Official Journal of the Brazilian Association of Infection Control and Hospital Epidemiology

Journal of INFECTION CONTROL
ISSN 2316-5324 | Ano VIII . Volume 8 . Número 3 . Jul/Set . 2019

> ACESSE AQUI A REVISTA ONLINE

EDITORIAL

Infection Prevention and Control Programmes in the Region of the Americas, Preparedness and Response to Infectious Diseases

IProgramas de Controle de Infecção na Região das Américas, preparação e resposta a agentes infecciosos

Programas de control de infecciones en la Región de las Américas, preparación y respuesta de agentes infecciosos

João Paulo Toledo,[1] Sylvain Aldighieri.[2]
[1]*Assessor, Manejo Clínico de Agentes Infecciosos, Manejo de Agentes Infecciosos/Emergências de Saude, Organização Pan-americana da Saúde, Washington, D.C., Estados Unidos da América.*
[2]*Diretor adjunto, Emergências de Saúde, Organização Pan-americana de Saúde, Washington, D.C., Estados Unidos da América.*

Received: *13/09/2019*
Accepted: *02/10/2019*
Available online: *30/12/2019*

Corresponding Author:
João Paulo Toledo
toledojoa@paho.org

Descriptors: *Infection control; Healthcare associated surveillance; Antimicrobial drug resistance; International health regulations; Universal precaution.*

Vaccine-preventable diseases such as measles, diphtheria and yellow fever, once eliminated or sporadically observed in the Region of Americas, have recently resurfaced and compete for ecological niches with emerging and re-emerging infectious diseases such as plague, New World Arenaviruses, and multidrug resistant organisms (MDRO). According to the *2017 Report of the Acute Public Health Events under the International Health Regulations*, in the period of 2011 – 2017 76% of substantiated events were due to infectious hazard type.[1] Arboviral diseases, such as Zika virus, chikungunya, dengue fever, and yellow fever were the most prevalent followed by influenza, measles, diphtheria, and MDRO. While arboviral diseases are not human-to-human transmitted, in the latter this route plays a fundamental role in spread and containment of infectious diseases, mainly in healthcare facilities. The implementation and compliance of infection prevention and control (IPC) practices prove to be more pertinent now than before.

Countries need to be prepared to promptly identify and curb infectious threatens. The revised International Health Regulations (2005) (IHR 2005) are a set of norms and procedures, and represents a binding international legal agreement involving 196 countries across the globe "(…) designed to help the international community prevent and respond to acute public health risks that have the potential to cross borders and threaten people worldwide (…)" and were adopted by all the Member States from 2005 onwards. Through its mandate, IHR (2005) brought the agenda of IPC Programmes at the national and facility level to the spotlight.[2]

The potential of dissemination of infectious agents as global threats is real, with various examples arising in the context of IHR (2005). In 2009 pandemic influenza (H1N1) 2009, its nosocomial spread alerted healthcare facilities on the need to comply with the ancient, yet wise, Semmelweis' principle of hand hygiene.[3] Five years later, the Ebola outbreak in West Africa in 2014 – 2016 and spillage to the Western World through healthcare workers infected during care of patients abroad, proved the relevance of not only performing hand hygiene, but using personal protective equipment based on risk evaluation, safe handling of sharp materials, and use of sterile instruments and medical devices.[4] Finally, the emergence of multidrug

resistant organisms (MDRO) in healthcare facilities, such as carbapenem-resistant *Enterobacteriacea* (CRE) and *Candida auris*, among others, pose risks of spreading diseases due to lack of compliance with IPC and proper cleaning and disinfection of healthcare facilities.[5-7]

Approximately 70% of Latin American countries have a national IPC Programme. During the period 2010 – 2015, a total of 86 healthcare facilities in 14 countries were evaluated for compliance to IPC practices. For organization of IPC programmes, only 42.7% of the facilities had a clear structure, meaning official regulations, standard operational procedures, and dedicated staff. For healthcare associated infection (HAI) surveillance, 38.8% of facilities reported performing surveillance on a regular and prospective basis, and some used the results to promote quality changes in service delivery and prompt outbreak identification and containment. Although these results are heterogeneous across countries and within facilities, the issues raised point to the need and urgency to advocate for IPC Programmes at both the national and facility levels and implement HAI surveillance.

