



EDITORIAL

Open Access

“Health supply chain personnel: an integral part of the health workforce.”

Giorgio Cometto^{1*}, Zaheer-Ud-Din Babar², Andrew Brown³, Lisa Hedman⁴, James Campbell¹

From The 2nd People that Deliver (2nd PtD) Global Conference on Human Resources in Supply Chain Management

Copenhagen, Denmark. 29-30 October 2014

Approximately a third of the world population – and about half in the most underdeveloped settings – have been estimated to lack access to essential medicines and diagnostics [1]. Effective supply chains are vital to deliver essential health commodities. In high-income countries the availability of medicines in the public and private sector is taken as a given: quality assurance is managed by robust national regulatory agencies; supply and distribution are increasingly privatized, with performance measured against timeliness and cost. Conversely, in many low- and middle-income countries, stock-outs of essential commodities are commonplace, with a mean availability of core medicines in the public sector ranging from 38.2% in sub-Saharan Africa to 57.7 % in Latin America and the Caribbean [2]. Vulnerability of supply chain functions also increases the potential for the entry of counterfeit and substandard products [3].

While availability of medicines is determined by multiple factors, there is a growing recognition of the need to address human resources requirements for supply chain systems [4]. A systematic review of the global pharmacy workforce revealed a dearth of evidence from low- and middle- income countries [5] . It also underscored several challenges, including inadequate numbers of pharmacists and pharmacy support workforce cadres, issues of maldistribution (across public and private sectors, and urban and rural areas), uneven implementation of education, staff management and retention strategies. Further, this study did not find evidence on the broader range of health logisticians and supply chain managers. Other analyses focused on low- and middle-income settings have highlighted dramatic supply chain workforce shortages, with some

countries facing vacancy rates up to 71% for public sector posts that would require accredited pharmaceutical training [6]. This situation is often determined by a combination of insufficient training capacity as well as 100-150% higher wages in the private sector as compared to the public sector.

Some of these problems reflect those affecting human resources for health more broadly. A cross-country analysis of the health workforce conducted in 2013 showed that multi-pronged strategies are required to improve forecasting, planning, education, deployment, retention and performance management of human resources for health [7]. Only by addressing these factors in an integrated manner, will it be possible for health systems to improve availability, accessibility, acceptability and quality of the human resources. This is a requirement to accelerate progress towards attaining universal health coverage.

Better health workforce intelligence and data can shape more effective planning, implementation and monitoring of such policies. A stronger evidence base on quantities, geographic distribution, competency frameworks, as well as the labour market conditions that determine the availability and performance of the health supply chain personnel, would similarly be required.

A more effective response to health supply chain workforce challenges therefore requires comprehensive and reliable data on availability, distribution, education curricula, competency frameworks, levels of remuneration, regulatory environment and supporting systems. Dedicated tools exist for assessment of operational and technical capacity in public health supply chain personnel [8], and related analyses have been conducted in some contexts [9,10]. There are also good governance initiatives focusing on legislation, transparency and integrity to reduce corruption and advance the professionalization of the supply chain profession [11]. Both these aspects are important,

* Correspondence: comettog@who.int

¹Global Health Workforce Alliance, World Health Organization, Geneva, Switzerland

Full list of author information is available at the end of the article

however existing initiatives have not yet fully captured the need for a leadership environment that promotes excellence and attracts talent, and that explicitly links the health supply chain system with a country's broader public health goal of promoting equitable access to essential medicines.

In most countries a relative lack of comprehensive data on supply chain personnel (and especially on the administrators, logistics managers, warehouse and transport personnel, clerks and other support cadres) means that critical capacity gaps go unnoticed, and often neglected in national health and human resources policies and strategies. Nevertheless, the supply chain workforce should be fully embedded in the core functions of health workforce management, including the human resources for health information systems, planning and forecasting, performance management [12]. Achieving this integration can be facilitated by an enabling policy and governance framework at the country and regional level.

