



# HEALTH WORKFORCE AND LABOUR MARKET DYNAMICS IN OECD HIGH-INCOME COUNTRIES: A SYNTHESIS OF RECENT ANALYSES AND SIMULATIONS OF FUTURE SUPPLY AND REQUIREMENTS

Human Resources for Health Observer Series No 20





# **HEALTH WORKFORCE AND LABOUR MARKET DYNAMICS IN OECD HIGH-INCOME COUNTRIES: A SYNTHESIS OF RECENT ANALYSES AND SIMULATIONS OF FUTURE SUPPLY AND REQUIREMENTS**

Human Resources for Health Observer Series No 20

Health workforce and labor market dynamics in OECD high-income countries: a synthesis of recent analyses and simulations of future supply and requirements

(Human Resources for Health Observer, 20)

ISBN 978-92-4-151228-2

© 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.** Health workforce and labor market dynamics in OECD high-income countries: a synthesis of recent analyses and simulations of future supply and requirements. Geneva: World Health Organization; 2017 (Human Resources for Health Observer, 20). 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>.

**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.

Design: Blossom Communication.

Layout: Zando Escultura.

Printed by the WHO Document Production Services, Geneva, Switzerland.

# TABLE OF CONTENTS

<b>Major contributors and acknowledgements</b>	<b>3</b>
<b>Abbreviations</b>	<b>4</b>
<b>Executive summary</b>	<b>5</b>
<b>1. Introduction</b>	<b>9</b>
1.1 Objectives	9
<b>2. Methods</b>	<b>11</b>
2.1 Synthesis of evidence	11
2.2 Development of simulations of future HRH supply and requirements	12
<b>3. Results – synthesis of available evidence</b>	<b>14</b>
3.1 Jurisdictional focus	14
3.2 Professions included	14
3.3 Date of publication	15
3.4 Analytical timeframes	15
3.5 Types of models used	15
3.6 Assumptions described	16
3.7 Trends and issues identified	16
Ageing populations	16
Chronic disease and comorbidities	16
Ageing workforces	17
Migration	17
Inconsistent use of terms	17
Distribution of resources	17
Interprofessional education and practice	17
Changing care delivery models	18
Changing practice patterns and scopes of practice	18
Evolving regulatory structures	18
Stakeholder engagement	18
Incentives	18

Technological changes.....	18
Balancing the private and public sectors.....	19
Data quality.....	19
Iterative planning.....	19
3.8 A methodology for projecting HRH requirements in high-income OECD countries.....	20
<b>4. Results – development of simulations on future HRH supply and requirements.....</b>	<b>25</b>
4.1 HRH supply vs. requirements.....	26
4.2 Impacts of changes in HRH productivity.....	27
4.3 Impacts of changes in levels of service.....	27
4.4 Impacts of changes in health status.....	28
4.5 Impacts of demographic changes.....	29
4.6 Impacts of changes in HRH activity.....	29
4.7 Impacts of changes in HRH training.....	30
4.8 Impacts of changes in HRH participation.....	30
4.9 Impacts of changes in HRH retention.....	31
4.10 Impacts of changes in multiple parameters.....	32
<b>5. Discussion.....</b>	<b>33</b>
5.1 Synthesis of evidence.....	33
5.2 Simulations of future HRH supply and requirements.....	33
<b>6. Conclusions.....</b>	<b>37</b>
<b>7. References .....</b>	<b>38</b>
<b>Annex 1: List of websites consulted.....</b>	<b>45</b>
<b>Annex 2: Data extraction tool for peer and non-peer reviewed literature.....</b>	<b>48</b>
<b>Annex 3: Stated objectives of included countries’ health-care systems.....</b>	<b>49</b>

# Major contributors and acknowledgements

The development of this report was coordinated by Giorgio Cometto (Global Health Workforce Alliance, WHO), under the oversight of James Campbell (Director, Health Workforce, and Executive Director, Global Health Workforce Alliance, WHO).

The analyses and the development of the contents of the report were led by Gail Tomblin Murphy (Director), Stephen Birch, Adrian MacKenzie, Janet Rigby, Stephanie Bradish and Annette Elliott Rose of the WHO/PAHO Collaborating Centre on Health Workforce Planning and Research, Dalhousie University, Halifax, NS, Canada.

The authors would like to express their appreciation for the input from:

James Buchan, Queen Margaret University, UK; University of Technology Sydney, Australia

Gaetan Lafortune, OECD

Tony Scott, University of Melbourne, Australia

Martine Morin, University of Sherbrooke, Canada

Guilliano Russo, Universidade Nova de Lisboa, Portugal

Mario Dal Poz, State University of Rio de Janeiro, Brazil

Marjolein Dieleman, Royal Tropical Institute, the Netherlands

Jackie Cumming, Victoria University at Wellington, New Zealand

Gilles Dussault, Universidade Nova de Lisboa, Portugal

Paulo Ferrinho, Universidade Nova de Lisboa, Portugal

Edward Salsberg, National Health Policy Forum, United States of America

Michel van Hoegaerden, European Union Joint Action on Health Workforce Planning and Forecasting – Belgium/European Union.

Suggested citation. Health workforce and labor market dynamics in OECD high-income countries: a synthesis of recent analyses and simulations of future supply and requirements. Geneva: World Health Organization; 2017 (Human Resources for Health Observer, 20). Licence: CC BY-NC-SA 3.0 IGO.

This analysis was also used as a basis for two separate peer-reviewed publications:

Tomblin Murphy G, Birch S, MacKenzie A, Bradish S, Elliott Rose A. A synthesis of recent analyses of human resources for health requirements and labour market dynamics in high-income OECD countries. Human Resources for Health. 2016;14(1):59.

Tomblin Murphy G, Birch S, MacKenzie A, Rigby J. Simulating future supply of and requirements for human resources for health in high-income OECD countries. Human Resources for Health. 2016;14(1):77.

# Abbreviations

AG	Advisory Group
DALY	disability-adjusted life years
FTE	full-time equivalent
GHWA	Global Health Workforce Alliance
HRH	human resources for health
OECD	Organisation for Economic Co-operation and Development
PAHO	Pan American Health Organization

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_26124](https://www.yunbaogao.cn/report/index/report?reportId=5_26124)

