** (We have provided recommendations for these items below)
  - Free zones based medical institutions were exempted from accreditation in 2018 however post Sep 2019 they shall be included under accreditation process by CAA.
  - Impact measurement of health workforce training on population is not in place.
  - IPE is encouraged however not mandatory in the accreditation system.
- ***Continuing Professional Development*** standards are not in line with national education plan for health workforce.

15. CHAPTER 7: MODULE 4 – EDUCATION FINANCES

Overview: This module has data which quantifies public/private expenditure towards health workforce education and training across higher education, continued learning and specialist education. The benefits of data acquired in this module includes below key areas:

- Provides details on health workforce development costs
- Distribution of budget in education, skills and job creation
- Ascertains sustainable financing for continued education and International Health Regulations (IHR) core competencies

Kindly Note - We have not received data for all the indicators of this module. Details are present in section: **24.2.3 Module 4 – Education Finances**

15.1 Key Areas

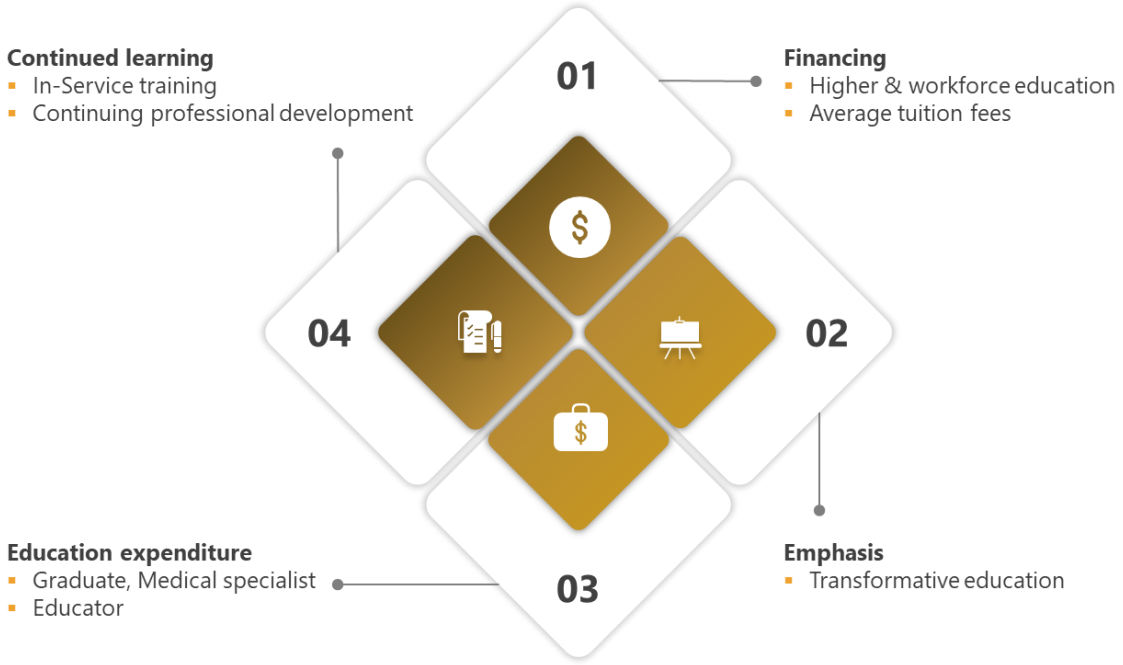

Figure 17 - Module 4 Key Areas

16. CHAPTER 8: MODULE 5 – HEALTH LABOUR MARKET FLOWS

Overview: This module provides distribution of labour market into entries, voluntary & involuntary exits and imbalances. The defined indicators relate to the GSHRH target on the reduction of access constraints to health services, through the creation, filling and sustenance of jobs in the health and social care sectors. The benefits of data acquired in this module includes below key areas:

- Improved understanding of labour market flows
- Effective recruitment and retention policies to ensure smooth functioning of health sector workforce
- Highlights dependency on foreign workers
- Showcases movement of successful graduates into the health labour market

Kindly Note - We have not received data for all the indicators of this module. Details are present in section: **24.2.4 Module 5 – Health Labour Market Flows**

16.1 Key Areas

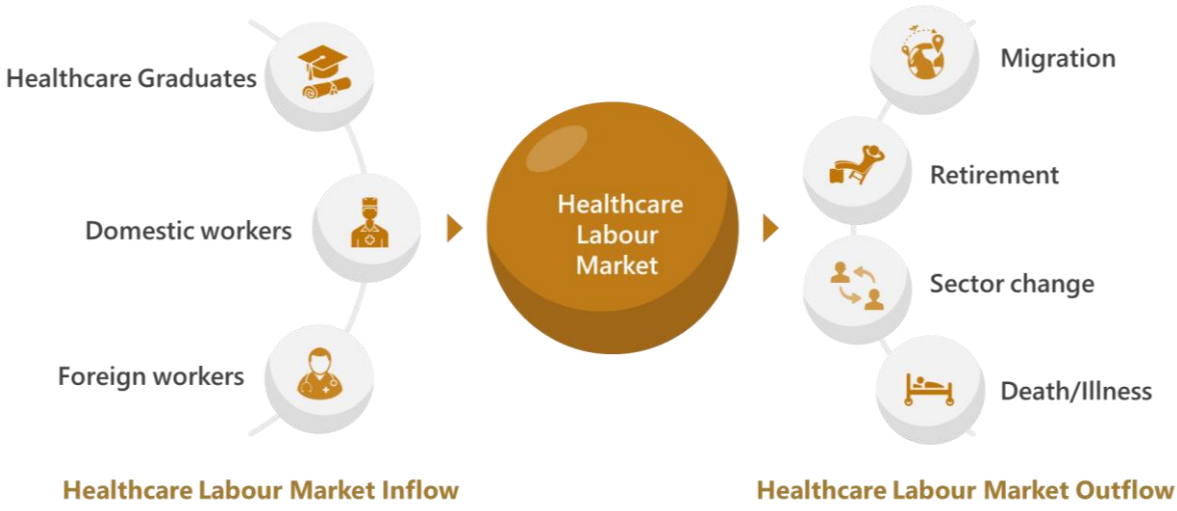

Figure 18 - Module 5 Key Areas

17. CHAPTER 9: MODULE 6 – EMPLOYMENT CHARACTERISTICS AND WORKING CONDITIONS

Overview: This module highlights regulations affecting working conditions and employment practices. It can facilitate comprehensive labour market assessment in conjunction with Module 5.

This module also focusses on self-employed and part time employee characteristics. The benefits of data acquired in this module includes below key areas:

- Progressive review of causal and descriptive labour market analyses
- Policies promoting work-life balance
- Provides inputs towards respectful working conditions
- Stresses upon health provider and facility safety based on prevention measures for health care worker and system attacks

Kindly Note - We have not received data for few indicators of this module. Details are present in section: **24.2.5 Module 6 – Employment Characteristics and Working Conditions**

17.1 Key Areas

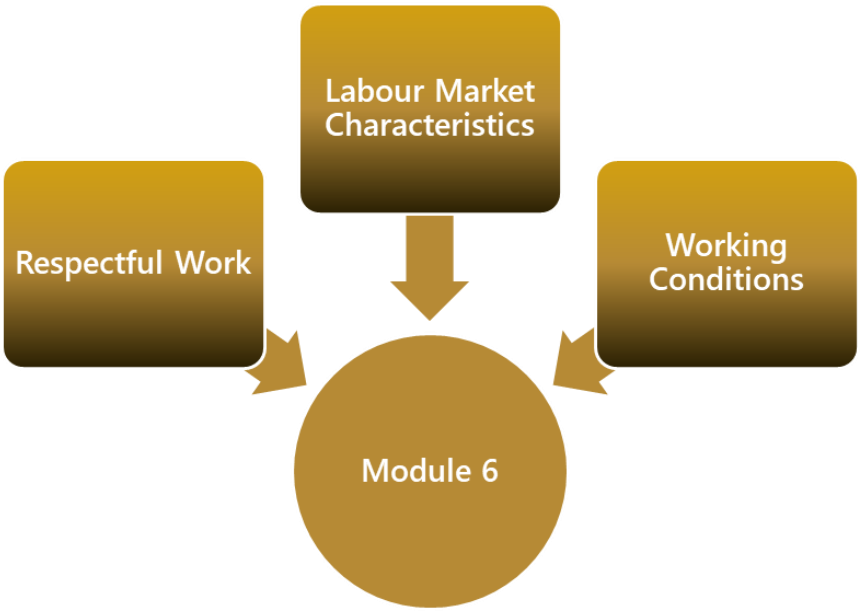

Figure 19 - Module 6 Key Areas

17.2 Indicator Data

Indicator Id	6.01
Unique Reference Id	ID_209
Name	Number of standard working hours per week as per national law/standards
Definition	Number of standard working hours per week as per national law/standards.
Value	**48**
Unit	**Hours per week**
Level	UAE Public Sector
Data Sources	Ministry of Health and Prevention (MOHAP)

Indicator Id	6.03
Unique Reference Id	ID_211
Name	Existence of national/subnational policies/laws regulating working hours and conditions
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of national/subnational policies/laws regulating working hours and conditions

Supporting Question	Answer
Has the government and its competent authorities regulated the maximum number of working days allowed per week?	**Yes**
Has the government and its competent authorities regulated the premium for night work, for work on a weekly rest day, for overtime work (as a percentage of hourly pay)?	**Yes**
Has the government and its competent authorities regulated whether non-pregnant and non-nursing women can work the same night hours as men?	**Yes**
Has the government and its competent authorities regulated whether there are restrictions on night work, overtime or holiday work?	**Yes**
Has the government and its competent authorities regulated the average paid annual leave for workers with 1, 5 and 10 years of tenure?	**Yes**
Has the government and its competent authorities regulated whether regulations, laws or policies differ according to employment status?	**Yes**

Value	**Yes**
Level	UAE Public Sector
Data Sources	Federal Authority for Government Human Resources (FAHR)

Indicator Id	6.05
Unique Reference Id	ID_213
Name	Existence of national/subnational policies/laws regulating social protection
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of national/subnational policies/laws regulating social protection

Supporting Question	Answer
Is there a national policy or programme regarding maternity leave or pregnancy leave?	**Yes**
Is there a national policy or programme regarding parental leave?	**Yes**
Is there a national policy or programme regarding childcare support?	**Yes**
Is there a national policy or programme regarding leave entitlements to care for sick family members?	**Yes**
Is there a national policy or programme regarding leave entitlements for in-service training and continuing professional development?	**Yes**

Value	**Yes**
Level	UAE Public Sector
Data Sources	Federal Authority for Government Human Resources (FAHR)

17.3 Module Summary

Key Summary for employment characteristics and working conditions

- ***48 Hours*** per week is the standard defined for public sector.
- Well defined ***gender-neutral policies*** exist in public sector for below areas
  - Regulation of working hours in inclusive of Night shifts, Overtime and Holiday work.
  - Regulation of social protection in terms of leaves due to maternity, childcare, sick family members and training (In-Service and CPD).
- Consistent work hour regulations for ***females*** especially in terms of ***extra work*** and ***night hours***.
- Well-defined regulations for ***part-time*** worker permit.

18. CHAPTER 10: MODULE 7 - HEALTH WORKFORCE SPENDING & REMUNERATION

Overview: This module focuses on public/private expenditure on health workforce and definition of regulation and policies towards worker compensation. In conjunction with module 4 the cumulative data provides a summary of the financial environment of health workforce. The benefits of data acquired in this module includes below key areas:

- Emphasis on monitoring Gender Pay Gap
- Economic analysis on flow of funds in health workforce
- Crucial information for budget allocation with government entities

Kindly Note - We have not received data for few indicators of this module. Details are present in section: **24.2.6 Module 7 – Health Workforce Expenditure**

18.1 Key Areas

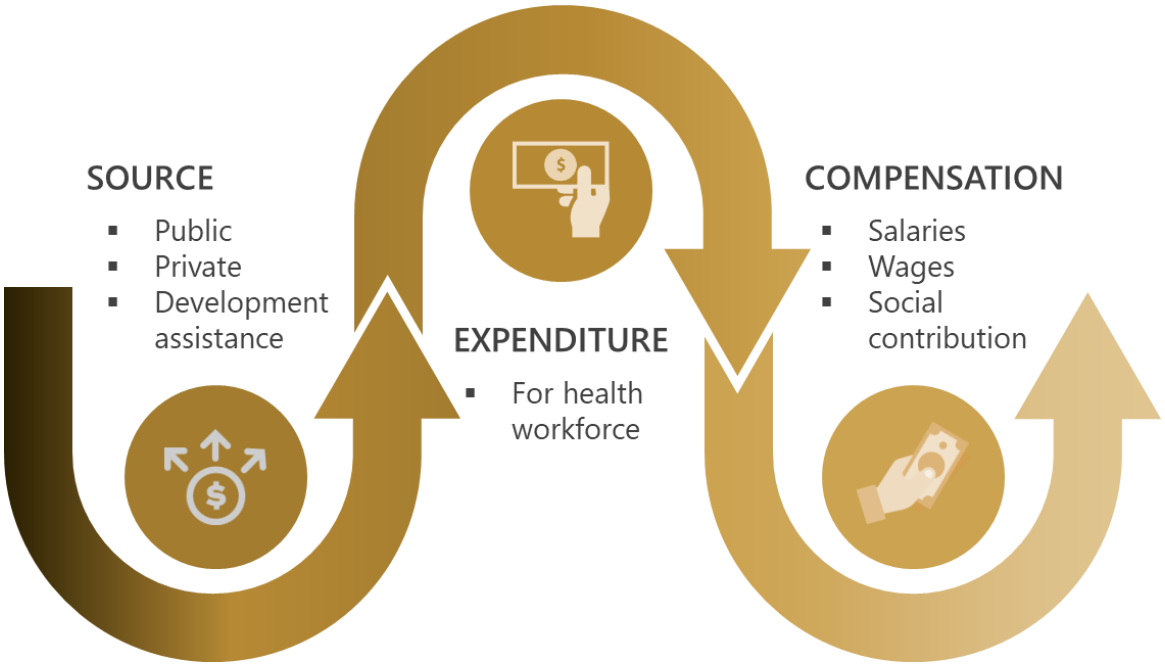

Figure 20 - Module 7 Key Areas

18.2 Indicator Data

Indicator Id	7.06
Unique Reference Id	ID_224
Name	Existence of national/subnational policies or standards on public sector wage ceilings
Possible Values	Yes/No
Definition	Existence of national/subnational policies or standards on public sector wage ceilings. Such policies would generally be applicable not only to the health sector, but to the whole public sector.
Value	**Yes**
Level	UAE Public Sector
Data Sources	Ministry of Health and Prevention (MOHAP)

Indicator Id	7.07
Unique Reference Id	ID_225
Name	Gender wage gap
Definition	The gender wage gap is the unadjusted difference between median earnings of men and women relative to median earnings of men. Data refer to full-time employees and to the self-employed.
Numerator	Difference between median earnings of men and women
Denominator	Median earnings of men
Value	**0**
Unit	**Percent (%)**
Level	UAE Public Sector - Partial
Data Sources	Ministry of Health and Prevention (MOHAP)

18.3 Module Summary

Key Summary for Health Workforce Expenditure and Remuneration

- There is ***no gender wage disparity*** in MOHAP based institutions.
- There is existence for ***public sector wage ceiling*** for controlling maximum salary values that can be earned by health employees however exceptions are made for special expert contracts.

19. CHAPTER 11: MODULE 8 - SKILL-MIX COMPOSITION FOR MODELS OF CARE

Overview: This module contains indicators which distribute the structure of health workforce by sector facility and specialized skill set. Data obtained from this module helps ascertains human resource capacity for International Health Regulation (IHR) and Field Epidemiology programs. The benefits of data acquired in this module includes below key areas:

- Matching labour supply with health care needs of population
- Skill-mix to case-mix alignment for patient centered care
- Compliance with International Health Regulations (IHR)

19.1 Key Areas

Figure 21 - Module 8 Key Area

19.2 Indicator Data

Indicator Id	8.01
Unique Reference Id	ID_226
Name	Percentage of health workforce working in hospitals
Definition	Percentage of health workers working in hospitals among all health workers. Hospitals are defined as all types of hospitals, following the International Classification for Health Accounts 2011 (including General hospitals, Mental health hospitals, and Other specialized hospitals).
Numerator	Total number of active health workers working in hospitals
Denominator	Total number of active health workers
Value	**47.45**
Unit	**Percent (%)**
Level	UAE Public Sector - Partial
Data Sources	Ministry of Health and Prevention (MOHAP) Ministry of Presidential Affairs (MOPA) Department of Health (DOH)

Indicator Id	8.02
Unique Reference Id	ID_227
Name	Percentage of health workforce working in residential long-term care facilities
Definition	Percentage of health workers, excluding social care workers, working in residential long-term care among all health workers. A residential long-term care facility is any type of nursing and residential care facility defined in the HP2.1 and HP2.9 categories of the International Classification for Health Accounts 2011.
Numerator	Total number of active health workers working in residential long-term care facilities
Denominator	Total number of active health workers
Value	**1.41**
Unit	**Percent (%)**
Level	UAE Public Sector - Partial
Data Sources	Ministry of Health and Prevention (MOHAP) Ministry of Presidential Affairs (MOPA) Department of Health (DOH)

Indicator Id	8.03
Unique Reference Id	ID_228
Name	Percentage of health workforce working in ambulatory health care (primary health care level facilities)
Definition	Percentage of health workforce working in ambulatory health care presumed to be primary health care level facilities. Ambulatory care provision refers to individuals and organizations that deliver personal healthcare services on an outpatient basis. This includes diagnosis, observation, consultation, treatment, intervention, rehabilitation services, and advanced medical technology and procedures even when provided outside of hospitals.
Numerator	Total number of active health workers working in ambulatory health care presumed to be primary health care level facilities
Denominator	Total number of active health workers
Value	**30.99**
Unit	**Percent (%)**
Level	UAE Public Sector - Partial
Data Sources	Ministry of Health and Prevention (MOHAP) Ministry of Presidential Affairs (MOPA) Department of Health (DOH)

Indicator Id	8.04
Unique Reference Id	ID_229
Name	Density of specialist surgical workers per 100 000 population
Definition	Density of specialist surgical workers, classified in ISCO-08 with code 2212, per 100 000 population. Specialist surgical workers are surgeons, obstetricians and anesthesiologists
Numerator	Total number of specialist surgical workers
Denominator	Total population
Value	**62.64**
Unit	**Per 100 000 population**
Level	UAE
Data Sources	Ministry of Health and Prevention (MOHAP) Department of Health (DOH) Dubai Health Authority (DHA) Dubai Healthcare City (DHCC) Ministry of Presidential Affairs (MOPA)

Indicator Id	8.05
Unique Reference Id	ID_230
Name	Density of family medicine practitioners per 100 000 population
Definition	Density of family medicine practitioners per 100 000 population. Family medicine practitioners are part of the generalist medical practitioners. They are referred to as general practitioners in some countries, and as a specialization in others. They should provide person-centred, continuous and comprehensive medical care to individuals and families in their communities. This group does not include resident medical officers, medical interns or other generalist medical practitioners not in general practice activities.
Numerator	Total number of family medicine practitioners
Denominator	Total population
Value	**81.45**
Unit	**Per 100 000 population**
Level	UAE
Data Sources	Ministry of Health and Prevention (MOHAP) Department of Health (DOH) Dubai Health Authority (DHA) Dubai Healthcare City (DHCC) Ministry of Presidential Affairs (MOPA)

Indicator Id	8.06
Unique Reference Id	ID_231
Name	Existence of advanced nursing roles
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of advanced nursing roles **Supporting Question** — **Answer** Is there a commonly accepted definition of 'nurse practitioner'? — **Yes** Is there another commonly accepted definition of other types of nurses working in advanced roles? — **Yes** 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.? — **Yes** 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? — **No**
Value	**Partly**
Level	UAE
Recommendations	*23.2.6 Recommendation for accreditation of in-service training programmes for advancing roles of Nurses*
Data Sources	Ministry of Health and Prevention (MOHAP)

Indicator Id	8.07
Unique Reference Id	ID_232
Name	Availability of human resources to implement International Health Regulation core capacity requirements
Possible Values	None/ Limited/ Developed/ Demonstrated/ Sustainable Capacity
Definition	This indicator is measured (or supported) by the following (capability) items:

Capability Item	Capability Value
No multidisciplinary human resource capacity available to implement IHR core capacities	**No capacity**
Multidisciplinary human resource capacity (epidemiologists, veterinarians, clinicians and laboratory specialists or technicians) available at national level	**Limited capacity**
Multidisciplinary human resource capacity available at national developed capacity and intermediate level	**Developed capacity**
Multidisciplinary human resource capacity available as required at relevant levels of public health system (e.g. epidemiologist at national and intermediate level and assistant epidemiologist (or short course trained epidemiologist) at local level available)	**Demonstrated capacity**
Capacity to send and receive multidisciplinary personnel within country (shifting resources) and internationally	**Sustainable capacity**

Value	**Sustainable capacity**
Level	UAE Public Sector
Data Sources	Ministry of Health and Prevention (MOHAP)

Indicator Id	8.08
Unique Reference Id	ID_233
Name	Existence of an applied epidemiology training programme
Possible Values	None/ Limited/ Developed/ Demonstrated/ Sustainable Capacity
Definition	This indicator is measured (or supported) by the following (capability) items:

Capability Item	Capability Value
No Field Epidemiology Training Programme (FETP) or applied epidemiology training programme established	**No capacity**
No FETP or applied epidemiology training programme is established within the country, but staff participate in a programme hosted in another country through an existing agreement (at basic, intermediate and/or advanced level	**Limited capacity**
One level (basic, intermediate, advanced) of FETP or comparable applied epidemiology training programme in place in the country or in another country through an existing agreement	**Developed capacity**
Two levels (basic, intermediate and/or advanced) of FETP or comparable applied epidemiology training programme(s) in place in the country or in another country through an existing agreement	**Demonstrated capacity**
Three levels (basic, intermediate, advanced) of FETP or comparable applied epidemiology training programme(s) in place in the country or in another country through an existing agreement, with sustainable national funding	**Sustainable capacity**

Value	**Limited capacity**
Level	UAE Public Sector
Recommendations	*23.2.5 Recommendation for capacity of Field Epidemiology Training Programmes*
Data Sources	Ministry of Health and Prevention (MOHAP)

19.3 Module Summary

Key Summary for Skill-mix composition for models of care

- ***47.45%*** of healthcare professionals work in ***Hospital*** settings.
- Density of Specialist Surgical workers is ***62.64 per 100 000 population***.
- Density of Family Medicine workers is ***81.45 per 100 000 population***.
- There is a ***Sustainable Capacity*** of human resources for reporting for International Health Regulations (IHR) core capacity requirements.
- There is a ***Limited Capacity*** of Field Epidemiology Training Programmes (FETP).
- There is existence of ***Advanced Nursing*** roles.

