

# InciSioN: Developing the Future Generation of Global Surgeons



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**BACKGROUND:** By 2030, an additional 1.27 million surgeons, anaesthesiologists, and obstetricians (SAO) are needed by 2030 to reach the Lancet Commission on Global Surgery's target of 20 SAO providers per 100,000 population. Inclusion of future generations of health workers early in global surgery discussions and interventions is critical to scale-up access to surgical and anaesthesia care and ensure lasting change.

**METHOD:** InciSioN, the International Student Surgical Network, is an innovative nonprofit organization by and for students, residents, and young doctors around the world. