



Inter-professional Competencies for One Health Workforce: An eDelphi Approach to Consensus

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INTRODUCTION

There is an ongoing debate about delivery and assessment of effective training in interprofessional competencies aligning with the One Health framework at the intersection of human and animal health, and environmental parameters. Current implementation of competency-based training in One Health seems indistinguishable from collaboration competencies in public health, global health, and planetary health. Consensus is needed on what competent One Health workers should know and confidently do.

METHODOLOGY

We launched an IRB-approved research protocol for generating debate and consensus through a Delphi Panel methodology implemented in an online platform (<https://www.edelphi.org>). The initial round of the 'eDelphi - One Health Workforce | Next Generation Core Competencies' project was implemented over a 3-month period with the recruitment of panellists in five categories: nominees from One Health Universities Networks in Africa (AFROHUN) and Southeast Asia (SEAOHUN), universities offering One Health training outside these networks, international agencies concerned with One Health (i.e. WHO, OIE, FAO, UNEP), and Ministries of Health or other related constituencies. The panel's exercises probed questions on workforce at the forefront of the next pandemic, and what knowledge domains, core competencies and skills should be acquired now, so that the world is prepared to prevent spillover events and outbreaks? The eDelphi panel were presented with a structured questionnaire and opportunity for open text debate and discussion on overlapping professions and disciplines, knowledge domains, and sub-domains. Panelists nominated 10 top-ranked core competencies and skills for One Health workforce.

RESULTS

Seventy-five panellists (41 % female; median age group 40-50 years; median work experience 15-20 years) completed the exercise for round-1, including experts identifying with human health (majority 64 %), animal health, environmental health, agriculture, and other disciplines (e.g. anthropology, 9 %). Consensus was quickly achieved on topics

including integrative surveillance, animal and human interactions in environmental contexts. There was a divergence of perspectives on gender context of One Health, the roles of policy and advocacy, and cultural domains that may influence human interactions with animals including wildlife and agricultural or domesticated animals. In addition, there was no consensus on topics such as integrative toxicology, encompassing the use and abuse of pesticides in agriculture and the importance of lead bullets in hunting wildlife; payment for ecosystem services and biodiversity management; and implementation science and team science, which underpin successful collaboration and partnerships.

DISCUSSION

The ongoing COVID-19 pandemic has revealed deficits in our understanding and implementation of strategies by which experts should collaborate across scholarly disciplines and between professional practices such as medicine, veterinary medicine, agriculture, public health, and environmental science. Additional deficits in implementation of the One Health conceptual framework include the roles of government agencies and communities, and perhaps more cogently, how the continuing professional development opportunities should be embedded in the One Health educational framework. The demand for a competent One Health workforce is intensifying due to increasing frequency and impacts of zoonotic outbreaks. The eDelphi panel results revealed opportunities for consensus and further debate to characterise knowledge of how major knowledge domains, core competencies, and skills should be consolidated into a curriculum suitable for an accreditable credential such as One Health Certificate for in-service professionals with potential integration into pre-service degree programmes at universities and learning academies. This study was supported by USAID OHW-NG and CUGH Tom Hall Education Award.