20. CHAPTER 12: MODULE 9 - GOVERNANCE AND HEALTH WORKFORCE POLICIES

Overview: This module focuses on governance and policies for effective management of health workforce planning. The governance indicators reveal a country's ability to able to coordinate an inter-sectoral health workforce agenda and possession of central HWF unit. The indicators on health workforce policies provide information on whether the country possesses health workforce planning process. The benefits of data acquired in this module includes below key areas:

- Demonstrates effective use and application of information collected from other modules
- Confirms alignment of national education plans with national health plans

20.1 Key Areas

Figure 22 - Module 9 Key Areas

20.2 Indicator Data

Indicator Id	9.01
Unique Reference Id	ID_234
Name	Existence of institutional mechanisms or bodies to coordinate an intersectoral health workforce agenda
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of institutional mechanisms or bodies to coordinate an inter-sectoral health workforce agenda

Supporting Question	Answer
Is there a coordinating mechanism or body in place for this task?	**Yes**
Are various stakeholders (ministries, public, private, nongovernmental and, international bodies) involved in the coordination process?	**Yes**
Has an agenda been formulated?	**Yes**
Has the agenda been approved at interministerial level (ministries of Education, Finance, Public Service, Health)?	**Yes**

Value	**Yes**
Level	UAE Public Sector
Data Sources	Ministry of Health and Prevention (MOHAP) – Public Policies Department

Indicator Id	9.02
Unique Reference Id	ID_235
Name	Existence of a health workforce unit in the Ministry of Health responsible for developing and monitoring policies and plans on health workforce
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of a health workforce unit in the Ministry of Health responsible for developing and monitoring policies and plans on health workforce

Supporting Question	Answer
Are there functions to monitor health workforce policies and plans as part of the monitoring of health services development?	**Yes**
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?	**Yes**

Value	**Yes**
Level	UAE Public Sector
Data Sources	Ministry of Health and Prevention (MOHAP) – Public Policies Department

Indicator Id	9.03
Unique Reference Id	ID_236
Name	Existence of mechanisms and models for health workforce planning
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of mechanisms and models for health workforce planning

Supporting Question	Answer
Are clear and explicit health workforce planning objectives set up in the national health policy?	**Yes**
Is there a coordinated communication and information flow among national-level intersectoral stakeholders?	**Yes**
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 HWF?	**Yes**
Is there a methodology established for HWF planning?	**Yes**
Are complete data with full coverage of the population available in a sustainable manner to provide quantitative assessment required for HWF planning?	**Yes**
Are policy actions based on the recommendations of the HWF Planning Committee implemented?	**Yes**

Value	**Yes**
Level	UAE Public Sector
Data Sources	Ministry of Health and Prevention (MOHAP) – Public Policies Department

Indicator Id	9.04
Unique Reference Id	ID_237
Name	Existence of national education plans for the health workforce, aligned with the national health plan and the national health workforce strategy/plan
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of national education plans for the health workforce, aligned with the national health plan and the national health workforce strategy/plan

Supporting Question	Answer
Do education plans for the HWF match health worker competencies with population, health systems, and health labour market needs?	**Yes**
Do plans take into account efforts to scale up transformative education and training?	**Yes**
Do recognized institutes such as national public health institutes, universities and collaborating centres offer training courses on the implementation and monitoring of Health in All Policies and related concepts?	**Yes**
Are strategic steps taken when considering and taking into account the workforce market needs and absorptive capacities for the education plan development?	**Yes**

Value	**Yes**
Level	UAE Public Sector
Data Sources	Ministry of Health and Prevention (MOHAP) – Public Policies Department

Indicator Id	9.05
Unique Reference Id	ID_238
Name	Existence of institutional models for assessing and monitoring staffing needs for health service delivery
Possible Values	Yes/No/Partly
Definition	The following questions help determine the existence of institutional models for assessing and monitoring staffing needs for health service deliver

Supporting Question	Answer
Is there a mechanism and/or responsible body in charge of determining the number of health workers of a particular occupation required to effectively and safely deliver health services in health facilities?	**Yes**
Is there a mechanism to assess the workload of health workers in health facilities?	**Yes**

Value	**Yes**
Level	UAE Public Sector
Data Sources	Ministry of Health and Prevention (MOHAP) – Public Policies Department

20.3 Module Summary

Key Summary for Governance and Health Workforce policies

- Below mentioned are key institutional mechanisms for ***Health Workforce Governance***
  - Co-ordinated inter-sectoral health workforce agenda cutting across federal and private regulatory entities.
  - Central Health Workforce Unit in the Ministry of Health.
- Below mentioned are key aspects for ***Health Workforce Planning***
  - Defined objectives, inter-sectoral stakeholders and committees involved in the health workforce planning processes.
  - Alignment of National Education Plan with the National Health Workforce Plan.
  - Structure in place for monitoring quantity and workload of health workers.

21. CHAPTER 13: MODULE 10 – HEALTH WORKFORCE INFORMATION SYSTEMS

Overview: This module defines indicators on the status of human resource for health information systems (HRHIS) systems for checking their reporting abilities against key regulations like IHR, WHO Code of Practise etc and tracking of data pertaining to labour market areas. The benefits of data acquired in this module includes below key areas:

- Ascertains readiness of HRHIS for meeting international reporting requirements on health workforce
- Tracking of entry, stock and exit of resources from labour market
- Production of geocoded facility location data

Kindly Note - We have not received data for an indicator of this module. Details are present in section: **24.2.7 Module 10 – Health Workforce Information Systems**

21.1 Key Areas

Figure 23 - Module 10 Key Areas

21.2 Indicator Data

Indicator Id	10.01
Unique Reference Id	ID_239
Name	Ability of HRHIS to generate information to report on International Health Regulations
Possible Values	Yes/No/Partly
Definition	The following questions help determine whether HRHIS has the capacity to report on IHR and submit core indicators to the WHO Secretariat annually.
Value	**No**
Level	UAE Public Sector
Recommendation	*23.2.7 Recommendation for reporting capabilities of HRHIS for IHR*
Data Sources	Ministry of Health and Prevention (MOHAP)

Indicator Id	10.03
Unique Reference Id	ID_241
Name	Ability of HRHIS to generate information for reporting on skilled attendance at birth requirements
Possible Values	Yes/No/Partly
Definition	The following questions help determine whether HRHIS has ability to generate information for reporting on skilled attendance at birth requirements.
Value	**No**
Level	UAE Public Sector
Recommendation	*23.2.8 Recommendation for reporting capabilities of HRHIS for Skilled attendance at birth*
Data Sources	Ministry of Health and Prevention (MOHAP)

Indicator Id	10.04
Unique Reference Id	ID_242
Name	Ability of HRHIS to generate information for reporting on outputs from education and training institutions
Possible Values	Yes/No/Partly
Definition	The following questions help determine whether the HRHIS has the capacity to report on outputs from education and training institutions, and submit core indicators to the WHO Secretariat annually

Supporting Question	Answer
Is there a master list of accredited education and training institutions at national level?	**No**
If yes, is this master list geocoded?	**No**
Is this master list updated on a regular basis?	**No**
Do education and training institutions record the number of graduates by health workforce education and training, and by sex?	**No**
Is information on the number of graduates provided to the relevant national body on an annual basis?	**No**

Value	**No**
Level	UAE Public Sector
Recommendation	*23.2.10 Recommendation for HRHIS in reporting on outputs from education and training institutions*
Data Sources	Ministry of Health and Prevention (MOHAP)

Indicator Id	10.05
Unique Reference Id	ID_243
Name	Ability of HRHIS for tracking the number of entrants to the labour market
Possible Values	Yes/No/Partly
Definition	The following questions help determine whether the HRHIS has ability for tracking the number of entrants to the labour market

Supporting Question	Answer
Is there a system that provides information about the health workforce?	**Yes**
If yes, does this system provide information on the inflows of the health labour market?	**Yes**

Value	**Yes**
Level	UAE Public Sector
Data Sources	Ministry of Health and Prevention (MOHAP)

Indicator Id	10.06
Unique Reference Id	ID_244
Name	Ability of HRHIS to generate information to track active stock on the labour market
Possible Values	Yes/No/Partly
Definition	The following questions help determine whether HRHIS has ability to generate information to track active stock on the labour market **Supporting Question** — **Answer** Is there a system that provides information about the health workforce? — **Yes** If yes, does this system provide information on the stock of the health labour market? — **Yes**
Value	**Yes**
Level	UAE Public Sector
Data Sources	Ministry of Health and Prevention (MOHAP)

Indicator Id	10.07
Unique Reference Id	ID_245
Name	Ability of HRHIS to generate information to track exits from the labour market
Possible Values	Yes/No/Partly
Definition	The following questions help determine whether HRHIS has the ability to generate information to track exits from the labour market **Supporting Question** — **Answer** Is there a system that provides information about the health workforce? — **Yes** If yes, does this system provide information on the inflows of the health labour market? — **Yes**
Value	**Yes**
Level	UAE Public Sector
Data Sources	Ministry of Health and Prevention (MOHAP)

Indicator Id	10.08
Unique Reference Id	ID_246
Name	Ability of HRHIS to generate geocoded information on the location of health facilities
Possible Values	Yes/No/Partly
Definition	The following questions help determine whether HRHIS has the ability to generate geocoded information on the location of health facilities
Value	**No**
Level	UAE Public Sector
Recommendation	*23.2.9 Recommendation for HRHIS production of geocoded health facility locations*
Data Sources	Ministry of Health and Prevention (MOHAP)

21.3 Module Summary

Key Summary for Governance and Health Workforce policies

- The ***Bayanati (HRHIS System)*** has data for tracking Entries, Stock and Exits from Health Labour Market.
- Above HRHIS system ***does not track*** data pertaining to outputs from Health Education & Training institutes and geocoded health facility locations.
- Currently there is a manual ***email based reporting process*** for ***IHR*** reporting to WHO.
- ***Skilled attendance at birth*** reporting is currently handled by ***Wareed (HIS System)*** of MOHAP.
- ***Geocoded*** facility locations are currently present in ***MOHAP Licensing System***.