Some of the required actions to strengthen the health supply chain workforce may be similar to - or be implemented as part of - broader health workforce policies. This includes improving public sector pay and incentives [13]; establishing rural pipelines to education and training to facilitate education and deployment in under-served areas [14]; reforming education strategies to adapt content and modalities of training to current and emerging health system needs [15]; and exploring the potential of greater delegation of tasks to cadres with shorter training [16]. Other interventions may need to be more specific to the supply chain workforce, such as mainstreaming relevant competencies in the pre-service education curricula of health personnel; scaling up training of pharmacists and pharmacy assistants; and professionalizing the personnel in administrative and management positions within the health supply system through more dedicated training (which may also help in countering the increasing burden on the functions of clinical staff). Key skills are particularly required in forecasting of needs, procurement, quality assurance, warehousing and distribution, stock management, with an overarching need for leadership and systems management.

The implementation of conducive supply chain workforce policies may require additional financing commitments or re-allocating available resources. However, considering the enormous levels of wastage associated with inadequate, ineffective and irrational procurement of medicines and other health commodities [17], investments in the health supply chain personnel may represent a strategy to improve the overall efficiency of health systems, and may therefore represent an area worth prioritizing [18].

In a nutshell, health systems throughout the world are progressively broadening their focus to non-communicable diseases, and are attempting to expand effective coverage to under-served populations through equity-focused

policies and quality enhancement interventions. The emerging discourse on the Sustainable Development Goals in the context of the post-2015 agenda includes eliminating avoidable maternal and child deaths, controlling epidemic diseases, and explicitly refers to providing "access to affordable essential medicines and vaccines" [19].

Strengthening the supply chain workforce is an essential element of making this vision a reality. This special supplement seeks to expand the evidence base contributing to the 2nd People that Deliver Global Conference on Human Resources for Supply Chain Management (www.peoplethatdeliver.org). This event marks the beginning of a second phase of the People that Deliver Initiative, which will place growing emphasis on country-focused action.

Authors' details

¹Global Health Workforce Alliance, World Health Organization, Geneva, Switzerland. ²School of Pharmacy, Faculty of Medical and Health Sciences University of Auckland, New Zealand. ³People that Deliver, UNICEF, Copenhagen, Denmark. ⁴Essential Medicines and Health Products, World Health Organization, Geneva, Switzerland.

Published: 17 December 2014

References

1. World Health Organization: **Equitable Access to Essential Medicines: A Framework for Collective Action**. *WHO Policy Perspectives on Medicines* 2004. Available at http://whqlibdoc.who.int/hq/2004/WHO_EDM_2004.4.pdf (accessed 12 October 2014).
2. Dowling P: **Healthcare Supply Chains in Developing Countries: Situational Analysis**. Arlington, Va.: USAID | DELIVER PROJECT; 2011 [<http://peoplethatdeliver.org/sites/peoplethatdeliver.org/files/dominique/files/Healthcare%20Supply%20Chains%20-%20Situation%20Analysis%20EN.pdf>], Task Order 4. Accessed 12 October 2014, available at:
3. WHO Bulletin: **Growing threat from counterfeit medicines**. 2010, **88**(4):241-320.
4. Steele P: **GAVI Supply Chain Strategy People and Practices Evidence Review**. 2014, Available at: <http://www.peoplethatdeliver.org/sites/peoplethatdeliver.org/files/FINAL%20GAVI%20Supply%20Chain%20Strategy%20Evidence%20Review%20Report%2021st%20May%202014.pdf> (accessed 12 October 2014).
5. Hawthorne N, Anderson C: **The Global Pharmacy Workforce: A Systematic Review of the Literature**. *Human Resources for Health* 2009, **7**:48.
6. World Health Organization: **Tackling the crisis of workforce shortages in the pharmaceutical sector**. 2011, Available at <http://apps.who.int/medicinedocs/documents/s17997en/s17997en.pdf> (accessed 12 October 2014).
7. Campbell J, Dussault G, Buchan J, Pozo-Martin F, Guerra Arias M, Leone C, Siyam A, Cometto G: **A universal truth: no health without a workforce**. *Forum Report, Third Global Forum on Human Resources for Health, Recife, Brazil* Geneva, Global Health Workforce Alliance and World Health Organization; 2013, Available at <http://www.who.int/workforcealliance/knowledge/resources/hrhreport2013/en/> (accessed 12 October 2014).
8. USAID | DELIVER PROJECT, Task Order 4: **Human Resource Capacity Development in Public Health Supply Chain Management: Assessment Guide and Tool**. Arlington, Va.: USAID | DELIVER PROJECT; 2013, Task Order 4. Available at http://deliver.jsi.com/dlvr_content/resources/allpubs/guidelines/HumaResoCapaDeve_AsseGuid.pdf (accessed 12 October 2014).
9. Hasselberg E, Van Buuren A, Ongerli B, McHenry B: **Public Health Supply Chain Competency Mapping in Namibia**. *Results and Recommendations from the People that Deliver Initiative collaboration between the Ministry of Health and Social Services, SCMS, and CapacityPlus* 2014, Available at <http://www.peoplethatdeliver.org/news/ptd-competency-compedium-public-health-supply-chain-competency-mapping-namibia> (accessed 12 October 2014).

