



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



# Expanding nursing's role in responding to global pandemics 5/14/2018



Inge B. Corless, PhD, RN, FNAP, FAAN<sup>a,\*</sup>, Deena Nardi, PhD, PMHCNS-BC, FAAN<sup>a</sup>,  
Jeri A. Milstead, PhD, RN, NEA-BC, FAAN<sup>a</sup>, Elaine Larson, PhD, RN, FAAN, CIC<sup>b</sup>,  
Kathleen M. Nokes, PhD, RN, APHN-BC, FAAN<sup>a</sup>, Susan Orsega, MSN, FNP-BC,  
FAANP, FAAN<sup>a</sup>, Ann E. Kurth, PhD, RN, CNM, MPH, FAAN<sup>a</sup>, Kenn M. Kirksey, PhD,  
RN, ACNS-BC, FAAN<sup>a</sup>, Wendy Woith, PhD, RN, FAAN<sup>a,b</sup>

<sup>a</sup> Global Nursing & Health Expert Panel

<sup>b</sup> Emerging Infectious Diseases Expert Panel

## Executive Summary

We know by now that the world will see another pandemic in the not-too-distant future; that random mutations occur often enough in microbes that help them survive and adapt; that new pathogens will inevitably find a way to break through our defenses; and that there is the increased potential for intentional or accidental release of a synthesized agent. Every expert commentary and every analysis in recent years tells us that the costs of inaction are immense. And yet, as the havoc caused by the last outbreak turns into a fading memory, we become complacent and relegate the case for investing in preparedness on a back burner, only to bring it to the forefront when the next outbreak occurs. The result is that the world remains scarily vulnerable.—World Bank, 2017

The world is interdependent, not only in terms of the flow of human beings but also the spread of new, emerging, and re-emerging pathogens (EIDR). The number of outbreaks per year has tripled in the last several decades (Smith et al., 2014) and the human and economic impact of human immunodeficiency virus, severe acute respiratory syndrome, Ebola, and other diseases, has been staggering. Yet only a handful of countries have carried out pandemic preparedness exercises (World Bank, 2017). Furthermore, funding for pandemic preparedness (e.g., the Coalition for Epidemic Preparedness Innovations and the Bloomberg Foundation), has been led by nongovernmental donors more than by governments. Global preparedness is critical and must include strengthening global surveillance in public and other health care delivery systems. Communities must be engaged as active partners in primary and secondary infectious

disease prevention efforts. As the largest cadre of the health workforce in every country, as well as a profession that is dedicated to prevention and alleviation of suffering, nurses must be integrally involved with interprofessional teams, communities, and across sectors for global pandemic preparedness.

## Background

Infectious diseases constitute the third leading cause of death worldwide (WHO, 2017). International mobility contributes to the promulgation of new and reemerging pathogens that frequently are resistant to current form of treatment (Morens & Fauci, 2013). This mobility may result in disease outbreaks that have dire consequences. Emerging global pandemics pose high risks for individuals and communities.

The unpredictability of pandemic outbreaks (agents, time, and place) is a given in communicable diseases. The gap in the incorporation of nursing knowledge and skills related to screening, disease identification, rapid response, community involvement, inter and intra-agency communication, governmental notification, and coordination need not remain challenges to adequate and timely responses. The failure to develop a coordinated system of health care workers who understand the importance of detecting and forwarding information about the identification of an illness is a major gap in our ability to contain new infections.

A key issue is the time delay in the early identification of infections that pose a threat to potential epidemics/pandemics. To mitigate the delay, it is essential that the health care professional who is the initial point of contact with the infected person, likely the

\* Corresponding author: Inge B. Corless PhD RN FNAP FAAN Lead Co-Chair, Global Nursing & Health Expert Panel.

E-mail address: [icorless@yahoo.com](mailto:icorless@yahoo.com) (I.B. Corless).

0029-6554/\$ — see front matter © 2018 Published by Elsevier Inc.