22. CHAPTER 14: NHWA INTERNATIONAL COMPARISONS

22.1 Overview

Key NHWA health workforce indicators are presented here pertaining to Gender Distribution and Category-wise health worker density per 10 000 population.

UAE's performance in these Indicators against top five countries are presented below to ascertain global health workforce comparability.

Note: All the indicator data present in this chapter are obtained from (WHO - Global Health Workforce Statistics,).

22.2 Gender Distribution Indicator

We are measuring gender distribution based on difference between percentage of male workforce and percentage of female workforce.

22.2.1 Medical Doctor

As per below mentioned countries, the gap in Medical Doctors workforce between men and women is highest in UAE with 17.35%.

In Norway there is lowest gender distribution parity in Medical Doctor workforce with small gap of 0.13%

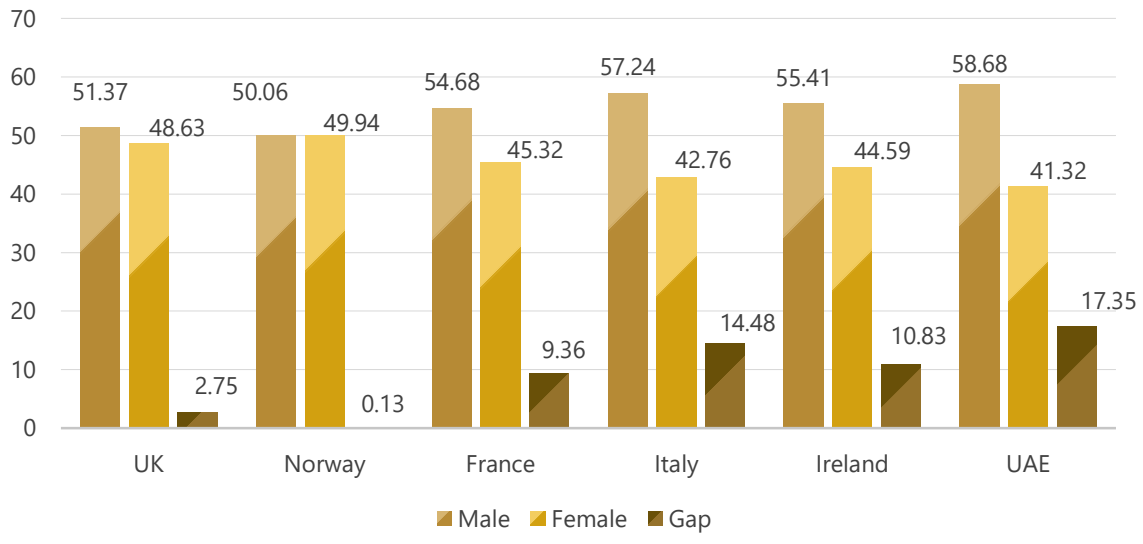

Figure 24 - Medical Doctor - Global Gender Comparison

22.2.2 Nursing

As per below mentioned countries, the gap in Nursing workforce between men and women is highest in **Ireland** with **-98.04%**

In **UAE** the gap between men and women in the Nursing workforce is **-62.22%**

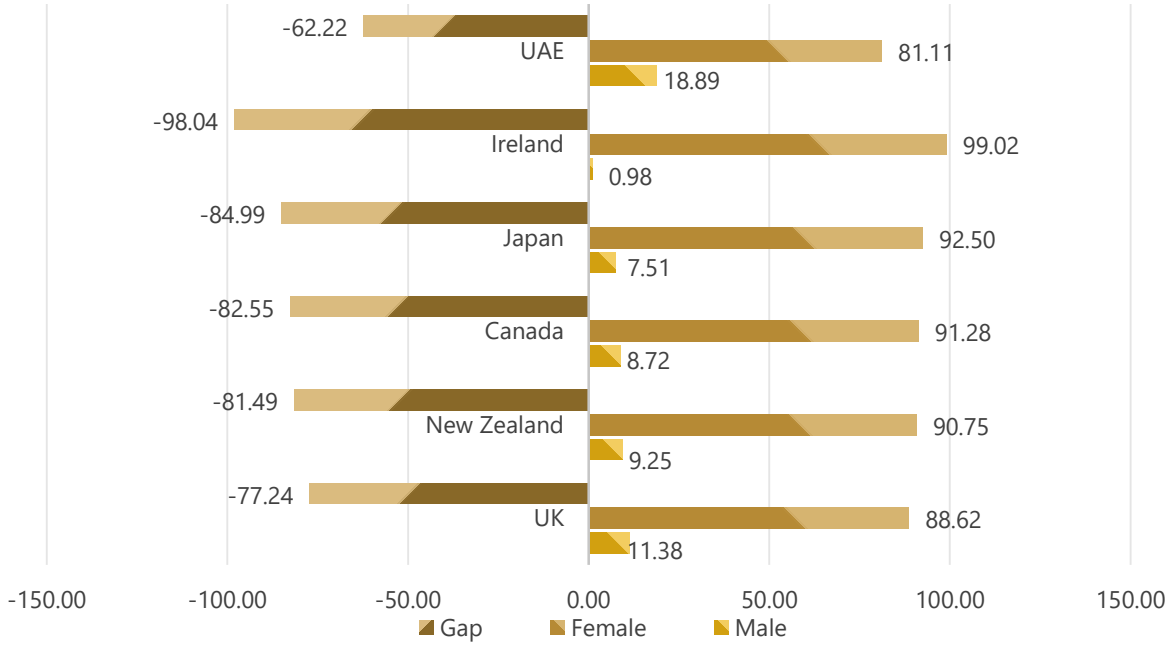

Figure 25 - Nurses - Global Gender Comparison

22.3 Category-wise Health Worker Density indicator

22.3.1 Medical Doctor per 10 000 population

As per below mentioned countries, highest Medical Doctor density per 10 000 population is in **Lithuania** with **63.53.** In the **UAE** this figure is at **26.**

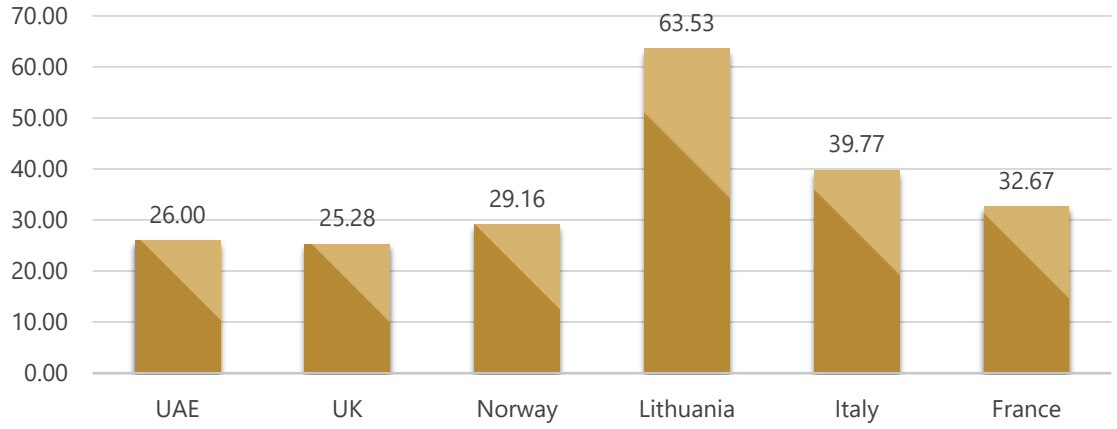

Figure 26 - Global Medical Doctor densities

22.3.2 Nurses and Midwifery per 10 000 population

As per below mentioned countries, highest Nurse and Midwife density per 10 000 population is in **Belgium** with **194.61**. In the **UAE** this figure is at **59**.

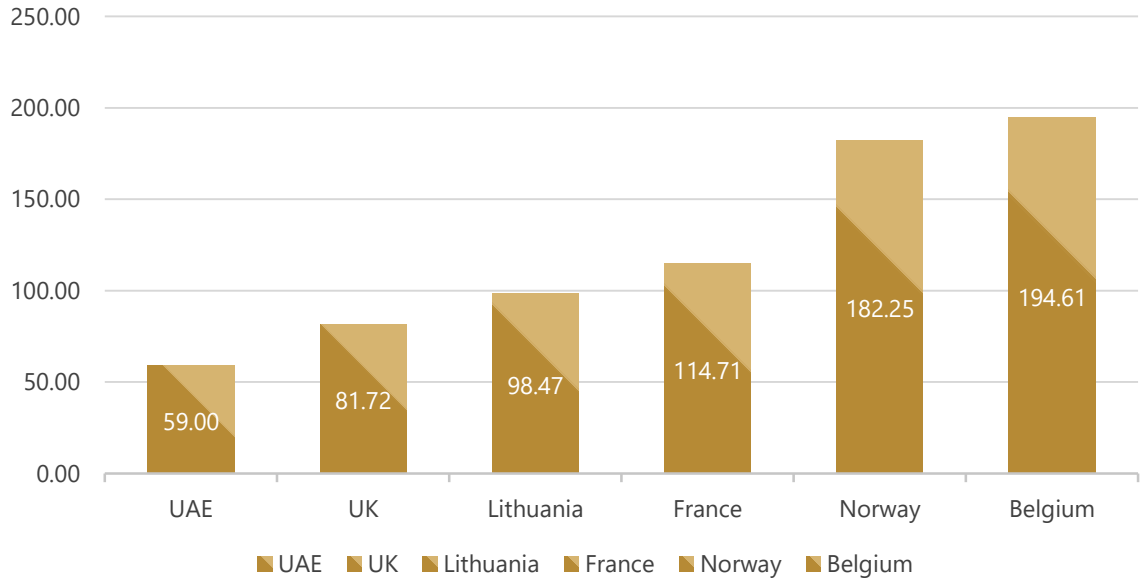

Figure 27 - Global Nurse and Midwife Density

22.3.3 Dentists per 10 000 population

As per below mentioned countries, **highest** Dentists density per 10 000 population is in **UAE** with **7.** Second highest dentist worker density per 10 000 population is in **Paraguay** with **1.64.**

