

# Health Employment and Economic Growth

*An Evidence Base*

*Edited by*

*James Buchan*

*Ibadat S. Dhillon*

*James Campbell*



**World Health  
Organization**



# Health Employment and Economic Growth

*An Evidence Base*

*Edited by*

*James Buchan*

*Ibadat S. Dhillon*

*James Campbell*



Health Employment and Economic Growth: An Evidence Base  
ISBN 978-92-4-151240-4

© World Health Organization 2017

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition".

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization.

**Suggested citation.** Buchan J, Dhillon IS, Campbell J, editors. Health Employment and Economic Growth: An Evidence Base. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO.

**Cataloguing-in-Publication (CIP) data.** CIP data are available at <http://apps.who.int/iris>.

**Sales, rights and licensing.** To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

**Cover Photo** © 2009 Center for Communication Programs, Courtesy of Photoshare

**Third-party materials.** If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

**General disclaimers.** The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

The named authors alone are responsible for the views expressed in this publication.

Printed in USA

# Contents

List of Tables, Boxes and Figures . . . . .	v
List of Contributors . . . . .	xi
Introduction to Health Employment and Economic Growth: An Evidence Base, by <i>James Buchan, Ibadat S. Dhillon, James Campbell</i> . . . .	xv

## **PART I: Health Workforce Dynamics**

Chapter 1	<b>Health workforce needs, demand and shortages to 2030:</b> an overview of forecasted trends in the global health labour market, <i>by Giorgio Cometto, Richard Scheffler, Tim Bruckner, Jenny Liu, Akiko Maeda, Gail Tomblin-Murphy, David Hunter, James Campbell.</i> . . . . .	3
Chapter 2	<b>Women’s contributions to sustainable development through work in health:</b> using a gender lens to advance a transformative 2030 agenda, <i>by Veronica Magar, Megan Gerecke, Ibadat S. Dhillon, James Campbell.</i> . . . . .	27
Chapter 3	<b>Achieving sustainable and appropriately trained health and social care workers for ageing populations,</b> <i>by Edward Salsberg, Leo Quigley</i> . . . . .	51
Chapter 4	<b>International migration of doctors and nurses to OECD countries:</b> recent trends and policy implications, <i>by Jean-Christophe Dumont, Gaétan Lafortune</i> . . . . .	81
Chapter 5	<b>Human resources for health care in the Nordic welfare economies:</b> successful today, but sustainable tomorrow?, <i>by Tyra Merker, Ivar Sønbo Kristiansen, Erik Magnus Sæther.</i> . . . . .	119
Chapter 6	<b>Global estimates of the size of the health workforce contributing to the health economy:</b> the potential for creating decent work in achieving universal health coverage, <i>by Xenia Scheil-Adlung, Andrea Nove</i> . . . . .	139

## PART II: Economic Value and Investment

- Chapter 7 **Pathways:** the health system, health employment, and economic growth,  
*by Jeremy A. Lauer, Agnès Soucat, Edson Araújo, David Weakliam . . . . .* 173
- Chapter 8 **Health and inclusive growth:** changing the dialogue,  
*by Chris James. . . . .* 195
- Chapter 9 **Paying for needed health workers for the SDGs:**  
an analysis of fiscal and financial space,  
*by Jeremy A. Lauer, Agnès Soucat, Edson Araújo, Melanie Y. Bertram, Tessa Edejer, Callum Brindley, Elina Dale, Amanda Tan . . . . .* 213
- Chapter 10 **Evidence on the effectiveness and cost-effectiveness of nursing and midwifery interventions:** a rapid review,  
*by Marc Suhrcke, Yevgeniy Goryakin, Andrew Mirelman . . . . .* 241

## PART III: Education and Production

- Chapter 11 **The economics of health professional education and careers:**  
a health labour market perspective,  
*by Barbara McPake, Edson Araújo Correia, Gillian Lê . . . . .* 261
- Chapter 12 **Transforming the health workforce:** unleashing the potential of technical and vocational education and training,  
*by Julian Fisher, Keith Holmes, Borhene Chakroun . . . . .* 281
- Chapter 13 **Enabling universal coverage and empowering communities through socially accountable health workforce education,**  
*by Björg Pálsdóttir, Nadia Cobb, Julian Fisher, John H.V. Gilbert, Lyn Middleton, Carole Reeve, Mariela Licha Salomon, Roger Strasser . . . . .* 307