<https://doi.org/10.1016/j.outlook.2018.06.003>

community health worker in many global settings, communicate with the appropriate provider or agency to initiate the next steps including identification of the pathogen, initiation of appropriate treatment, and prevention of further dissemination. In addition, recognition of a pattern, alerting others as to the emerging disease, and preventive services will aid in preventing further diffusion of pathogens from isolated cases. A delay in such identification may lead to the development of epidemics/pandemics and be an impediment to the prompt initiation of treatment for the infected individual, appropriate interventions and protective devices, and efforts to curtail the spread of the epidemic.

## Responses and Policy Options

### Response

Recent events, such as the Ebola outbreak, demonstrate how lack of preparation and gaps in communication systems during the alert phase when a pathogen has been identified contribute to a delayed response (Dzau & Sands, 2016). National and global organizations have evaluated the adequacy of the timeliness and programmatic response to potential outbreaks, and have examined what remains to be accomplished (Sands, Mundaca-Shaw, & Dzau, 2016).

The World Health Organization Department of Pandemic and Epidemic Diseases (PED) develops strategies, initiatives, and mechanisms to address emerging and re-emerging epidemic diseases to reduce impact on affected populations and limit international spread (World Health Organization, n.d.). Although the PED brochures note that their work is implemented through a multidisciplinary team that includes disease-specific and public health experts with field experience responding to outbreaks and emergencies under the International Health Regulation, it is not clear how nurse input is provided and communicated with the team.

The U.S. Department of Health and Human Services Office of Pandemics and Emerging Threats engages with multiple governmental and nongovernmental partners and agencies to set policy and support initiatives to prevent, detect, and respond to health threats and provides leadership and coordination of international activities through policy analysis, program development and implementation, coordination, and strategic planning (U.S. Department of Health and Human Services, n.d.). Again, it is not clear how nurse input is provided or utilized during the early stages of the health challenge.

The Global Advisory Panel on the U.S. Department of Health and Human Services (2017) organized by Sigma Theta Tau International met with key nurse stakeholders throughout the world and released a 2014-2017 summary report (the Global Advisory Panel on the Future

of Nursing & Midwifery (GAPFON)) (U.S. Department of Health and Human Services, 2017). Using accumulated rankings across all geographic regions, communicable disease was one of the top five health priorities identified by nursing leaders ([www.gapfon.org](http://www.gapfon.org)). The contribution of nurses from all types and levels of practice to an improved response to global pandemics also has been noted (Edmonson, McCarthy, Trent-Adams, McCain, & Marshall, 2017).

The U.S. Centers for Disease Control and Prevention (CDC) identified several time intervals important to organizing an effective response to an emerging pandemic. The first is *Recognition Interval: Recognition of Increased Potential for Ongoing Transmission*, described as the time when increasing numbers of human cases or clusters are identified anywhere in the world (CDC, 2011).

Although the organizational responses noted above contribute to earlier and more rapid identification of communicable diseases, the contributions of nursing are missing. The aim of this Academy policy is to fill this gap by identifying the essential role of nurses and community health workers during the time just prior to the confirmation of a potential epidemic and focuses on the early identification of infectious pathogens and prevention of further transmission. For this to occur, nursing leaders must develop a ground-up approach to the formulation of solutions to local problems of national and international significance.

### Policy Options

The best response to a potential global pandemic is prevention. Early recognition of novel infections will be enhanced by the development of linkages between community and clinic nurses and the initial point of contact with the infected individual. This will require the education and empowerment of community health workers who have regular and on-going contact with the inhabitants of villages, towns, or regions, and are likely to be the first to recognize symptomatic individuals and consequently serve as the first line of defense through the early and prompt identification of emerging or re-emerging infectious diseases. A policy that requires the development of a network incorporating the community health workers into an early warning system will facilitate the prompt identification of potentially communicable diseases. The early identification of suspicious illnesses requires that these individuals are educated regarding symptoms, modes of transmission, information about ways to interrupt the chain of infection, and who and how to make contacts for rapid follow-up. Providing a cell phone or other communication device to community health workers or others likely to be an initial point of contact may be an efficient, cost-effective approach to facilitating the early identification of communicable diseases. This will also serve as community recognition of the importance of their role.

