Towards closing the health human resource gap in radiotherapy

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Problem to address

- Number of new cancer cases will increase by 54% by 2030
- Huge gap in the access to radiotherapy globally
- Need for >200,000 new radiotherapy health professionals by 2035 to meet the demand
- Traditional models of education will not address the issue

Lancet Oncol, Sept 2015
Program of Action for Cancer Therapy (PACT) - http://cancer.iaea.org/agart.asp
"a slow-burning crisis is emerging in the mismatch of professional competencies to patient and population priorities because of fragmentary, outdated, and static curricula producing ill-equipped graduates from underfinanced institutions”

Frenk, The Lancet, 2010
Emerging Technologies

- Computerized grading
- Electronic textbooks
- Simulation technology
- Gamification
- Flipped classrooms
- Active learning classrooms
- Massive Open Online Courses - MOOCs
- Collaborative distance learning environments
- Active Learning Forum™ platform
- Learning management systems
Task Shifting

- Task shifting involves appropriate redistribution of tasks among health workforce teams
  - Promote more efficient use of the available health human resources
- Technology drives task shifting
  - IGRT implementation
  - Regional differences are profound
- Emerging Disciplines

WHO, Task Shifting Global Recommendations and Guidelines, 2008
Blended Learning & Sustainability

- Blended learning approaches:
  - Maximize learning opportunities & equity
  - Promote decentralization
  - Sharing of educational resources as global public goods
  - Standardization with local customization
  - Promote loco-regional retention
  - Foster team-oriented, collaborative environments

STANLEY AHALT
Emerging Training Priorities

- Healthcare economics
- Health information technology
- Health systems science
- Health policy
- Quality & outcomes
- Innovation
- Change management
- Leadership
- Humanistic Qualities
- Social and Emotional Learning

Majmudar et al. Clinician Innovator, J Am Heart Ass; 2015
Turner et al. Defining a Leader Role Curriculum for Radiation Oncology; 2017
Adleman et al. Development of a Quality and Safety Competency Curriculum for Radiation Oncology; 2017
Lancet Commission Recommendations

**Reforms**

**Instructional**
- Competency-driven
- Local responsiveness with global connectivity
- Inter- & trans-professional education
- IT-empowered
- Educational resources
- New professionalism

**Institutional**
- Joint planning
- Academic systems
- Global networks
- Culture of critical inquiry
- Integrated with health systems

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**Enabling Actions**

- Mobilize leadership
- Enhance investments
- Align accreditation
- Strengthen global learning

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**Goal**
Transformative and interdependent professional education for equity in health

Adapted from J.Frenk
UN Expert Panel on HHR

Key Messages

Message 1: Transforming and expanding the health and public health workforce, including reform of the skills and mix of that workforce, has the potential to accelerate inclusive economic growth and progress towards health equity.

Message 2: Achieving person- and community-centred universal health coverage by increasing employment, through the equitable distribution of decent jobs for health and non-health workers, will be a crucial foundation for inclusive economic growth and sustainable development.

Message 3: Reforming aid and accountability for health system strengthening with a focus on skilled health workers can initiate a new era of international cooperation and action for economic and human security.
Ten Recommendations
Pathways linking health employment to economic growth

1. Health
   - Improved labour supply and productivity
   - Services
   - Goods and capital assets
   - Reduced inequality
   - Political stability
   - Technological change and risk management
   - Commerce, trade, and the movement of populations

2. Economic output

3. Social protection

4. Social cohesion

5. Innovation and diversification

6. Health security

Economic growth
#WORKFORCE2030

and the Sustainable Development Goals

HEALTH WORKERS - A PROVEN RETURN ON INVESTMENT

GOAL 1

Healthy societies are engines for economic growth. Health workers are at the core of health systems ensuring healthy lives and wellbeing.

GOAL 2

Substantive and strategic investments in the global health workforce are essential to provide essential health services including those related to nutrition.

GOAL 3

The health workforce is central in translating the vision of universal health coverage into reality. Goal 3 of the Wits 30+20 Global Health Dividend Framework for Health: #Workforce2030, which provides guidance and policy options for countries looking to improve the health of their populations.

GOAL 4

Girls' education is a strategic development investment. Inclusive and equitable education can lead to greater economic growth, better health outcomes, and improved global security. Equal opportunities for affordable and quality technical, vocational and tertiary education will improve the pool of high-school graduates and qualified health workers.

GOAL 5

Women are a large part of the health workforce and obtaining qualified jobs in the formal sector of the economy can be a driver of gender empowerment, however, opportunities for women to engage in high level professions are constrained. Health workers' employment conditions need to be gender-sensitive allowing equal opportunities for career development. Violence, harassment and discrimination during training, recruitment, employment and in the workplace must be eliminated.

GOAL 8

The health care sector is one of the largest employment sectors in most countries. It is a source for full and productive employment and decent work for all. Women are a large part of the health workforce and obtaining qualified jobs in the formal sector of the economy can be a driver of gender empowerment, however, opportunities for women to engage in high level professions are constrained. Health workers' employment conditions need to be gender-sensitive allowing equal opportunities for career development. Violence, harassment and discrimination during training, recruitment, employment and in the workplace must be eliminated.

GOAL 10

Migration and mobility of health workers can result in inequitable access to health care, within and among countries. The WHO Code of Practice on International Recruitment of Health Personnel is a framework for guiding national dialogue among sectors and stakeholders to inform solutions to the challenges of health system sustainability and workforce mobility.

GOAL 11

The majority of the world's population lives in urban areas. Over 3.5 billion in 2016, of which 2.7 billion live in slum conditions. Equitable access to health care will improve basic services for all.

GOAL 17

Multi-stakeholder partnerships - The design and implementation of effective health workforce policies rests on collaboration across different sectors (health, education, finance, labour) and stakeholders (public and private employment, professional associations, trade unions). Strengthening such collaborative platforms can have positive cascade effects on national and global partnerships for sustainable development.

Data, monitoring and accountability - The Global Strategy on Human Resources for Health: Workforce 2030 calls for investments in strengthening country analytical capacities of human resources for health and health system data.
Summary

• There is a huge unmet need for skilled health human resources for radiotherapy; huge HHR gap
• There are numerous opportunities to close the gap by revolutionizing the health professional education
• Modern technologies, IT, digital future, and automation extend new opportunities to redefine RT professions
  – methods of learning, practice modes
  – integration of research, education, and practice
  – globalization of skills
• Health system planners must address HHR issues
  – Integrate education into population based cancer plans
• Health employment for economic growth
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