

National Health Workforce Accounts Online Platform – part I

Introduction

Exercises: maturity assessment, data entry

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PAHO NHWA workshop, Brasilia August 2019

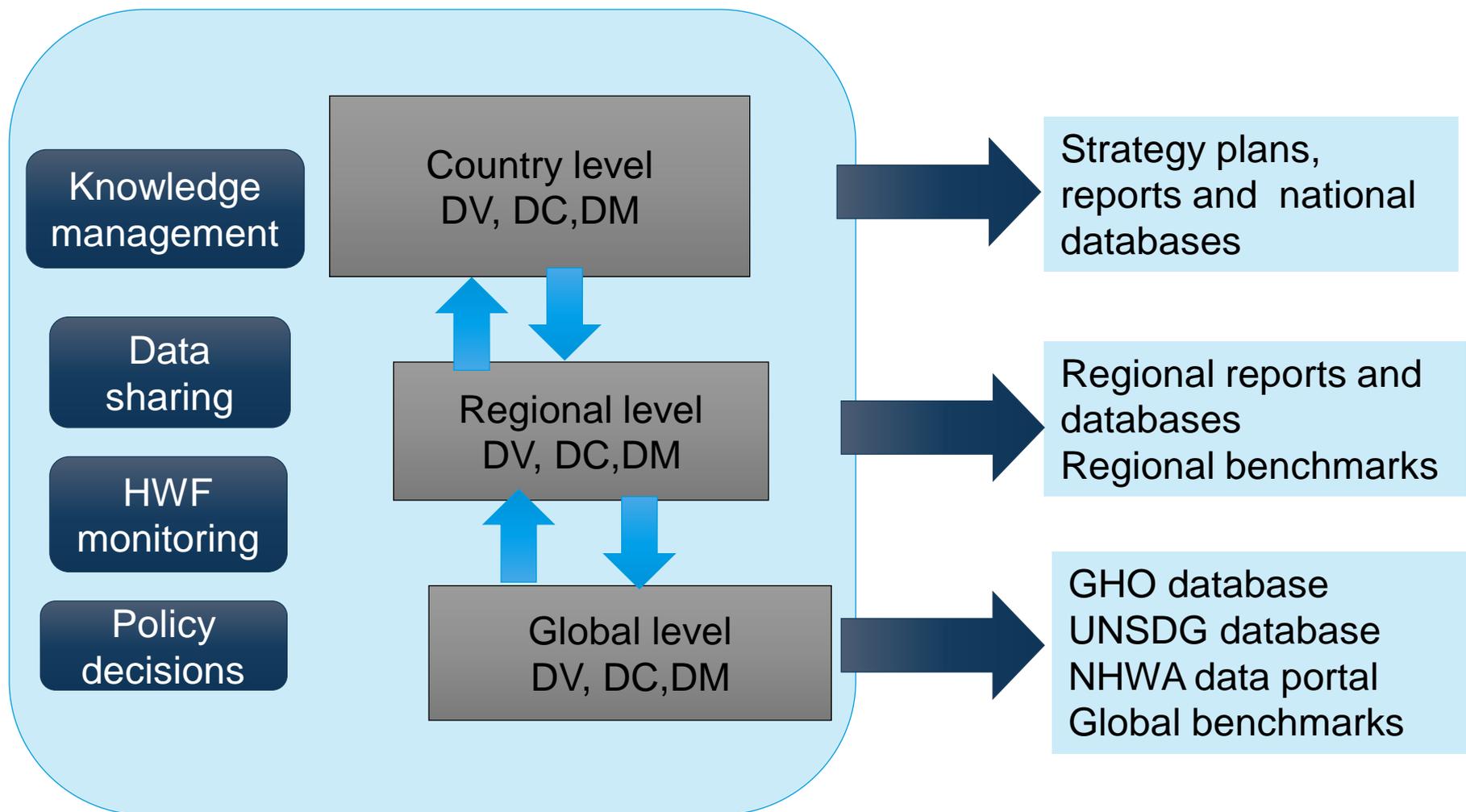
Why the need for a platform?

