Role of Anesthesia providers in infection related care in the perioperative pathway – results of a global survey

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Introduction

The availability and roles of physician anaesthetists and other trained anaesthesia providers varies globally, particularly across high, low- and middle-income countries (LMICs). We conducted a global survey to better understand the resources, the scope and extent of anaesthesia providers and map existing capacities and opportunities for anaesthesia provider roles in infection related care.

Methods

We developed an anonymous self-administered online survey targeting physicians, anaesthetists and other anaesthesia providers working along the perioperative pathway. Participant gave their demographic data (age, gender, country), their background (education and training), the setting in which they work (type of surgery, resources and capacities) and current role in anaesthesia. The roles of anaesthesia providers were approach with a focus on infection prevention and control (IPC) in general, surgical antibiotic prophylaxis (SAP), diagnosis and treatment of postoperative infections along the perioperative pathway.

Results

Between December 2021 and June 2022, 173 anaesthesia providers from 20 countries (53% Europe, 29% Asia, 15% Africa, 3% others) participated in the survey. Among them, 135 (78%) were certified anaesthesiologists (Physician), and 102 (59%) had postgraduate training in anaesthesiology. For routine operations, anaesthesiologist physicians were staff members the more likely to be providing anaesthesia (n=72, 48%) followed by non-specialist anaesthesia (n=25, 17%) and nurse anaesthesiologist (n=23, 15%). Overall, 100 (66%) participants were certified to prescribe antibiotics, 58 (38%) were involved in the IPC, and 140 (97.22%) in SAP policies. 74 (50%) declared following a protocol for SAP, and 77 (90.59%) reported surgeons to be responsible for choosing (prescribing) SAP at the beginning of the surgery, 73 (57.94%) anaesthetists, and 12 (35%) non-specialist anaesthesia providers. In non-critical wards, 31 (35%) respondents were involved in the diagnosis of postoperative infections, 19 (22%) responsible for antibiotic prescribing for postoperative infections, and 20 (22%) for monitoring progress and/or changing prescribed antibiotics.

Conclusion

Our survey highlights the lack of training in anaesthesia providers in respect to their actual roles in IPC and antibiotic prescription. These findings are particularly striking in LMICs underlying the need to formally recognize the diverse roles of anaesthesia providers. Surgeons could also be targeted to investigate whether they recognize these roles.