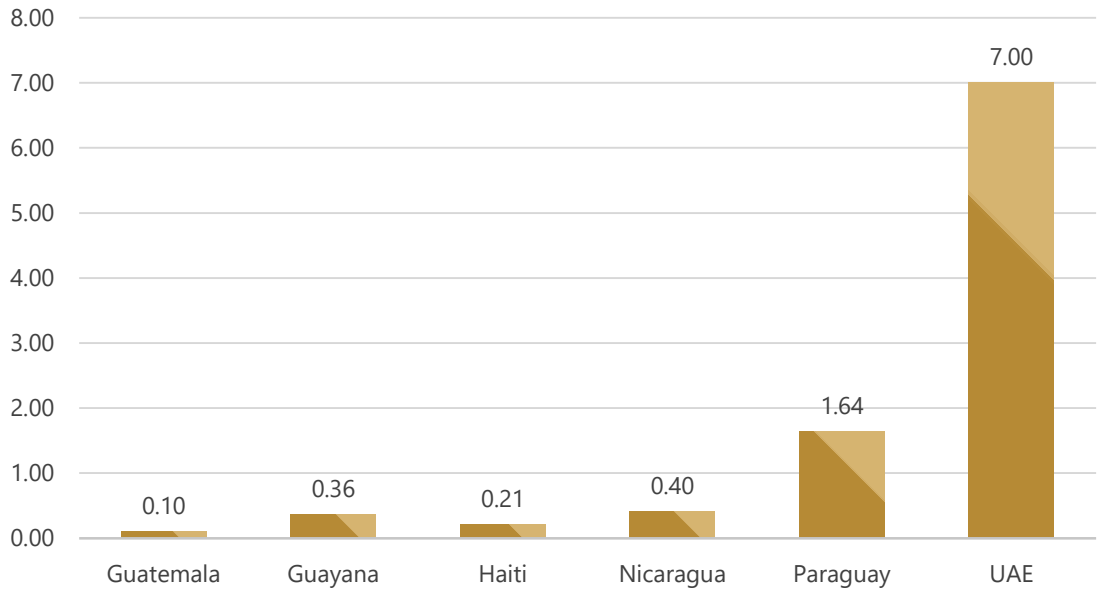

Figure 28 - Global Dentists Density

22.3.4 Pharmacists per 10 000 population

As per below table, Highest Pharmacist density per 10 000 population is in **Belgium** with **19.07**. In the **UAE** this figure is at **9.**

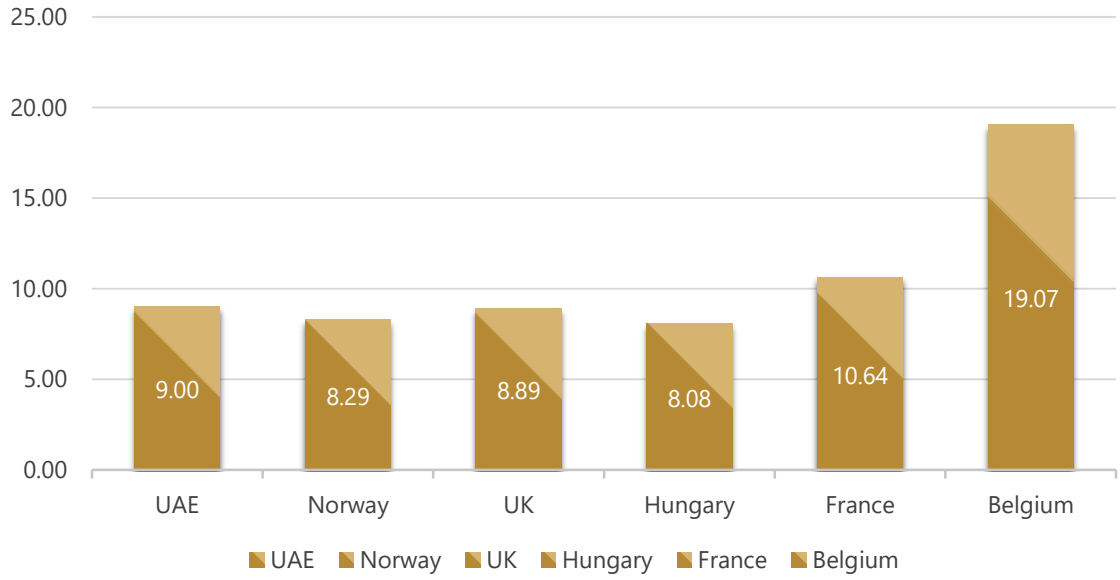

Figure 29 - Global Pharmacist Density

22.4 Key Summary for UAE

- Increase required in Female Medical Doctors staff.
- Increase required in overall density of Medical Doctors, Nurses and Pharmacists.

23. CHAPTER 15: MOHAP RECOMMENDATIONS

Overview

The NHWA modules have certain indicators which are qualitative in nature and are used to assess the capabilities of a country's health workforce policies and regulations in improving the state of the health workforce. In the above-mentioned chapters pertaining to individual NHWA Modules, certain indicators are in the form of questions which have possible responses as Yes, No or Partly.

For those indicators wherein identified stakeholders have provided responses as No or Partly, We at MOHAP have analyzed those responses and are providing recommendations towards those questions whereby 100% indicator compliance can be achieved in UAE.

23.1 Capability Indicator Status

#	Module	Total	Yes	No	Partly
2	Education & training	1	1	0	0
3	Education & training regulation and accreditation	9	5	0	4
4	Education finances	1	0	0	0
6	Employment characteristics and working conditions	6	2	0	0
7	Health workforce spending and remunerations	1	1	0	0
8	Skill-mix composition for models of care	3	1	1	1
9	Governance and health workforce policies	5	5	0	0
10	Health workforce information systems	8	4	3	0

Table 12 - Capability Indicator Status

23.2 MOHAP Recommendations

23.2.1 Recommendation for Accreditation of non-compulsory education and training institutions

Indicator	Accreditation mechanisms for education and training institutions and their programmes
Question	Are there national and/or subnational mechanisms for accreditation of health workforce education and training institutions and their programmes that are not compulsory?
Recommendation	▪ This question ascertains **non-compulsory** areas for **accreditation** of health workforce education and training institutions and their **programmes.** ▪ For the year 2018, the accreditation standards were **exempted** for education and training institutes that fall under the **free zones** in UAE. ▪ Education areas such as governance, student faculty, facilities, research, legal compliance etc. mentioned below need to be accredited periodically to ensure **standardized, high quality and relevant** education is being imparted.

Post Aug 2019, Ministry of Education should have unveiled a **new set of licensing and accreditation standards** for all types of higher education institutions which would **include free zones** in the UAE.

23.2.2 Recommendation for measurement of Impact of health training on health system and population

Indicator	Standards for social accountability effectively implemented
Question	Do health workforce education and training institutions measure their impact on the health system and populations they serve?
Recommendation	▪ This question verifies whether health workforce education and training institutions **measure their impact** on the health system and populations they serve. ▪ In the UAE, healthcare training institutions **except Universities and Colleges**, measure their medical professionals' impact on health system and populations served. ▪ Assessment of their **graduates/interns** should be undertaken based on areas such as patient outcome, equipment handling, adherence to facility rules, cost effectiveness and other critical performance areas mentioned below.
Above feedback mechanism should be made mandatory for all licensed institutions and carried out on annual basis for identification of **potential gaps** or **improvement areas** in training process or educational course material.	

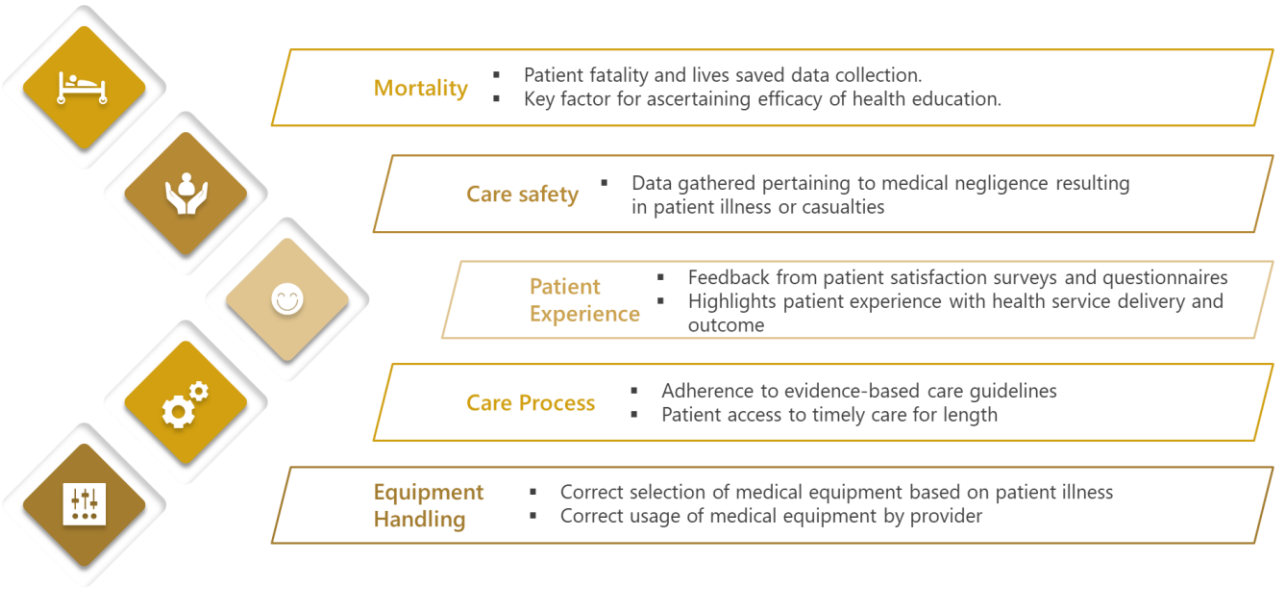

Figure 30 - Implementation Areas for measurement of education and training on health systems and population served

23.2.3 Recommendation for implementation of accreditation standards for IPE

Indicator	Standards for interprofessional education (IPE)
Question	Is interprofessional education included or reflected within national and/or subnational standards?
Recommendation	▪ This question deals with **inclusion of standards for IPE education** in educational accreditation. ▪ IPE education is a **collaborative approach** to learning resulting in **improved knowledge** and **health outcomes.** ▪ IPE is regarded as an integral **mitigation strategy** towards **global health workforce crisis** which takes place in many different countries and healthcare settings across a range of income categories. ▪ In the UAE, IPE is encouraged but **not mandatory** for health education universities.
Series of steps detailed below should be undertaken by **licensed health education universities** in order for successful accreditation of their IPE implementation.	

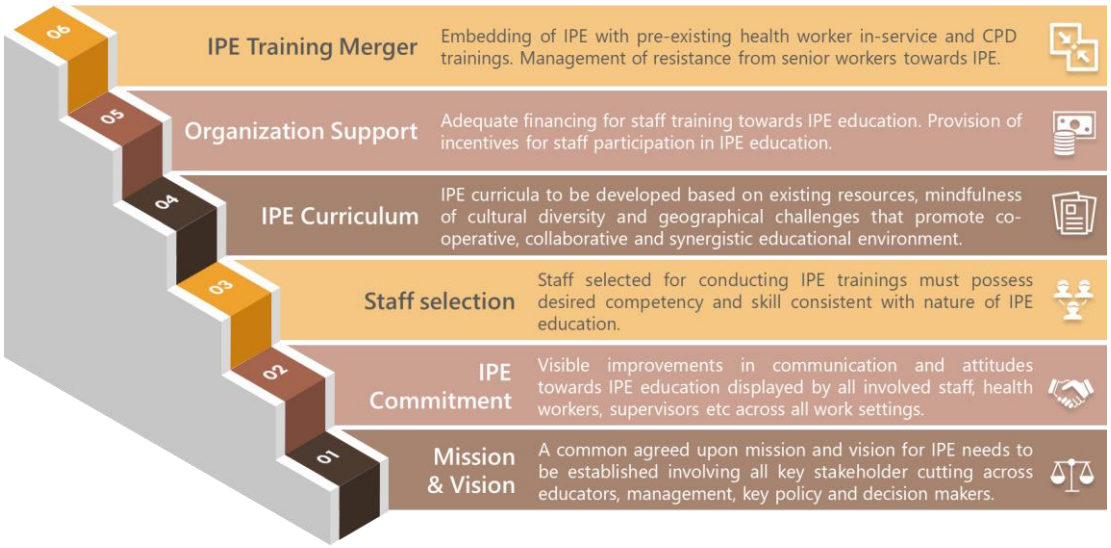

Figure 31 - Steps for accreditation of IPE

23.2.4 Recommendation for integration of CPD into National Education Plan

Indicator	Continuing Professional Development
Question	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?
Recommendation	▪ This question indicator verifies the incorporation of CPD into the national education plan for health workforce. ▪ CPD is used to describe learning activities that professionals partake in to develop and enhance their skills. ▪ Currently the CPD standards for health workforce education are not integrated with national education plan.