10. Wuliji T, Ehsan J, Wong S, Haidar zad MN, Amarkhail S, Hakimyar S, Naimi HM, Taban Q, Ayoubi N, Amini K, Ghowsi Z, Siddiqui Z, Wang S, Omari Z, Morris M: **Strengthening Pharmaceutical Human Resources in Afghanistan: Assessment and Strategic Framework Development.** Submitted to the US Agency for International Development by the Strengthening Pharmaceutical Systems (SPS) Program Arlington, VA: Management Sciences for Health; 2013.
11. OECD: **OECD principles for integrity in public procurement.** 2009, Available at http://web.law.columbia.edu/sites/default/files/microsites/public-integrity/files/citytime_cle_materials_for_conference_on_5.30.14.pdf (accessed 12 October 2014).
12. Capacity Plus: **Applying the HRH Action Framework to Develop Sustainable Excellence in the Health Supply Chain Workforce.** 2013, Available at <http://www.capacityplus.org/applying-hrh-action-framework-to-develop-sustainable-excellence-health-supply-chain-workforce> (accessed 12 October 2014).
13. McCoy D, Bennett S, Witter S, Pond B, Baker B, Gow J, Chand S, Ensor T, McPake B: **Salaries and incomes of health workers in sub-Saharan Africa.** *Lancet* 2008, **371**(9613):675-81.
14. Dolea C, Stormont L, Braichet JM: **Evaluated strategies to increase attraction and retention of health workers in remote and rural areas.** *Bull World Health Organ* 2010, **88**(5):379-85.
15. Frenk J, Chen L, Bhutta ZA, et al: **Health professionals for a new century: transforming education to strengthen health systems in an interdependent world.** *Lancet* 2010, **376**:1923-5.
16. Foster N, McIntyre D: **Economic evaluation of task-shifting approaches to the dispensing of anti-retroviral therapy.** *Hum Resour Health* 2012, **10**(1):32.
17. World Health Organization: **Health system financing: the path to universal health coverage.** *World Health Report 2010* 2010 [<https://www.who.int/whr/2010/en>], (accessed 12 October 2014).
18. Soucat A, Scheffler R: **The Labor Market for Health Workers in Africa : New Look at the Crisis.** Washington, DC: World Bank; 2013, Available at <https://openknowledge.worldbank.org/bitstream/handle/10986/13824/82557.pdf?sequence=5> (accessed 12 October 2014).
19. Open Working Group on Sustainable Development Goals: **Outcome document.**, Available from: <http://sustainabledevelopment.un.org/focussdgs.html> (accessed 12 October 2014).

doi:10.1186/2052-3211-7-S1-I1

Cite this article as: Cometto et al: "Health supply chain personnel: an integral part of the health workforce.". *Journal of Pharmaceutical Policy and Practice* 2014 **7**(Suppl 1):11.

Submit your next manuscript to BioMed Central and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit

