46th Advisory Committee on Health Research of the Pan American Health Organization (ACHR)

28-30
NOVEMBER 2016
PAHO/WHO HEADQUARTERS
WASHINGTON, DC

Tuesday, 29 November 2016

PAHO/WHO HEADQUARTERS
WASHINGTON, DC
Objective 3 – Human Resources

“To improve competencies of and support for human resources involved in research”

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Six interrelated objectives have been established for PAHO’s policy on research for health:

1) to promote the generation of relevant, ethical, and quality research,
2) to strengthen research governance and promote the definition of research agendas,
3) to improve competencies of and support for human resources involved in research,
4) to seek efficiencies and enhanced impact and appropriation of research through effective and strategic alliances, collaboration, and the building of public trust and engagement in research,
5) to foster best practices and enhanced standards for research, and
6) to promote the dissemination and utilization of research findings.
Research for Health Policy

Objective 3:

Improve competencies of and support for human resources involved in research
28. PAHO considers researchers to be an irreplaceable asset for sustainable development.

All countries need to invest in education, training, recruitment, and retention in both basic and applied sciences, while seeking a balanced gender and ethnic representation and participation in research.

In addition, health professionals, policy makers (in health as well as in other sectors that affect health), the media, and the public need different sets of skills to seek, understand, and interpret research results that can inform their decisions and actions.
29. To achieve this objective, PASB will:

- (a) promote the mainstreaming of human resources working in research for health and the integration of global and regional policies, strategies, and plans of action for human resources in health;

- (b) strengthen the capability of its staff to use scientific knowledge and systematic reviews of the literature when they develop technical cooperation and address uncertainties in the face of insufficient research evidence;
29. To achieve this objective, PASB will:

(c) work with partners, including but not limited to, health, science and technology, education, development, and legal sectors, and research institutions, to enrich the health sciences curricula; improve competencies in research, monitoring, and evaluation; and engage in capacity building activities to increase health professionals’ capability to understand and use research results and to engage other sectors that influence health care, health systems, and health governance;

(d) Assist Member States to evaluate their current and future human resource needs to conduct research for health, to help them develop national policies and long-term plans to educate and retain the necessary number of health researchers with the required skills and capacities, and find constructive approaches that engage expatriate researchers;
29. To achieve this objective, PASB will:

(e) help Member States address, through appropriate research and development of strategic incentives, the factors that determine migration and alienation of researchers to promote the development, retention and thriving of productive research groups;

(f) cooperate with Member States to promote gender equity in the composition of research groups and research management structures, and to develop ways to support increasing the number of researchers from under-represented ethnic groups; and
29. To achieve this objective, PASB will:

(g) support the development of the structures, methods and directives that promote and maintain systematic evidence-informed approaches in the evaluation and selection of health technologies.
“Research for health”

• The term reflects:
  – the purpose of research and
  – the fact that improving health outcomes requires the involvement of many sectors and disciplines, including those that participate and are expected to benefit from research.
The Sustainable Development Goals
Objective 3 – Human Resources

Human Resources to meet SDGs

The strategy addresses

• Training
• Availability
• Accessibility

of the health workforce
Health workforce doing/understanding research

Health professionals should be required to have working knowledge and silks on:

• Research methods, design, bias identification and minimization
• Critical assessment of research relevant to clinical practice
• Test for these skills in licensing examinations
• Expectations for continued professional development, reflective practice, and validation of research skills

• Valuable for research clinicians/nurses but also as part of professional skills

• Source: John P A Ioannidis et al 2014; used under Fair Use Copyright Policy
Having capable and enough health workforce requires large investments, considerable operational research and strengthening of educational institutions and educators/trainers.