NHWA data platform enables users to **record**, **analyze** and **visualize** information and evidence on health workforce.

The data platform is developed bearing in mind a country perspective

- To have a national level **system** to systematically record time trend data in a structured and **standardized** manner
- To have a tool for national level stakeholders to **view and visualize** data recorded at the national level
- To provide a common place for multi-stakeholder **data exchange** without disrupting existing stakeholder databases.

Data management and use



Overview of the platform architecture



- NHWA data platform is developed on a DHIS2 instance, hosted in WHO.
- Following all the WHO security clearance and data sharing policies.
- The server is co-shared with other departments.
- 4 instances – dev, **training (used for exercises this week)**, preprod, prod

Users and user access

- Access to the NHWA data platform is possible through individual password protected user accounts
- Each account is assigned a role and geographic location (country/region)
- Multiple users from the same country can access the system
- Main 3 categories of users

Who can? What they can?

	Data viewer	Data clerk	Data manager
View data entered in the platform in pivot tables	√	√	√
Create charts and dashboards using the data visualization tools	√	√	√
Enter new data in the platform		√	√
Edit entered/existing data in the platform		√	√
Approve entered data in the platform			√

For this workshop, we will all be using Data Manager profiles

To connect



The screenshot shows the login interface for the WHO Integrated data platform. It features a dark blue background with the WHO logo at the top center. The text 'World Health Organization' is prominently displayed in white. Below this, there is a 'Sign in' section with two input fields: 'Username' and 'Password'. A 'Sign in' button is located below these fields. To the left of the 'Username' field, a blue box labeled 'User name' has an arrow pointing to the field. To the right of the 'Password' field, a blue box labeled 'Password' has an arrow pointing to the field. In the top left corner, there is a smaller WHO logo and the text 'WHO Integrated data platform' followed by a welcome message: 'Welcome on the WHO Integrated data platform ! Please enter your credential to enter into the platform.' In the top right corner, there is a graphic with three browser icons (Chrome, Firefox, and Edge) and a '62%' statistic. At the bottom, there is a footer with the text 'Powered by DHIS 2 Powered by DHIS2, Managed by WHO' on the left, 'WHO-HQ' in the center, and a '[Change language]' dropdown menu on the right. A light blue box at the bottom center contains contact information: 'For any issue contact us in integrated-data@who.int or open a ticket in the Online Reporting System'.

WHO Integrated data platform
Welcome on the WHO Integrated data platform ! Please enter your credential to enter into the platform.

World Health Organization

User name → Username

Password → Password

Sign in

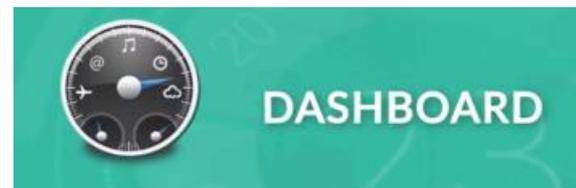
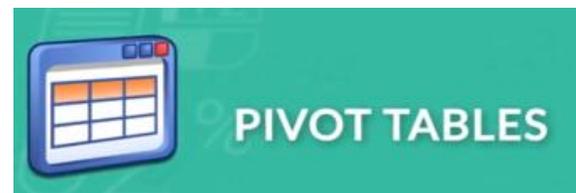
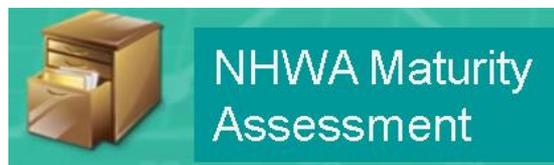
Sign in

For any issue contact us in integrated-data@who.int or open a ticket in the Online Reporting System

Powered by DHIS 2 Powered by DHIS2, Managed by WHO

WHO-HQ [Change language]