Implementation of IPC Programmes in countries is not a straightforward task. The general scenario includes lack of dedicated personnel, competing agendas and limited or non-existent budgets. The *World Health Organization Guidelines on Core Components of Infection Prevention and Control Programmes at the National and Acute Healthcare Facility Level* is a framework of recommendations and best practice statements in IPC to assist countries in developing and implementing IPC Programmes to combat infectious threats and guarantee quality in service delivery. The IPC core components include: 1) organization and structure, 2) guideline development and implementation, 3) education and training, 4) HAI surveillance, 5) multimodal strategies for implementing IPC activities, 6) monitoring and evaluation and feedback, 7) workload, staffing and bed occupancy at the facility level and, 8) built environment, materials and equipment for infection prevention and control at the facility level.[8,9] However, the experience in the implementation of the IPC core components at the country level has revealed that countries and facilities should consider a stepwise approach based on local priorities and availability of resources.

Progress has been achieved in the Region of the Americas. With PAHO support and response to infectious disease outbreaks and nosocomial outbreaks due to MDRO, some countries such as Haiti, Dominican Republic, Suriname, and Barbados are advancing with their IPC agendas. Examples of progress include the designation of specific personnel to work on national policies, revamp guidelines, and establish surveillance of MDRO. Additionally, healthcare workers have been exposed to the theme of IPC through professional development opportunities such as online certifications, onsite trainings for nosocomial outbreak investigation, and webinars addressing major themes in IPC practices.

A national agenda for IPC Programmes in the Region of the Americas and later implementation at the facility level is fundamental in combating emerging and re-emerging pathogens, reduction of MDRO and prevention of healthcare-associated infection.

REFERENCES

1. *World Health Organization. Acute Public Health Events Assessed by WHO Regional Offices for Africa, the Americas, and Europe under the International Health Regulations (2005) - 2017 Report. Geneva, Switzerland2018. 28 p.*
2. *World Health Organization. International health regulations (2005). 2nd ed. Geneva: World Health Organization; 2008. vi, 74 p. p.*
3. *Siegel JD, Rhinehart E, Jackson M, Chiarello L, Committee HCICPA. 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Health Care Settings. Am J Infect Control 2007;35(10 Suppl 2):S65-164.*
4. *Cooper C, Fisher D, Gupta N, MaCauley R, Pessoa-Silva CL. Infection prevention and control of the Ebola outbreak in Liberia, 2014-2015: key challenges and successes. BMC Med 2016;14:2.*
5. *Calvo B, Melo AS, Perozo-Mena A, Hernandez M, Francisco EC, Hagen F, et al. First report of Candida auris in America: Clinical and microbiological aspects of 18 episodes of candidemia. J Infect 2016;73(4):369-74.*
6. *Armstrong PA, Rivera SM, Escandon P, Caceres DH, Chow N, Stuckey MJ, et al. Hospital-Associated Multicenter Outbreak of Emerging Fungus Candida auris, Colombia, 2016. Emerg Infect Dis 2019;25(7).*
7. *World Health Organization / Pan American Health Organization. Epidemiological Alert: Outbreaks of resistant microorganisms associated with medical tourism. Washington, D.C.: 16 April 2019; 2019.*
8. *World Health Organization. Guidelines on Core Components of Infection Prevention and Control Programmes at the National and Acute Health Care Facility Level. Geneva: World Health Organization; 2016.*
9. *Storr J, Twyman A, Zingg W, Damani N, Kilpatrick C, Reilly J, et al. Core components for effective infection prevention and control programmes: new WHO evidence-based recommendations. Antimicrob Resist Infect Control. 2017;6:6.*