Is there a strategy on for Research Workforce?
Do we need another SDG?
Search for ‘research’ or ‘human resources’
Search for ‘research’ or ‘human resources’

- Although many of the MDG targets were not met, national research institution is providing third-party monitoring, focusing on verification of cash distribution.
- Research, through supervision based on quality standards, staff training, education as well as operational research for decision making processes; and (f) establishing systems for monitoring and applied research on supply service and demand, with specific actions intended to ensure service.
- Operational research, 85 TRANSITIONING FROM THE MDGs.
- Research provided by UNICEF, WHO, UNFPA and UNAIDS. With technical and funding.
- Health Research and Development, has been a part of the national health sector review.
- Conduct research and generate and synthesize evidence and data to design key interventions in Operational research on male involvement in FP, promotion of shared responsibility in child care.
- Communication research on community behaviors on MNCHN services, FP demand generation through Family Development.
- A research and impact evaluation component; and (iv) an investment component to provide.
- Research shows that HIV and NCDs have many things in common: both are.
- Agricultural Research, the Pacific Islands Farmer Organisations Network and the Pacific Organic and Ethical.
- A research and impact evaluation component; and (iv) an investment component to provide.
3. Empower local change agents

Advocates and facilitators of SDG implementation should seek to identify and equip local change agents with the know-how they need to leverage the SDGs.

6. Pursue “big picture” opportunities

The SDGs are “integrated and indivisible”
The success of one leads to the success of others.

A country’s ability to combat hunger... is directly linked to its infrastructure, land-tenure, healthcare and capacity to manage natural resources and mitigate disasters.

9. Build a big tent

Solutions to real-life problems generally lie outside the boundaries of individual ministries, tightly focused initiatives or disciplines.

Global Goals can be a powerful way to rally and convince diverse actors to work together to solve problems they care about.
What is needed in terms of Human Resources for Research for Health to advance and meet the SDGs?
Trends

• Global Health versus Public Health
• Global infectious disease emergencies / pandemics/ antimicrobial resistance
• Growing burden of non-communicable diseases
• Conflicts and displaced populations
• Increasing inequalities

Global health is public health

Linda P Fried, Margaret E Bentley, Pierre Buekens, Donald S Burke, Julio J Frenk, Michael J Klag, Harrison C Spencer
Published: 13 February 2010
Trends

- Climate change
- Transdisciplinarity
- Discovery, innovation, public–private partnerships
- Team work / collaborative initiatives
- One Health
- Better understanding of human and social capital
Trends

Brain circulation/exchange and brain drain

http://www.oecd.org/dev/poverty/migrationandthebraindrainphenomenon.htm
Trends

• International collective action
• Research transparency, accountability, equity
• Networks
• Open access
• Open science
• Big data
Trends

• Empowerment of patients, research users, etc., better information
• Citizen research
• Crowd-sourcing ideas – wisdom of the crowd
Skill sets

Beyond discipline-oriented education and methodological training, research competencies must now include:

- Inter-professional education
- Effective science communication
- Research governance
- Stewardship and administration
- Leadership
- Entrepreneurship
- Knowledge of national and global policies and strategies
- Experiential learning
### Competencies for Public Health, Global Health Practice and Research