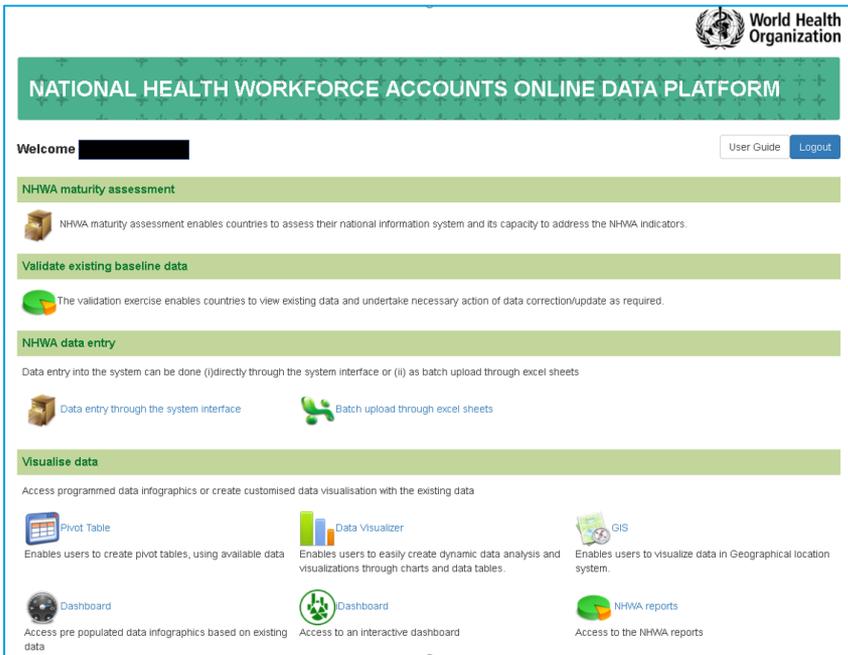
What can you do in the platform?



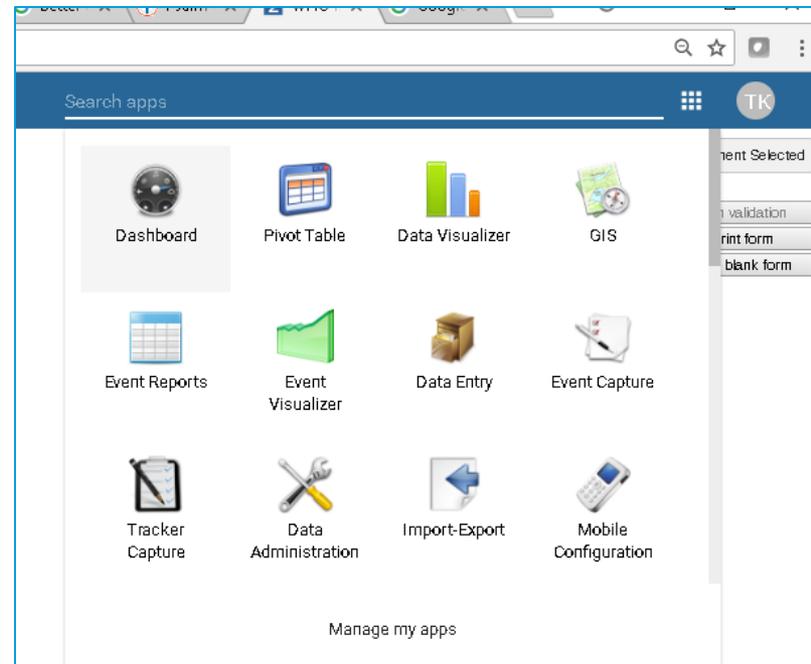
Access to functions/apps

Functions are referred to as 'Apps' in the system

Available from the Landing page , also from any other page



The screenshot shows the landing page of the National Health Workforce Accounts Online Data Platform. At the top, there is a green header with the WHO logo and the text "NATIONAL HEALTH WORKFORCE ACCOUNTS ONLINE DATA PLATFORM". Below the header, there is a "Welcome" section with a user name and "User Guide" and "Logout" links. The main content area is divided into several sections: "NHWA maturity assessment", "Validate existing baseline data", "NHWA data entry", and "Visualise data". Each section contains a brief description and links to related functionality.