A standard structure for CPD needs to be established in order to ensure complete training and development of every individual healthcare worker along with certification for essential re-licensure.

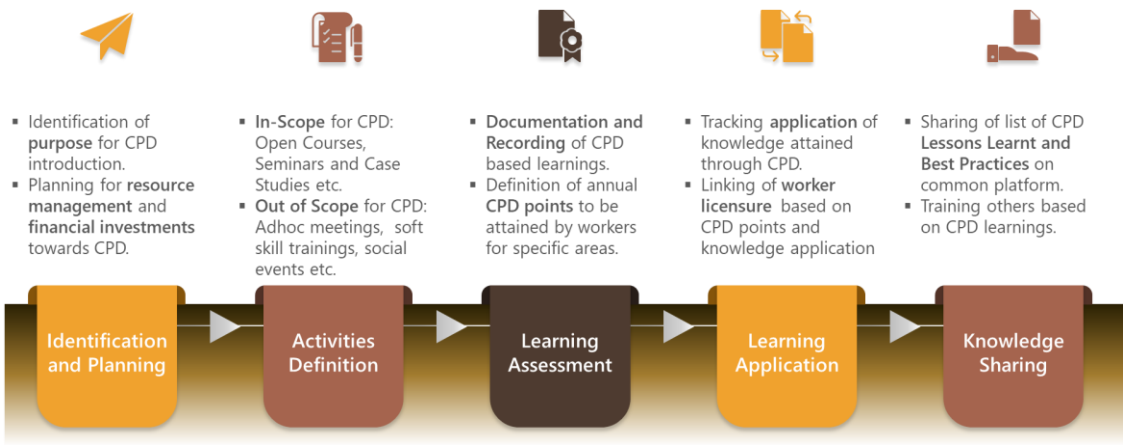

Figure 32 – CPD Inclusion process in National Education Plan

23.2.5 Recommendation for capacity of Field Epidemiology Training Programmes

Indicator	Applied epidemiology training programme
Question	Is there an existence of an applied epidemiology training programme?
Recommendation	▪ This indicator checks the existence of **Field Epidemiology Training Programmes (FETP)** typically conducted by a country's Ministry of Health. ▪ FETP comprise of lectures, workshops, technical discussions and field visits that **strengthen public health workers' competency** for detection and response towards international or local **disease outbreaks**. ▪ A **limited capacity** for FETP exists in the UAE on account of an annual **in-house epidemiology workshop** conducted on 13th Dec 2018 which comprised of few MOHAP employees at the Training & Development Center (TDC). ▪ A comprehensive field epidemiology programme should exist comprising of below key areas: ○ **Developed training material**: Surveillance disease systems and laboratory techniques based on actual epidemics should be included. Usage of Epidemiological cases studies revealing correct methods for outbreak data analysis and reporting. Inclusion of material having methods to deal with complex emergency situations. ○ **Organized training courses**: Conducting of epidemiological workshops and field visits utilizing the baselined training material. Defined objectives for increasing participant readiness for complex emergency situations. Local staff employment for communicable disease surveillance. ○ **Multi-stakeholder participation**: Multi-disciplinary stakeholders should participate in trainings based on existing programmes in other countries. Participants should be incentivized to work as field epidemiologists forming a cohort at country level. Participants should in turn be trained to conduct similar workshops on epidemiology.

For a **sustainable capacity**, comprehensive Field Epidemiology Training Programmes utilizing **baselined training materials** should be undertaken each year with basic, intermediate and advanced levels of training attended by **multiple stakeholders** across federal and private health regulation entities.

23.2.6 Recommendation for accreditation of in-service training programmes for advancing roles of Nurses

Indicator	Existence of advanced nursing roles
Question	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?
Recommendation	▪ This indicator checks the existence of **training methods** for nursing role advancement. ▪ An **advanced practice nurse** (APN) is essentially a post-graduate nurse receiving advanced didactic and clinical education, skills and expertise in nursing sector. ▪ Typical APN types are **Clinical Specialist Nurse** (CSN) and **Nurse Practitioner** (NP). ▪ In the UAE there are currently **no designated training programs** for advancement of nurse roles. ▪ **Key benefits** in providing formal and ad-hoc training opportunities for nurse role advancement include: o Improvement in patient care and outcome o Reduced re-admission rates o Alleviated doctor burnout o Reduced patient waiting time o Improved family and career satisfaction o Heightened professional development and satisfaction of nurses and midwives ▪ Types of **accredited training methods** for nursing role advancement: o **Preceptorship training**: Nurses working along with preceptors who mentors and trains them towards role advancement. Preceptors assess the ability of the nurse towards clinical assignment and offer supervision on complex tasks. o **Specialization certifications**: Attending classroom trainings and completing certifications in nurse specialty areas such as Neonatal Units, Critical Care, Perioperative, Labour & Delivery etc. o **Nurse blogs**: Reading resourceful nursing blogs written by nursing experts and seasoned professionals from reputed organizations. These provide cutting-edge ideas and practical knowledge of health systems and nursing. o **Continued Education**: Attending of mandatory and critical in-servicing trainings that facilitate upskilling through new advancements, techniques and practices in Nursing. This enables nurses to be up to date with the current trends and knowledge areas in nursing.

- **Graduate residency training**: New Graduates learning through classroom work, clinical experience and preceptors for attaining advanced nursing roles.

Accordingly, above mentioned **accredited training methods** should be accepted in the UAE health systems that facilitate nursing role advancement.

23.2.7 Recommendation for reporting capabilities of HRHIS for IHR

Indicator	HRHIS for reporting on International Health Regulations
Question	Does the Human Resource for Health Information System (HRHIS) have ability to generate information to report on International Health Regulations?
Recommendation	▪ This indicator checks the **reporting abilities** of HRHIS system for **International Health Regulations (IHR)**. ▪ IHR are **legal regulations** adopted by WHO for aiding countries in saving their population by reporting instances of **local or foreign diseases** to WHO through a designated **IHR National Focal Point (NFP)**. ▪ In the UAE, all sectors report on public health events of global and national relevance through a regular reporting mechanism namely **Daily Epidemic Reports** within the UAE, which is overseen by MOHAP (IHR NFP). ▪ The current system for reporting involves **manually entered** form-based reports that are **emailed to WHO**.
This current **email reporting system** needs to be upgraded to an **integrated electronic platform (HRHIS)** system encompassing national and local levels, as well as human and animal health sectors.	

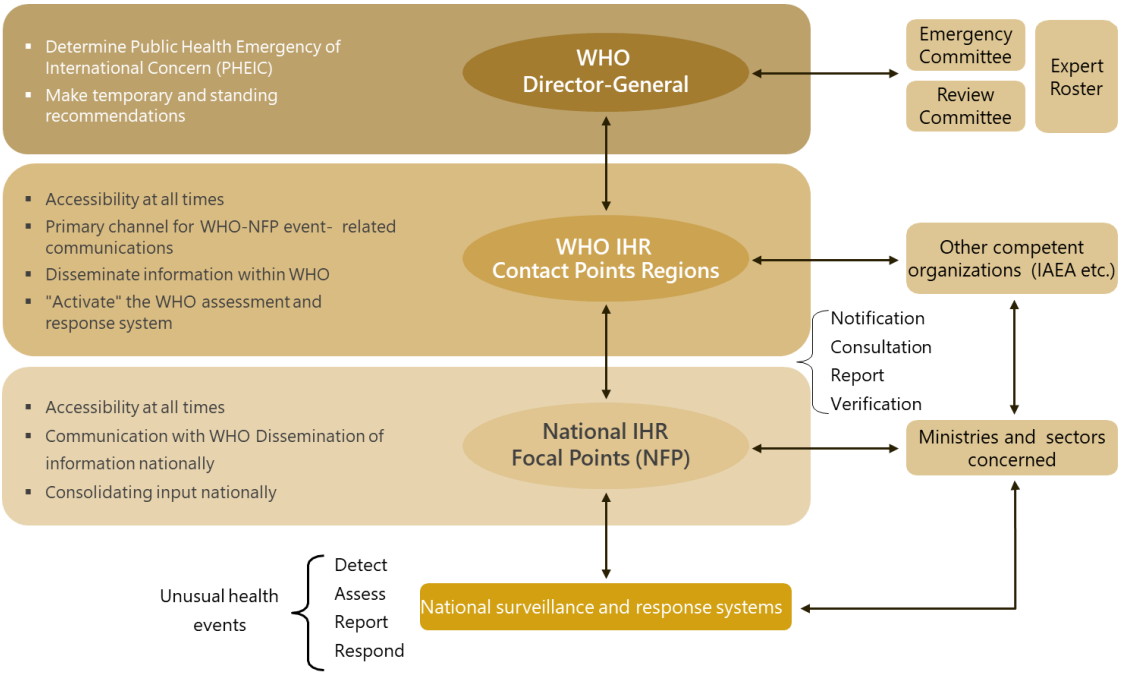

Figure 33 - IHR Framework

23.2.8 Recommendation for reporting capabilities of HRHIS for Skilled attendance at birth

Indicator	HRHIS for reporting on skill attendance at birth requirements
Question	Does the Human Resource for Health Information System (HRHIS) have ability to generate information for reporting on skilled attendance at birth requirements?
Recommendation	▪ This indicator checks the **reporting abilities** of HRHIS system for **skilled attendance at birth**. ▪ Skilled attendance at birth relates to **Doctors, Nurses and Midwives** who are specially educated and trained to handle childbirths, normal pregnancies, postnatal care and complications in women and newborns. ▪ High value of skilled attendance at birth indicator depicts high rate of **successful deliveries** and **reduced maternal mortalities**. ▪ Currently the **Bayanati** HRHIS system **contains** skilled attendants data however **does not contain** the patients data being attendant by those professionals. This data is present in the **Wareed** HIS system.
The **Bayanati system** should be **integrated** with the **Wareed** system in order to obtain skilled attendance at birth data for reporting to WHO.	