## PART IV: Addressing Inefficiencies

- Chapter 14 **Equipping health workers with the right skills, in the right mix and in the right numbers, in OECD countries,**  
*by Liliane Moreira, Gaétan Lafortune. . . . .* 341
- Chapter 15 **The role of decent work in the health sector,**  
*by Christiane Wiskow . . . . .* 363
- Chapter 16 **A hidden human resources for health challenge:**  
personnel posting and transfer,  
*by Marta Schaaf, Kabir Sheikh, Lynn Freedman, Arielle Juberg . . . . .* 387
- Chapter 17 **Geographical variations in outpatient physician supply in Germany:** encouraging a more even distribution of outpatient health care services in rural and urban areas,  
*by Stefan Scholz, Wolfgang Greiner . . . . .* 407

# LIST OF TABLES, BOXES AND FIGURES

## TABLES

### CHAPTER 1

Table 1	Supply of health workers (millions), 2013 (WHO Global Health Observatory) and 2030 (forecast) . . . . .	14
Table 2	Estimates of health worker needs-based shortages (millions) in countries below the SDG index threshold by region, 2013 and 2030 . . . . .	15
Table 3	Estimates of labour market demand (millions) for health workers in 2013 and 2030 (165 countries). . . . .	17

### CHAPTER 4

Table 1	Practising doctors by place of birth in 30 OECD countries, 2000/2001 and 2010/2011 . . . . .	86
Table 2	Practising nurses by place of birth in 30 OECD countries, 2000/2001 and 2010/2011 . . . . .	88
Table 3	Foreign-trained doctors working in 26 OECD countries, 2000, 2006 and 2012–2014 . . . . .	92
Table 4	Foreign-trained nurses working in 25 OECD countries, 2000, 2006 and 2012–2014 . . . . .	94
Table 5	Trends in the expatriation rates of doctors and nurses to OECD countries, 2000/2001 and 2010/2011 . . . . .	100
Table 6	Estimated critical shortages of doctors, nurses and midwives, by WHO region, 2000/2001 and 2010/2011 . . . . .	103

### CHAPTER 5

Table 1	Projections for health care personnel demand in Norway in 2060 (in thousand FTEs) . . . . .	131
---------	---	-----

### CHAPTER 6

Table 1	Conceptual framework . . . . .	159
Table 2	Median ratio of NHO workers to HO workers in 52 ILOSTAT countries . . . . .	164
Table 3	WHO database categories and their ISCO code equivalents. . . . .	165
Table 4	Median number of workers per 1000 population in low-vulnerability countries . . . . .	169

### CHAPTER 9

Table 1	Wage indexes for health workers by cadre . . . . .	222
---------	--	-----

### CHAPTER 11

Table 1	Search terms. . . . .	279
Table 2	MeSH terms . . . . .	280

## CHAPTER 17

Table 1	Dependent and independent variables at district level ( $n = 412$ ) . . . . .	425
Table 2	Results of the three zero-truncated, negative binomial GLMs for GP density, specialist density and ratio of GPs–specialists. . . . .	427

## FIGURES

### CHAPTER 1

Figure 1	SDG composite index: percentage of 12 SDG tracer indicators achieved as a function of aggregate density of doctors, nurses and midwives per 1000 population. . . . .	12
----------	--	----

### CHAPTER 2

Figure 1	Women’s share of employment in the health and social sector versus total employment (%), by WHO region, average values for the period 2005–2014 . . . . .	32
Figure 2	Unadjusted gender wage gaps in mean monthly earnings among health professionals and health associate professionals, 2005–2014 (latest year for which data are available) . . . . .	36
Figure 3	Women’s share of senior positions over their share of employment, by sector and by country, 2007 . . . . .	38

### CHAPTER 3

Figure 1	Percentage of population aged 60 years and over: 2015 and 2050 . . . . .	55
Figure 2	Young children and older people as a percentage of global population, 1950 to 2050. . . . .	56
Figure 3	People-centred integrated health services delivery: the example of Alzheimer’s . . . . .	71

### CHAPTER 4

Figure 1	Number of foreign-born doctors and nurses in 30 OECD countries by main region of origin, 2000/2001 and 2010/2011 . . . . .	96
Figure 2	Number of foreign-born doctors and nurses in OECD countries by 25 main countries of origin, 2000/2001 and 2010/2011 . . . . .	98

预览已结束，完整报告链接和

<https://www.yunbaogao.cn/report/index/report?>