The screenshot shows the "Search apps" interface. At the top, there is a search bar with the text "Search apps" and a search icon. Below the search bar, there is a grid of app icons. The apps are: Dashboard, Pivot Table, Data Visualizer, GIS, Event Reports, Event Visualizer, Data Entry, Event Capture, Tracker Capture, Data Administration, Import-Export, and Mobile Configuration. At the bottom of the grid, there is a "Manage my apps" link. On the right side, there is a sidebar with a "TK" profile icon and a list of actions: "Validation", "Print form", and "Blank form".

NHWA Landing page



NATIONAL HEALTH WORKFORCE ACCOUNTS ONLINE DATA PLATFORM

Welcome [redacted]

[User Guide](#) [Logout](#)

NHWA maturity assessment



NHWA maturity assessment enables countries to assess their national information system and its capacity to address the NHWA indicators.

Validate existing baseline data



The validation exercise enables countries to view existing data and undertake necessary action of data correction/update as required.

NHWA data entry

Data entry into the system can be done (i) directly through the system interface or (ii) as batch upload through excel sheets



[Data entry through the system interface](#)



[Batch upload through excel sheets](#)

Visualise data

Access programmed data infographics or create customised data visualisation with the existing data



[Pivot Table](#)

Enables users to create pivot tables, using available data



[Data Visualizer](#)

Enables users to easily create dynamic data analysis and visualizations through charts and data tables.



[GIS](#)

Enables users to visualize data in Geographical location system.



[Dashboard](#)

Access pre populated data infographics based on existing data



[Dashboard](#)

Access to an interactive dashboard



[NHWA reports](#)

Access to the NHWA reports

NHWA maturity assessment

Organisation Unit	France
Data Set	NHWA Maturity assessment
Period	2016 ⌵ Prev year
Filter on section	Show all sections

M01 - Active health workforce stock

Does your country have data on

Filter in section	Value
Health occupations at national level ?	<input type="radio"/> No value <input type="radio"/> Yes <input type="radio"/> No 💬
Health occupations by activity level data ?	<input type="radio"/> No value <input type="radio"/> Yes <input type="radio"/> No 💬
Health occupations at subnational level ?	<input type="radio"/> No value <input type="radio"/> Yes <input type="radio"/> No 💬
Health occupations by age group ?	<input type="radio"/> No value <input type="radio"/> Yes <input type="radio"/> No 💬
Health occupations by sex ?	<input type="radio"/> No value <input type="radio"/> Yes <input type="radio"/> No 💬
Health occupations by facility ownership?	<input type="radio"/> No value <input type="radio"/> Yes <input type="radio"/> No 💬
Health occupations by facility type?	<input type="radio"/> No value <input type="radio"/> Yes <input type="radio"/> No 💬
Health occupations by foreign-born ?	<input type="radio"/> No value <input type="radio"/> Yes <input type="radio"/> No 💬
Health occupations by foreign-trained?	<input type="radio"/> No value <input type="radio"/> Yes <input type="radio"/> No 💬
Health and social sector employment ?	<input type="radio"/> No value <input type="radio"/> Yes <input type="radio"/> No 💬

- Enables countries to assess the capacity of their information system to generate NHWA indicators
- List of Yes/No questions on indicators availability
- Possibility to record comments to indicate special cases, exceptions etc.