23.2.9 Recommendation for HRHIS production of geocoded health facility locations

Indicator	HRHIS for producing the geocoded location of health facilities
Question	Does the Human Resource for Health Information System (HRHIS) have ability to generate geocoded information on the location of health facilities?
Recommendation	▪ This indicator checks the existence of **geocoded location** of health facilities in the HRHIS system. ▪ Geocoded location corresponds to the **latitudinal** and **longitudinal** location tracked down to nearest constituent town, ward or neighborhood of that particular health facility on the earth's surface. ▪ Methods of geocoding typically include below areas: ○ Using GPS devise for facility location. ○ Satellite imagery and aerial photography platforms like Google Map, Google Earth etc. ○ Using scanned and georeferenced hand-drawn maps. ○ Location determination through existing maps.
The **Bayanati HRHIS** system should be **upgraded** to store the **geocoded locations** of the facilities associated with each staff in addition to the existing **work location** and **organizational unit** of their employees.	

23.2.10 Recommendation for HRHIS in reporting on outputs from education and training institutions

Indicator	HRHIS for reporting on outputs from education and training institutions
Question	Does the Human Resource for Health Information System (HRHIS) have ability to generate information for reporting on outputs from education and training institutions?
Recommendation	▪ This indicator checks the reporting abilities of HRHIS system towards the outputs from education and training institutions. ▪ These outputs typically constitute below mentioned areas of accredited education and training institutions: o Annual updated list of accredited education & training institutions and their programmes o Applications/Admissions/Enrollments made towards these programmes o Faculty to Student ratios o Successful graduates data o Dropouts data ▪ Currently the Bayanati HRHIS System only contains the educational qualification details of the employees and not the above-mentioned outputs. ▪ Benefits for containing outputs for education and training institutions in the HRHIS system: o Aids planning towards health workforce projection and capacity o Supports budgetary considerations for new job creation o Promotes judicious international health workforce recruitment o Optimizes training needs for health workforce o Facilitates collaboration between health and education ministries o Derives core indicators which can be submitted to WHO Secretariat annually

The Bayanati HRHIS system should be integrated with the systems used in the Ministry of Education that contain the specified outputs from education and training institutions which cumulatively provides a holistic overview of health workforce education and corresponding recruitment.

24. CHAPTER 16: CHALLENGES

24.1 General Challenges

The National Health Workforce Account (NHWA) was formulated as a means to meet the below mentioned global health workforce challenges faced by countries:

- Shortage of national health workforce
- Provision of high-quality education and training that supports the needs of health systems
- Equitable deployment of health workers to match populations' needs
- Performance monitoring to ensure high-quality care nationwide
- Health workforce promotion and job retention

The NHWA programme can aid countries to address or reconsider major policy questions related to current HWF challenges and optimizing planning systems such as:

- Is the current health workforce stock sufficient, skilled and accessible for providing quality services thereby resulting in satisfaction of population needs?
- Are the identified gaps in health workforce situation addressable through optimal resource allocation, formulation of effective policies, bolstering of public and private sector partnerships and making sound investments in education and workforce production?
- What is the financial feasibility in terms of fiscal investment (salaries) and inter-sectoral negotiations for implementing policies that improve health workforce performance?
- Can the health workers entry into the labour market counterbalance the exits?
- Can financial incentives attract health workers in underserved areas and aid in job retention and balanced geographical distribution?

24.2 Challenges in NHWA Data Collection

The biggest challenge in the accurate data collection for all NHWA Modules in the UAE was that data is scattered across 7 emirates, multiple regulatory ministries and the private sector. For each NHWA module, identification of the correct stakeholder for the respective data was the key step that was taken during a NHWA Orientation workshop which included designated individuals from each Ministry in the UAE. Despite this initiative, several indicator data was not successfully obtained due to unavailability with the respective stakeholder.

The specific module-wise data collection challenges are present below

24.2.1 Module 1 – Active Health Work Stock

Indicator	Health worker distribution by age group Health worker distribution by facility type
Overview	These indicators reveal the number of active health workers disaggregated by age groups and facility types namely Hospitals, Ambulatory Facilities, Residential Facilities, Retail Facilities etc.
Challenge	▪ We have received health worker specialization-based age demographic and facility type data from all contacted stakeholders except from DHA and DHCC. ▪ For DHA this data is currently unavailable. ▪ For DHCC data from only few facilities have been received.
Action	▪ We need to obtain pending data from DHA and all DHCC facilities.

Indicator	Share of foreign-trained health workers
Overview	This indicator focusses on active health workers who have obtained qualification degree outside of the UAE and practices within UAE.
Challenge	▪ We contacted multiple stakeholders for acquiring Manpower data with different disaggregation's like gender, age groups, sector, training etc. ▪ However majority of the stakeholders responded with unavailability of data pertaining to Country of Training data of their health workers.
Action	▪ We shall request the concerned stakeholder entities to start tracking the Country of Training associated with highest qualification degree of each of their existing and new joiners employees. ▪ This should become a mandatory requirement for their employee onboarding process.

Indicator	Share of workers across health and social sectors
Overview	This indicator reveals the number of health and social sector workers in comparison to total employed population.
Challenge	▪ We have not received data pertaining to all employed population in UAE for the year 2018. ▪ This is the key denominator required for calculating this indicator.
Action	▪ We have requested FCSA for sharing this data and shall follow-up with them for acquiring this information.

24.2.2 Module 2 – Education & Training

Indicator	**Ratio of admissions to available places** **Exit / drop-out rate from education and training programmes** **Ratio of students to qualified educators for education and training** **Duration of education and training**
Overview	The above-mentioned indicators are pertaining to **educational parameters** for healthcare based training universities and institutions in the UAE.
Challenge	▪ The **Ministry of Education – Higher Education** is the only source for acquiring this data and they have confirmed **unavailability** of this data.
Action	▪ The Ministry of Health – Higher Education collect education and training based **statistical** and **financial** data from the individual MOE licensed universities using the **Centre for Higher Education Data and Statistics (CHEDS)** data collection process. ▪ We shall request them to add these additional data requirements into the CHEDS process and aspire to obtain desired data within the end of this year.

Indicator	All indicators of this module relating to Applications, Admissions, Graduation and Drop-outs
Overview	These indicators focus around health worker education and training institutions, and information on applications, admissions, exit / drop-out and graduation.

Challenge	▪ We have received data like Applications, Enrollments and Graduates data specific to certain healthcare specializations from the Ministry of Education.
	▪ However the same data is yet to be obtained from the below Free Zones namely:
	  ○ Knowledge and Human Development Authority (KHDA)
	  ○ Fujairah
	▪ We received confirmation from RAK free zone that their institutions do not conduct healthcare based trainings hence are excluded from this data.

Action	▪ We shall be closely working with Ministry of Education for following-up with the other free zones in order to acquire the desired data of this module.

24.2.3 Module 4 – Education Finances

Indicator	All indicators of this module relating to Financing of higher education, Investments, Education Expenditure and Lifelong learning
Overview	These indicators focus around **expenditures** and **investments** incurred towards health workforce education.
Challenge	▪ The expenditure towards health education and training has to be **independently captured** from applicable MOE **licensed universities**.
Action	▪ We have contacted a focal point from the Ministry of Education – Higher Education to provide us **single point of contact** information for each of the universities so that we can individually obtain the desired data from them.

24.2.4 Module 5 – Health Labour Market Flows

Indicator	All indicators of this module relating to Labour Market Entries, Exits and Imbalances
Overview	Data in this module mainly relates to newly active workers who have just entered the UAE health labour market and existing active workers who had voluntarily/involuntarily left the market.
Challenge	▪ Majority of stakeholders have data on individuals who were licensed in their organization however, they do not have data confirming that those individuals were newly active into the UAE market. ▪ Similarly few stakeholders have provided data on worker exits however; those same workers might have joined other organizations in the same year resulting in incomplete data.
Action	▪ We need to identify a stakeholder that can provide cumulative end of year data on health workers that have freshly entered into the UAE health labour market as well as those workers that have become unemployed or left the market. ▪ We are expecting data for Unemployment and Vacancy rate from FCSA.

24.2.5 Module 6 – Employment Characteristics and Working Conditions

Indicator	Health workers with a part-time contract
Overview	This indicator is applicable for those active health workers that work below national standard working hours and across multiple sectors as well.
Challenge	▪ Majority of contacted stakeholders do not possess this data.
Action	▪ In the UAE, there are rare occasions where professionals opt for working across multiple sectors and need permit from MOHRE for undertaking part-time work. ▪ We have accordingly contacted and requested them to share the accurate numbers of Part-Time health workers in the UAE.

Indicator	Health worker status in employment
Overview	This indicator is applicable for those active health workers that are self-employed in the UAE.
Challenge	▪ Majority of contacted stakeholders do not possess this data.
Action	▪ In the UAE, obtaining self-employment requires finding sponsorship through free zones in UAE as a Contractor through an established company, or through an individual. ▪ There are 45 free zones within the UAE and we need to identify those wherein health care professionals work and have obtained self-employment permits. ▪ We shall be contacting the identified free zones for this data.

Indicator	Regulation on working hours and conditions, minimum wage, social protection, dual practice and compulsory service
Overview	These indicators describe the regulations that impact employment characteristics like work hours, leaves, salaries, multi sector employment etc.
Challenge	▪ In the UAE, regulations affecting employment for the public sector are governed by FAHR. ▪ Similarly these regulations for the private sector are governed by MOHRE. ▪ We have received only data for public sector regulations relating to working hours and social protection however not for all.
Action	▪ We are expected to receive these data for private sector from MOHRE. ▪ We have received few regulatory data items from FAHR however need to identify stakeholder for remaining indicators for public sector.

Indicator	Attacks on health-care system Measures to prevent attacks on health workers
Overview	These indicators revolve around preventive measures and statistical figures on various attacks on healthcare systems. These include attacks on Healthcare Providers, Facilities, Transportation, Patients and their relatives and other areas of healthcare ecosystem.
Challenge	▪ We have contacted numerous stakeholders for such kind of data however we have received confirmation of unavailability of the same.
Action	▪ We have to identify a new stakeholder for obtaining such kind of healthcare attacks related data. ▪ We have been advised to check police records across emirates for a potential figures relating to these indicators.

24.2.6 Module 7 – Health Workforce Expenditure

Indicator	**Total expenditure on health workforce** **Total expenditure on compensation of health workers** **Entry-level wages and salaries**
Overview	These indicators correspond to the total expenditure inclusive of compensations, salaries, social contributions and training incurred on health workforce.
Challenge	▪ Health workforce expenditure data is **not complete** as it is not received from all relevant stakeholders. ▪ We have received **health worker expenditure data** only from **MOHAP** and partial data from **MOPA**. ▪ Many contacted stakeholders from public sector like **DOH** and **DHA** have confirmed **unavailability** of this data. ▪ From the private sector, we have received data from small percentage of **DHCC** based healthcare facilities.
Action	▪ We shall follow-up with **DHCC** in order to obtain data inclusive of all of their facilities. ▪ We shall also reconfirm availability of **financial data** from previously contacted stakeholders.

24.2.7 Module 10 – Health Workforce Information Systems

Indicator	HRHIS for WHO Global Code of Practice reporting
Overview	This indicator checks the ability of HRHIS to generate information to report on implementation of the WHO Global Code of Practice on the International Recruitment of Health Personnel.
Challenge	▪ We have not received any information regarding this indicator from contacted stakeholders.
Action	▪ We need to identify a stakeholder wherein HRHIS system is utilized for sending reports to WHO in terms of international recruitment of migrant workers in the UAE.