Collection of a specimen from the sick individual, if feasible, and restriction of contact with that individual,

to the degree possible, will also minimize transmission of the infection. The use of technology will increase the efficiency of early identification of prospective epidemics. Transport of a potentially infected individual, as appropriate, to a primary care clinic or district hospital may be essential to obtaining a differential and confirmatory diagnosis and for treatment. Prompt identification and treatment of the infected individuals, and prevention of further transmission, requires the rapid deployment of appropriate treatment regimens and protective gear to the caregivers in the affected areas.

In addition to preparing frontline community workers to promptly identify potential emerging or re-emerging infection, appropriate national nursing councils and public health entities could be charged with the responsibility of developing and sharing early reporting networks. Engaging international and national agencies (e.g., World Health Organization, International Council of Nurses, American Nurses Association, CDC) in such networks would further facilitate rapid mobilization of responses.

These recommended actions are consistent with CDC's National Strategic Plan for Public Health Preparedness and Response to protect people's health and secure the nation's public health, (CDC, 2011) directly addressing the need for "a change in approach and long-term visioning across the various U.S. agencies involved in global health...with an emphasis on integration and partnership" (National Academies of Sciences, Engineering, and Medicine, 2017).

## The Academy's Position

The American Academy of Nursing affirms the importance of nursing leadership for the early recognition of communicable diseases and therefore calls on nursing leaders in each country to develop a coordinated network for response to emerging or re-emerging infections that is based on a grounds-up approach incorporating frontline individuals and communities likely to be the first to recognize symptomatic individuals as first responders.

This policy aligns with the Academy's Strategic Plan 2017-2020, Goal 2, Objective 3: "Support policies and practice design that promotes nurses as clinicians and leaders in care coordination and primary care" (American Academy of Nursing, 2017). It is also consistent with the Academy policy, increasing the capacity of public health nursing to *strengthen the public health infrastructure and to promote and protect the health of communities and populations* (Kub, Kulbok, Miner, & Merrill, 2017).

Global pandemics are a threat to every nation's health and therefore improvement in recognizing, containing, and controlling infectious diseases must be a global health priority. The American Academy of Nursing asserts that nurses are prepared for the leadership roles

in policy decisions of health systems and government agencies, and can prepare for, identify, respond to, and direct recovery efforts from global pandemics that require an informed, internationally coordinated response (American Academy of Nursing, 2017).

The policy recommendations provided below will strengthen national health security through the enhanced recognition and expansion of the individuals who are initial points of contact in the community as well as the role of nurses and nursing organizations in responding to and preventing potential global pandemics.

## Recommendations

1. Encourage the International Council of Nursing (ICN), World Health Organization (WHO) Dept. of Pandemic and Epidemic Diseases, the U.S. Department of Health and Human Services Office of Pandemic and Emerging Threats, the U.S. Centers for Disease Control and Prevention (CDC), and national nurse leaders, to build an in-country community health worker-to-clinic nurse to physician/lab technologist network.
2. Collaborate with identified country nurse leaders who have developed a national grounds-up nurse-coordinated network, advocate for funding from appropriate sources (e.g., the Gates Foundation, the World Bank) for the education of community health workers and for the distribution of cell phones or other devices to personnel likely to be first points of contact with infected individuals to facilitate rapid communication with next level providers.
3. Encourage the ICN, the National League for Nursing, the Centers for Disease Control and Prevention, and community health worker representatives, to develop a curriculum for community health workers regarding the identification and reporting of infectious diseases.
4. Urge global leaders (ICN, WHO, CDC) to develop a strategic plan for local distribution of resources (pharmaceuticals, lab equipment, and other treatment-related materials) in case of emerging epidemics.

## Acknowledgments

This policy brief represents the work of the Global Nursing & Health Expert Panel of the American Academy of Nursing. The authors acknowledge the assistance provided by members of the Global Nursing & Health Expert Panel, Versie Johnson-Mallard, PhD, ARNP, FAAN, of the Women's Health Expert Panel, Jason Farley, PhD, MPH, ANP-BC, AACRN, FAAN, of the Emerging Infectious Diseases Expert Panel, American Academy of Nursing Board

Liaison Paula Milone-Nuzzo, PhD, RN, FHHC, FAAN, and American Academy of Nursing Policy Manager and Staff Liaison, Matthew Williams, JD, MA.

---

## REFERENCES

- American Academy of Nursing. (2017). *2017-2020 strategic plan*. Available: <http://www.aannet.org/about/strategic-plan-2017-20>.
- CDC. (2011). *A National Strategic Plan for Public Health Preparedness and Response*. [https://www.cdc.gov/phpr/publications/2011/a\\_nat'l\\_strategic\\_plan\\_for\\_preparedness\\_201109901a.pdf](https://www.cdc.gov/phpr/publications/2011/a_nat'l_strategic_plan_for_preparedness_201109901a.pdf).
- Dzau, V.J., & Sands, P. (2016). Beyond the Ebola battle-winning the war against future epidemics. *The New England Journal of Medicine*, 375, 203-204.
- Edmonson, C., McCarthy, C., Trent-Adams, S., McCain, C., & Marshall, J. Emerging Global health issues: A nurse's role. *OJIN: The Online Journal of Issues in Nursing*, 22, doi:10.3912/OJIN.Vol22No01Man02 Manuscript 2.
- EIDR. *Emerging infectious disease repository*. EcoHealth Alliance. <https://eidr.ecohealthalliance.org/event-map>
- Kub, J., Kulbok, P., Miner, S., & Merrill, J. (2017). American Academy of Nursing Policy: Increasing the capacity of public health nursing to strengthen the public health infrastructure and to promote and protect the health of communities and population. *Nursing Outlook*, 65, 661-664.
- Morens, D. M., & Fauci, A. S. (2013). Emerging infectious diseases: Threats to human health and global stability. *PLOS Pathogens*, 9 e1003467, doi:10.1371/journal.ppat.1003467.
- National Academies of Sciences, Engineering, and Medicine. (2017). *Global health and the future role of the United States*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/24737>.
- Sands, P., Mundaca-Shaw, C., & Dzau, V. J. (2016). The neglected dimension of global security—a framework for countering infectious disease crises. *New England Journal of Medicine*, 374, 1281-1287, doi:10.1056/NEJMs160023.
- Smith, K.F., Goldberg, M., Rosenthal, S., Carlson, L., Chen, J., Chen, C., & Ramachandran, S. (2014). Global rise in human infectious disease outbreaks. *Journal of the Royal Society Interface*, 11, 20140950.
- U.S. Department of Health and Human Services (n.d.) Office of Global Affairs, Office of Pandemics and Emerging Threats (PET). <http://www.hhs.gov/about/agencies/oga/about-oga/what-we-do/policy-and-program-coordination/pandemics-emerging-threats.html>.
- U.S. Department of Health and Human Services 2017. (2017). *The Global Advisory Panel on the Future of Nursing & Midwifery (GAPFON®) Report*. Retrieved from, <http://www.nursinglibrary.org/vhl/handle/10755/621599>.
- WHO. (2017). *The top 10 causes of death*. Media Centre, Updated 2017.
- World Bank. (2017). *From panic and neglect to investing in health security: Financing pandemic preparedness at a national level (English)*. Washington, D.C.: World Bank Group.
- World Health Organization (n.d.) *Pandemic and epidemic diseases*. Retrieved from: <http://www.who.int/csr/disease/en/>.