Data validation



DHIS 2 Pivot Tables

Data

Indicators

Select indicator group

Available >>> <<< Selected

- Medical doctors not further defined Stock Total
- General Medical Practitioners Stock Total
- Specialist Medical Practitioners Stock Total
- Gen Paediatricians Practitioners Stock Total
- Obstetricians and Gynaecologists Stock Total
- Psychiatrists Practitioners Stock Total
- Medical Specialists Practitioners Stock Total
- Surgical Specialists Practitioners Stock Total
- Other Specialists Practitioners Stock Total
- Nurses not further defined Stock Total
- Nursing Professionals Stock Total
- Nursing Associate Professionals Stock Total
- Midwives not further defined Stock Total
- Midwifery Professionals Stock Total
- Dentists Stock Total
- Dental Assistants and Therapists Stock Total
- Dental Prosthetic Technicians Stock Total
- Pharmacists Stock Total
- Pharmaceutical Technicians & Ass. Stock Total
- Paramedical Practitioners Stock Total
- Medical Laboratory scientists Stock Total
- Imaging Technicians Stock Total
- Medical Laboratory Technicians Stock Total
- Env and Occup Health Professionals Stock Total
- Env and Occup Health Inspectors Stock Total
- Traditional Medicine Professionals Stock Total
- Traditional Assoc Professionals Stock Total
- Community Health Workers Stock Total
- Personal workers in health n.e.c Stock Total
- Health Care Assistants Stock Total
- Home-based Personal Care Workers Stock Total
- Personal care workers Stock Total
- Physiotherapists Stock Total
- Physiotherapy Technicians Stock Total
- Dieticians Stock Total

Periods

Organisation units

Age group

Gender

MDG Countries

OUGS_NTD_Leish_Stock_AmBisome_FiartLevel

SDG Countries

Yes Partial No

Stock : data validation table

<<< Update Favorites Layout Options Download Embed

Data / Period	Global																			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		
Medical doctors not further defined Stock Total	1 236 328	576 224	506 502	380 979	1 359 262	1 347 928	544 400	544 540	613 209	590 028	1 629 290	1 592 154	1 334 000	1 893 211	1 353 945	1 333 844	1 460 831	962 238		
General Medical Practitioners Stock Total											255	200 860		726	1 044	783	21 334	15 218	155 380	
Specialist Medical Practitioners Stock Total											114	54 273		280	293	309	13 339	15 150	297 542	
Gen Paediatricians Practitioners Stock Total																			840	
Obstetricians and Gynaecologists Stock Total																			527	
Psychiatrists Practitioners Stock Total																			62	
Medical Specialists Practitioners Stock Total																				
Surgical Specialists Practitioners Stock Total																			295	
Other Specialists Practitioners Stock Total																				
Nurses not further defined Stock Total	3 472 675	953 342	1 059 023	731 601	1 052 063	4 002 883	1 092 871	1 831 369	1 650 204	474 946	6 119 174	731 844	815 364	2 500 625	3 631 016	3 528 616	926 852	1 542 950		
Nursing Professionals Stock Total										279 346	284 690	287 344	291 008	292 883	296 029	293 205	296 731	306 753	636 248	
Nursing Associate Professionals Stock Total										81 099	85 277	90 306	94 646	99 935	106 447	107 923	113 367	116 491	1 029 920	
Midwives not further defined Stock Total	1 254	5 509	3 351	2 504	6 297	1 523	2 265	1 636	2 290	13 096				9 402	11 818	311	308	803	867	228
Midwifery Professionals Stock Total																11 626				
Midwifery Associate Professionals Stock Total																30 324				5 771
Dentists Stock Total	399 549	266 503	238 264	219 438	279 275	440 777	287 239	290 818	309 600	296 709	474 515	35 321	55 824	53 206	54 285	288 934	59 854	286 850		
Dental Assistants and Therapists Stock Total	329 856	16 295	16 884		17 553	454 593	19 385	6 650	22 591	6	523 870	40	113	124	1 387	2 500	2 712	78 982		
Dental Prosthetic Technicians Stock Total	55 869	6	4	4						8	29			6	5 218	4 404	2	1		
Pharmacists Stock Total	301 058	117 404	28 243	1 080	48 119	361 522	131 800	141 779	135 697	33 872	400 154	6 275	33 235	33 538	34 416	372 390	39 685	146 428		
Pharmaceutical Technicians & Ass. Stock Total	10 506	2 077	1 023					15 877	1 133	72	77 685	90	3 855	3 034	3 155	1 080	586	29 615		
Paramedical Practitioners Stock Total	274 032	579	322			163 941				77	203 167			47	52	337	59			
Medical Laboratory scientists Stock Total	105 255	20 051	298	31	19 955	509 956	351	29	2 956	1 164	552 276			2 907	624					
Imaging Technicians Stock Total	177 411	15 160	14 787	7	15 693	331 919	16 627	7 680	17 913	18 136	443 561	689	3 062	2 717	3 118	1 988	2 151	64 316		
Medical Laboratory Technicians Stock Total	521 337	17 999	18 272	19 105	19 402	20 790	20 530	34 203	20 745	20 803	71 482	2 632	6 549	6 395	7 258	4 281	3 599	43 744		
Env and Occup Health Professionals Stock Total	168 574	1 495	1 279	15	1 219	496	1 448	3 440	1 700	75	128 411			69	47	4 140	739	1 377	11 218	
Env and Occup Health Inspectors Stock Total						685					20 320			1 808	1 523	1 592	5 744	2 302	168 375	
Traditional Medicine Professionals Stock Total		1 006					411	1 660			6 718						310	137	3 839	
Traditional Assoc Professionals Stock Total											13 126	1 930				1 488	496	7 912		
Community Health Workers Stock Total	90	93	45	45					49 899	50 033	385 676	48 165	52 038	52 401	54 780	59 028	72 194	496 418		
Personal workers in health n.e.c Stock Total																			728 326	
Health Care Assistants Stock Total																			81 925	
Home-based Personal Care Workers Stock Total																			574 604	
Personal care workers Stock Total																			71 797	
Physiotherapists Stock Total	156 366	26 414	15 009	1	15 607	273 820	16 264	22 855	17 596	17 493	422 216	210 482	220 178	228 005	237 119	253 202	262 021	193 861		
Physiotherapy Technicians Stock Total	76 307	1 103	3 337	2 126	15 340	213 974	2 667	7 010	3 741	3 057	447 922	43				2 491	2 080	39 479		
Dieticians Stock Total	101 390	6 975	7 292		7 783			8 422	1 094	6 592		1 219	16	865	780	844				

