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Pilot survey on infection control bundles in middle income countries

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Background: Although low-to-middle income countries (LMICs) represent 80% of the global population, they consume only 20% of the world's resources. Lower resources impact on the quality of healthcare provision and healthcare associated infections (HAI) indicators can be helpful in gauging such impacts. HAI prevention/control (IPC) bundles are often recommended to reduce HAI burdens. This pilot survey was aimed to determine the status of IPC bundle practice and regulations in LMICs and some well-resourced countries with the further goal of reflecting on results, updating it and then sending it to more countries via ESGNI/ESGCIP.

Methods: A questionnaire was emailed to Infectious Diseases International Research Initiative (ID-IRI) Group Members and dedicated IPC doctors working in LMICs to examine self-reported practices/policies regarding IPC bundles. Responding country incomes were classified by World Bank definitions into low, middle and high.

Results: A total of 30 respondents from 18 countries completed the questionnaire from high and middle income countries. Among 18 countries, 4 (22%) (4 centers) were high and 14 (88%) (26 centers) were middle income. Two European countries were high income [Austria (1), Italy (1)] and 8 were middle income [Albania (2), Bosnia 1), Bulgaria (1), Georgia (1), Serbia (2), Kosova (1), Romania (1), and Turkey (10)]. Non-European countries comprised high [Saudi Arabia (1), Puerto Rico(1)] and middle income (Pakistan (1), Thailand (1), Azerbaijan (1), Bangladesh (1), Jordan (1), Nigeria (1)]. Nurse-to-patient ratio was over 3 in 10 (33.3%) centers from seven (50%) middle income country and one high income country (Saudi Arabia). In middle income countries, 25 (96%) centers have an IPC committee in their hospital, 20 (77%) have annual agreed programme and 20 (77%) produce an annual HAI rate report. In high income countries; three of four centers have an IPC committee in their hospital and have annual agreed programme, however two centers produce an annual HAI rate report. In middle income countries, 17 (65%) centers have a full-time equivalent IPC doctor and 22 (85%) had a full time equivalent IPC nurse. In high income countries, three of four centers report a full-time equivalent IPC doctor and full time equivalent IPC nurse. All high income countries had invasive device-related surveillance programme and infection control bundle strategies. However, 8 (57%) centers had no invasive device-related surveillance programme, 6 (43%) had no VAP prevention bundle, 9 (64%) had no CAUTI prevention bundle and 5 (36%) had no CLABSI prevention bundle in middle income countries. Most of the centers (67%) in high and middle income countries reported more than five parameters to be used in IPC bundles.

Conclusion: IPC resources were less evident in middle income countries compared to high income countries. Efforts should be focused on implementation and improvement of IPC bundle strategies in middle income countries.