#### Table 1. Competencies for Public Health, Global Health Practice and Research

<table>
<thead>
<tr>
<th>Core Competencies for Public Health Practice*</th>
<th>Our Proposed Complementary Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category 1: Public Health Sciences</strong></td>
<td><strong>Global Health Practice†</strong></td>
</tr>
<tr>
<td>1.2 Demonstrate knowledge about the history,</td>
<td>GH.1 Demonstrate knowledge of:</td>
</tr>
<tr>
<td>structure and interaction of public health</td>
<td>GH.1. historical and present north-south</td>
</tr>
<tr>
<td>and health care services at local,</td>
<td>power dynamics; social and political</td>
</tr>
<tr>
<td>provincial/ territorial, national and</td>
<td>contexts and determinants of health.</td>
</tr>
<tr>
<td>International levels.</td>
<td>GH.2. Linkages between local and global</td>
</tr>
<tr>
<td></td>
<td>health problems.</td>
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<td></td>
<td>GH.3. International organizations, their</td>
</tr>
<tr>
<td></td>
<td>interactions and their effects on local</td>
</tr>
<tr>
<td></td>
<td>actions for health.</td>
</tr>
<tr>
<td><strong>Category 2: Assessment and Analysis</strong></td>
<td><strong>Public Health Research†</strong></td>
</tr>
<tr>
<td>2.3 Collect, store, retrieve and use</td>
<td>R.1 Demonstrate knowledge of the ways</td>
</tr>
<tr>
<td>accurate and appropriate information on</td>
<td>research has been historically funded,</td>
</tr>
<tr>
<td>public health issues.</td>
<td>generated and used in different contexts</td>
</tr>
<tr>
<td>2.4 Analyze information to determine</td>
<td>and levels of the public health and the</td>
</tr>
<tr>
<td>appropriate implications, uses,</td>
<td>health care systems.</td>
</tr>
<tr>
<td>gaps and limitations.</td>
<td>R.2 Critically analyze, synthesize and</td>
</tr>
<tr>
<td></td>
<td>manage available knowledge.</td>
</tr>
<tr>
<td><strong>Category 3: Policy and Program Planning,</strong></td>
<td>R.3 Identify ‘actionable determinants’ or</td>
</tr>
<tr>
<td><strong>Implementation and Evaluation</strong></td>
<td>entry points for research to action.</td>
</tr>
<tr>
<td>3.3 Develop a plan to implement a course of</td>
<td>R.4 Engage community members in research</td>
</tr>
<tr>
<td>action taking into account relevant</td>
<td>planning within a framework of trust and</td>
</tr>
<tr>
<td>evidence, legislation, emergency planning</td>
<td>respect.</td>
</tr>
<tr>
<td>procedures, regulations and policies.</td>
<td>R.5 Demonstrate proficiency in the use</td>
</tr>
<tr>
<td>3.6 Evaluate an action, policy or program.</td>
<td>of evaluation research methods.</td>
</tr>
</tbody>
</table>

* Cole et al. 2011.
Competencies for Public Health, Global Health Practice and Research

Category 4: Partnerships, Collaboration and Advocacy
4.1 Identify and collaborate with partners in addressing public health issues.
4.2 Use skills such as team building, negotiation, conflict management and group facilitation to build partnerships.
4.4 Advocate for healthy public policies and services that promote and protect the health and well-being of communities.

GH.5 Foster self-determination, empowerment and community participation in GH contexts.
GH.6 Actively recognize the interaction between political and economic history, power, participation and engagement globally.
GH.7 Contribute to improving health equity at multiple levels, through systems changes.
R.6 Produce knowledge relevant to users through well-managed, ethically informed research.
R.7 Identify and collaborate with researchers from different disciplines and partners from different cultures.
R.8 Use research as an advocacy tool; recognizing the appropriateness of different strategies in particular situations.
R.9 Use knowledge exchange mechanisms in community action, program management and policy-making.

Category 5: Diversity and Inclusiveness
5.3 Apply culturally-relevant and appropriate approaches with people from diverse cultural, socio-economic and educational backgrounds, and persons of all ages, genders, health status, sexual orientation and abilities.

GH.8 Critically self-reflect upon one’s own social location and appropriately respond to others in their diverse locations.
GH.9 Communicate effectively across disciplines and cultures.
GH.10 Demonstrate commitment to global equity, social justice, and sustainable development.
CHR.1 Respect cultural diversity and values as they relate to global health research and interventions.

Cole et al 2011
Competencies for Public Health, Global Health Practice and Research

Category 6: Communication
6.3 Mobilize individuals and communities by using appropriate media, community resources and social marketing techniques.

Category 7: Leadership
7.4 Contribute to team and organizational learning in order to advance public health goals.
7.6 Demonstrate an ability to build community capacity by sharing knowledge, tools, expertise and experience.

GH.11 Create social spaces for dialogue between stakeholders across jurisdictions.
GH.12 Demonstrate willingness to be mentored across borders.
GH.13 Mentor others and develop long-term relationships of trust locally and globally.
GH.14 Educate oneself about global health issues on an ongoing basis.

GHR.2 Work in transnational teams with a broad understanding of health research.

* We have included competencies within the seven CCPHC categories that we felt were relevant to global health (www.phac-aspc.gc.ca/core_competencies).
† These additional and complementary competencies were developed with participants at a pre-conference workshop at the 2010 annual conference of the Canadian Public Health Association.

Cole et al. 2011
Include research users

• Increasingly, those “who are expected to benefit from research” are becoming involved in moving forward the health of their communities by engaging in research at the community level
Reduce waste in research

Researchers must make efforts in reducing waste in research; need to be better trained in

- Research design methods
- Research synthesis methods
- Transparency, data sharing, etc.
<table>
<thead>
<tr>
<th>Research decisions based on questions relevant to users of research?</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Low priority questions addressed</td>
</tr>
<tr>
<td>– Important outcomes not assessed</td>
</tr>
<tr>
<td>– More than 50% studies designed without reference to systematic reviews of existing evidence</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Appropriate research design, methods, and analysis?</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Adequate steps to reduce bias not taken in more than 50% of studies</td>
</tr>
<tr>
<td>– Inadequate statistical power</td>
</tr>
<tr>
<td>– Inadequate replication of initial findings</td>
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<tr>
<th>Efficient research regulation and management?</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Complicit with other sources of waste and inefficiency</td>
</tr>
<tr>
<td>– Disproportionate to the risks of research</td>
</tr>
<tr>
<td>– Regulatory and management processes are burdensome and inconsistent</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fully accessible research information?</th>
</tr>
</thead>
<tbody>
<tr>
<td>– More than 50% of studies never fully reported</td>
</tr>
<tr>
<td>– Biased under-reporting of studies with disappointing results</td>
</tr>
<tr>
<td>– Biased reporting of data within studies</td>
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<table>
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<tr>
<th>Unbiased and usable research reports?</th>
</tr>
</thead>
<tbody>
<tr>
<td>– More than 30% of trial interventions not sufficiently described</td>
</tr>
<tr>
<td>– More than 50% of planned study outcomes not reported</td>
</tr>
<tr>
<td>– Most new research not interpreted in the context of systematic assessment of other relevant evidence</td>
</tr>
</tbody>
</table>

**Figure:** Avoidable waste or inefficiency in biomedical research

**Source:** Ioannidis et al 2014; used under Fair Use Copyright Policy
Research that contribute nothing or very little to knowledge or to practice and policy

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Source: Chalmers et al 2014
Used under Fair Use Copyright Policy

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Figure 1: Classification of different categories of research

<table>
<thead>
<tr>
<th>Category</th>
<th>2004-05</th>
<th>2009-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure basic research</td>
<td>68.3%</td>
<td>59.4%</td>
</tr>
<tr>
<td>Pure applied research</td>
<td>21.2%</td>
<td>27.2%</td>
</tr>
<tr>
<td>Use-led basic research</td>
<td>10.7%</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

Proportions calculated with data from UK health research analysis 2009/2010. Pure basic research is concerned with understanding of biological, psychological, and socioeconomic processes and functioning (underpinning research), and etiology. Pure applied research is concerned with prevention, detection and diagnosis (but not the discovery and preclinical testing of markers and technologies), treatment assessment, disease management, and health services. Use-led basic research is concerned with development of detection, diagnosis, and treatment (including the discovery, development, and preclinical testing of biological markers, imaging technologies, and diagnostic and predictive tests).
Changing metrics in Academia (really)

In addition to scientific publishing and citation metrics, researchers’ impact in society can be measured in terms of

– knowledge development and diffusion (knowledge brokers)
– providing expertise
– overall contribution to social capital development

[Jacobson et al 2014]

https://christinescottcheng.files.wordpress.com/2014/02/ivory-tower-tg-version.png
Brain sharing
References