Data entry through the system interface



WHO Integrated data platform

Data Entry ?

Organisation Unit Bahrain

Data Set [Select data set]

Period

- NHWA Maturity assessment
- NHWA Module 1
- NHWA Module 2
- NHWA Module 3
- NHWA Module 4
- NHWA Module 5
- NHWA Module 6
- NHWA Module 7
- NHWA Module 8-10
- Population UN

A red arrow points to the 'Data Set' dropdown menu.

To enter data: choose your **country** (default organisation unit selection), **NHWA module** (Data Set) and **year**

In each module, indicators are ordered in tabular format along NHWA dimensions.

Data entry – source and comments

Working Details | Demographic | Place of Birth and training | Country of training

Other indicators in Module 1 | Other Resources

SECTION 1: HWF WORKING DETAILS

SN	Occupation	Total	Active	
			Practising	Professional
1	Medical Doctors	100		
1.1	General Medical Practitioners	80		
1.2	Specialist Medical Practitioners	20		
1.2.1	General paediatricians	5		
1.2.2	Obstetricians and Gynaecologists	4		
1.2.3	Psychiatrists Practitioners	3		

Data element history

Audit trail

On	Modified by	Value	Modification
2019-01-14 17:46	teena.kunjumen	209367	Update
2018-12-21 16:58	teena.kunjumen	209367	Delete

Source Type

Select an option

- Ministry of Health
- National HRH Observatory
- Academia Inter. Organisation
- Ministry of Labour
- Professional association
- Multi Agency organisations
- National Statistical Office
- Regulatory bodies WHO
- Other multi Agency databases
- Ministry of Internal Affairs

Select an option

WHO Integrated data platform

defined Stock Total default

Comment ☆

Includes Medical Doctors .