25. Glossary

Source: WHO - (National Health Workforce Account - A Handbook)

Term	Definition
Accreditation	A process by which an officially approved body, on the basis of assessment of learning outcomes and/ or competences according to different purposes and methods, awards qualifications (certificates, diplomas or titles), or grants equivalences, credit units or exemptions, or issues documents such as portfolios of competences. The term accreditation applies to the evaluation of the quality of an institution or a programme as a whole. ▪ **Accreditation mechanisms:** Mechanisms and procedures for implementation of an accreditation process. ▪ **Accreditation standards:** Standards that guide health workforce education programme development and evaluation, facilitate diagnosis of strengths and weaknesses relating to the education programme, and stimulate quality improvement. ▪ **Accreditation systems:** A system that is: based on standards; supported by a legislative or legal instrument; independent; transparent; non-profit-making; accountable; representative of, but independent from all major stakeholders; and efficiently administered.
Active health worker	One who provides services to patients and communities (practising health worker) or whose medical education is a prerequisite for the execution of the job (e.g. education, research, public administration) even if the health worker is not directly providing services (professionally active health worker). If data are not available for practising or professionally active health workers, data with the closest definition can be used, such as "health worker licensed to practice".
Active health workforce stock	This comprises of the size, composition and distribution of health workforce within a country.
Advanced practice nurse	A registered or other professional nurse who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which the nurse has credentials to practise. A master's degree is recommended for entry level.
Ambulatory care	Personal health-care services delivered by individuals and organizations on an outpatient basis.
Compensation of employees	The total remuneration, in cash or in kind, paid by an enterprise to an employee in return for work performed by the latter during the accounting period. It includes wages, salaries, and all forms of social benefits, payments for overtime or night work, bonuses, allowances, as well as the value of in-kind payments such as the provision of uniforms for medical staff.
Continuing professional development	Training that is beyond clinical update and includes wide-ranging competences like research and scientific writing; multidisciplinary context of patient care;

Term	Definition
	professionalism and ethical practice; communication, leadership, management and behavioral skills; team building; information technology; auditing; and appropriate attitudinal change to ensure improved patient service, research outcomes, and attainment of the highest degree of satisfaction by stakeholders. The form of continuing professional development (CPD) may include: courses and lectures; training days; peer review; clinical audit; reading journals; attending conferences; e-learning activity. CPD may be included in national standards of conduct, performance and ethics that govern health workers. Continuing professional development (mandatory) National systems for continuing CPD may be voluntary or mandatory. Mandatory systems may include the requirement for both verifiable and general and non-verifiable CPD. Verifiable CPD is activity that meets an agreed definition of CPD and for which there is documentary evidence that the health worker has undertaken CPD with concise educational aims and objectives; clear anticipated outcomes; and quality controls.
Domestic trained health worker	A health worker who obtained his/her first qualification in the country where s/he is entitled to practice.
Enrolment	Number of new entrants in the first year of an education programme.
Family medicine practitioner	Part of generalist medical practitioners classified in ISCO-08 code 2212. Also referred to as general practitioners and in some countries considered as a specialization, they provide person-centred continuous and comprehensive medical care to individuals and families in their communities. This group does not include resident medical officers, medical interns or other generalist medical practitioners not in general practice activities.
Field epidemiology training programme (FETP)	A health training programme with field investigations to develop experience and specialist skills based on practical application of epidemiological methods. FETP training levels are defined as: ▪ **Basic level:** for local health staff, comprising limited classroom hours interspersed throughout 3–5 month on-the-job field assignments to build capacity to conduct timely outbreak detection, public health response, and public health surveillance. ▪ **Intermediate level:** for district/regional epidemiologists, comprising limited classroom hours interspersed throughout 6–9 month on-the-job mentored field assignments to build capacity to conduct outbreak investigations, planned epidemiologic studies, and public health surveillance analyses and evaluations. ▪ **Advanced level:** using a national focus for advanced epidemiologists, it consists of limited classroom hours interspersed throughout 24-month mentored field assignments to build capacity in outbreak investigations, planned epidemiologic studies, public health surveillance analyses and evaluations, scientific communication and evidence-based decision-making for development of effective public health programming.

Term	Definition
Foreign-born health worker	A health worker born in a country other than the one in which s/he performs health-related activities.
Foreign-trained health worker	A domestic health worker who obtained his/her qualification (degree) in another country and is entitled to practise in the receiving country.
Graduate	An individual who has successfully completed an education programme, according to the International Standard Classification of Education 2011.
Health information system	The health information system provides the underpinnings for decision-making and has four key functions: (i) data generation, (ii) compilation, (iii) analysis and synthesis, and (iv) communication and use. The health information system collects data from health and other relevant sectors, analyses the data, ensures their overall quality, relevance and timeliness, and converts the data into information for health-related decision-making.
Health workforce education and training institution	An established institution that provides education as its main purpose, such as a school, college, university or training centre. Such institutions are normally accredited or sanctioned by the relevant national education authorities or equivalent to award qualifications. Educational institutions may also be operated by private organizations, such as religious bodies, special interest groups or private educational and training enterprises, both for profit and non-profit.
Health workforce education and training place	A place may be offered, by a health workforce education and training institution, to an applicant who meets the published minimum admission requirements for a particular programme. The number of places denotes the capacity of an education and training institution and its programmes.
Health workforce education and training programme	A "coherent set or sequence of educational activities or communication designed and organized to achieve pre-determined learning objectives or accomplish a specific set of educational tasks over a sustained period" with the objective to improve health knowledge, skills and competencies applied to health and enable the training of new health workers. Health workforce education and training programmes will often have a numerus clauses that restricts the number of places for a given programme.
Health workforce planning	Strategies that address the adequacy of the supply and distribution of the health workforce according to policy objectives and the consequential demand for health labour.
Health Worker Density	Health Worker Density includes the total number of health workers across healthcare specializations such as Medical Doctors, Nurses, Dentists, Pharmacists, Technicians etc in a given country in terms of 10,000 population.

Term	Definition
Higher education	Includes "all types of studies, training or training for research at the post-secondary level, provided by universities or other educational establishments that are approved as institutions of higher education by the competent State authorities".
Human resources for health	All persons engaged in actions whose primary intent is to enhance health (WHO definition). Three categories of workers relevant for health workforce analysis can be distinguished: ▪ Those with health vocational education and training working in the health services industry ▪ Those with training in a non-health field (or with no formal training) working in the health services industry, and ▪ Those with health training who are either working in a non-healthcare related industry, or who are currently unemployed or not active in the labour market
In-service training	Training received while one is employed in the health sector.
International Health Regulations (2005)	An international legal instrument that is binding on 196 countries across the globe, including all Member States of WHO. Its aim is to help the international community prevent and respond to acute public health risks that have the potential to cross borders and threaten people worldwide.
Inter-professional education	When two or more health professionals learn about, from and with each other to enable effective collaboration and improve health outcomes. "Professional" is an all-encompassing term that includes individuals with the knowledge and/or skills to contribute to the physical, mental and social well-being of a community.
Licensure	The granting of a permit (licence) or mandatory certification to practise in the appropriate field of health, issued by a legitimate regulatory body within the profession.
Lifelong learning	All general education, vocational education and training, non-formal education and informal learning undertaken throughout life, at all levels and all settings, resulting in an improvement in knowledge, skills and competences, which may include professional ethics.
Medical doctor or physician: generalist	Generalist medical practitioners (ISCO 2008 code 2211) including family and primary care doctors, who diagnose, treat and prevent illness, disease, injury, and other physical and mental impairments and maintain general health in humans through application of the principles and procedures of modern medicine. They plan, supervise and evaluate the implementation of care and treatment plans by other health-care providers. They do not limit their practice to certain disease categories or methods of treatment, and may assume responsibility for the provision of continuing and comprehensive medical care to individuals, families and communities.
Medical doctor: specialist	Specialist medical doctors (ISCO 2008 code 2212) diagnose, treat and prevent illness, disease, injury and other physical and mental impairments using specialized testing, diagnostic, medical, surgical, physical and psychiatric techniques, through application of the principles and procedures of modern medicine. They plan, supervise and evaluate the implementation of care and treatment plans by other health-care providers. They specialize in certain disease

Term	Definition
	categories, types of patient or methods of treatment, and may conduct medical education and research activities in their chosen areas of specialization.
Newly active health worker	A health worker who starts activity in the given year in the given profession.
Public expenditure	Expenditure from public funds. Public funds are state, regional and local government bodies and social security schemes. Public capital formation includes publicly-financed investment in facilities plus capital transfers to the private sector for construction and equipment.
Relicensure	Recertifying a health worker as having attained the standards required to practise a particular occupation.
Remuneration	Average gross annual income, earned by employees or those self-employed, i.e. income per year and per person, before any deductions are made for social security contributions or income tax. A person may have more than one qualifying job in any given reference period.
Skill mix	A broad term that refers to the combination or grouping of different categories of staff in the workforce, or the demarcation of their roles and activities. It is also used to describe the mix of posts, grades or occupations in an organization (as in ''grade mix''). Buchan and O'May offer the following definition in the context of health-care provision: ▪ a combination of skills available at a specific time ▪ a mix of posts in a given facility ▪ a mix of employees in a post ▪ a combination of activities that are comprised in each role ▪ differences across occupational groups such as nurses and physicians or between various sectors of the health system, or ▪ a mix within an occupational group such as the different types of nursing providers with different levels of training and different wage rates.
Social accountability	The obligation of an authorized body to direct its education, research, and service activities towards addressing the priority health concerns of the community, region, and/or nation it has a mandate to serve.
Social determinants of health	The conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems.
Specialist surgical workforce	Includes licensed and qualified physician surgeons, anaesthesiologists and obstetricians.
Subnational level	To be defined according to the specific conditions, governing structures, and constitutional provisions existing in a given country. Disaggregation based on administrative boundaries down to the first or second subnational level is recommended (depending on the structure of administrative boundaries and the size of subnational territories), without overlaps between the administrative units. Examples for subnational administrative units are states, regions, provinces, counties, and districts.

Term	Definition
Total expenditure on the health workforce	The sum of expenditures on compensation of employees (FP.1): wages and salaries (FP.1.1); social contributions (FP.1.2); all other costs related to employees (FP.1.3); self-employed professional remuneration (FP.2). Expenditure on mandatory continuing professional development should be included within social contributions.
Total public expenditure on health workforce education	Current and capital expenditure expressed as a percentage of gross national income (or gross national product) in a given financial year. This indicator shows the proportion of income spent by government authorities on health workforce education over a given financial year. This can also be calculated based on gross domestic product.
Transformative (health workforce) education	The sustainable expansion and reform of health workforce education and training to increase the quantity, quality and relevance of health workers, and in so doing strengthen national health systems and improve population health outcomes.
Unemployment	All persons of working age who are qualified for a job, are not in employment, have carried out activities to seek employment during a specified recent period, and are currently available to take up employment given a job opportunity.
Vacancy rate	The proportion of total posts that are vacant according to the definition of the job vacancy, expressed as a percentage of total positions, both filled and unfilled.