Min-max limits

Min limit

Max limit

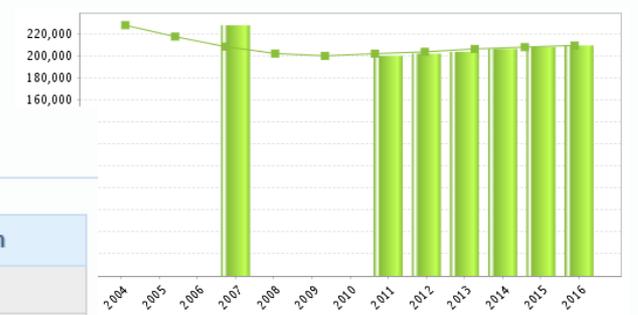
Average 208031.3

Save Remove

Stored by Teena Kunjumen

Last updated 2019-01-14

Data element history Audit trail



Year	Value
2004	215,000
2005	210,000
2006	205,000
2007	200,000
2008	195,000
2009	190,000
2010	185,000
2011	190,000
2012	195,000
2013	200,000
2014	205,000
2015	208,000
2016	210,000

Data entry - completion

41	Engineering and maintenance staff	99	<input type="text"/>
42	Other non-medical professional staff	99	<input type="text"/>
43	Other non-medical support staff	99	<input type="text"/>

If you have data on occupations and their source title, that are not listed

|

Excel data importer



Template Module 1 Template ▼

OrgUnit Scheme UID ▼

UPLOAD

DOWNLOAD

Help Tips:

- Single or Multiple xlsx data files can be uploaded using upload button



NATIONAL HEALTH WORKFORCE ACCOUNTS DATA
Active Health Workforce Demographic Details

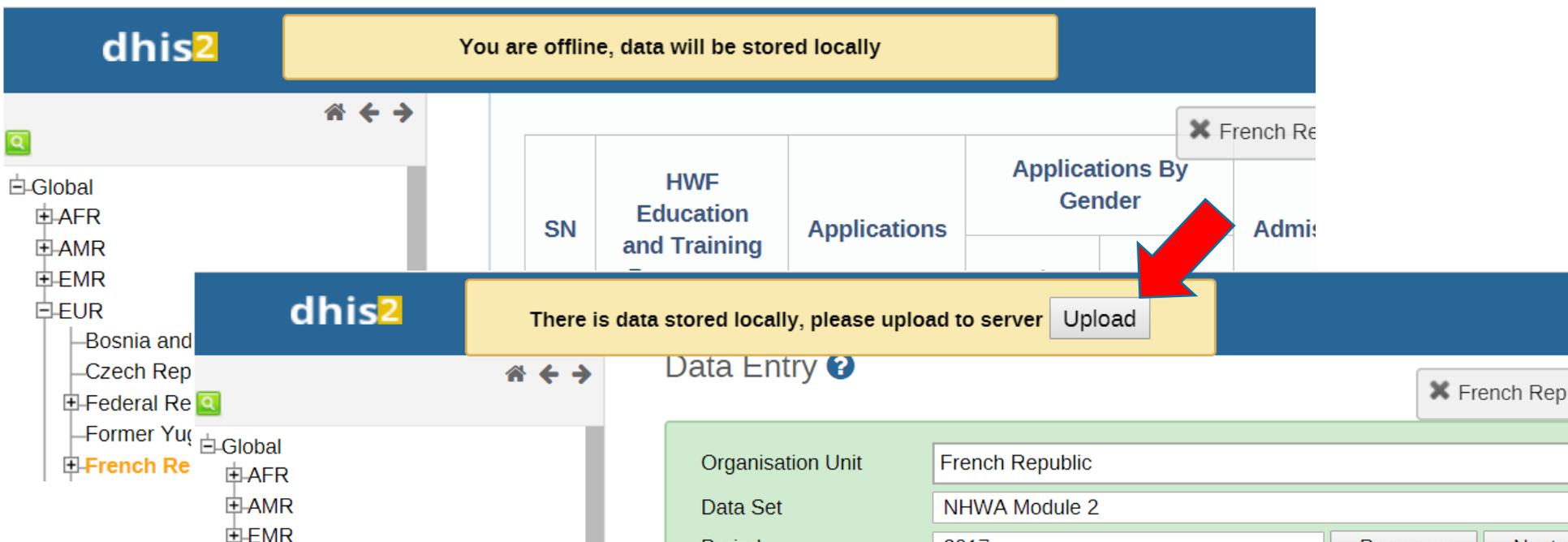
COUNTRY: REGION: PERIOD:

SN	Occupation	Total	Activity Level			Gender		Age Group						Place of Training			Place of Birth		
			Practising	Professionally Active	Licensed to practice	Male	Female	<25 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	> 65 yrs	Domestically Trained	Foreign Trained	Unknown place of training	National Born	Foreign Born	
1	Medical Doctors																		
1.1	General Medical Practitioners																		
1.2	Specialist Medical Practitioners																		
1.2.1	General Paediatricians Practitioners																		
1.2.2	Obstetricians and Gynaecologists Practitioners																		
1.2.3	Psychiatrists Practitioners																		
1.2.4	Medical group of Specialists Practitioners																		
1.2.5	Surgical group of Specialists Practitioners																		
1.2.6	Other Specialists Practitioners																		
2	Nursing Personnel																		
2.1	Nursing Professionals																		
2.2	Nursing Associate Professionals																		
3	Midwifery personnel																		
3.1	Midwifery Professionals																		
3.2	Midwifery Associate Professionals																		
4	Dentists																		
5	Dental Assistants and Therapists																		

Demographic | OtherDetails | ForeignTrained | Sourcetype

What if I am temporarily disconnected from internet?

- A message can sometimes indicate change of status from online to offline



The screenshot displays the dhis2 web interface. At the top, a yellow notification bar states "You are offline, data will be stored locally". Below this, a navigation menu on the left shows a tree structure with "French Re" highlighted. The main content area features a table with columns for "SN", "HWF Education and Training", "Applications", and "Applications By Gender". A red arrow points to a yellow notification bar at the bottom that reads "There is data stored locally, please upload to server" with an "Upload" button. The "Data Entry" form below shows "Organisation Unit" as "French Republic" and "Data Set" as "NHWA Module 2".

Why entered data do not display in graph or tables?

- You just entered a data in the form and you do not see it in the graphs, where is it?
- The data is properly saved, however they would be ready for analysis after analytics have run (twice a day).

Tutorial video and user guide

NHWA maturity assessment tutorial: <https://vimeo.com/265561781/f446326134>

Data entry tutorial: <https://vimeo.com/265561404/0e6d7301ba>



NHWA User guide

- Guides users to navigate through the system
- Detailed steps for data entry and data visualizations
- Accessible from the NHWA data platform



Where to find the user guide?



NATIONAL HEALTH WORKFORCE ACCOUNTS ONLINE DATA PLATFORM



Welcome Mathieu BONIOL

User Guide

Logout

NHWA maturity assessment



NHWA maturity assessment enables countries to assess their national information system and its capacity to address the NHWA indicators.

Validate existing baseline data



The validation exercise enables countries to view existing data and undertake necessary action of data correction/update as required.

NHWA data entry

Data entry into the system can be done (i) directly through the system interface or (ii) as batch upload through excel sheets

Exercises – part I

1.1 – Connection* <https://extranet.who.int/dhis2-demo/>

1.2 – Assess availability of NHWA indicators in your country
(**maturity assessment**)

1.3 – **Validation** : Display and assess the data already available
in the platform

1.4 – **Data entry** : enter data [random number] (stock for
doctors, nursing, pharmacists,... distribution by age, gender,...)

1.5 – Add **comments and sources**

*

!!! We are working on a Training server, so feel free to test it as much as you want.
!!! Data on Training server are deleted every saturday.

Thank you



World Health
Organization



WHO

20, Avenue Appia
1211 Geneva

Switzerland

Contact us:
hrhstatistics@who.int

<https://www.who.int/hrh/statistics/nhwa/en/>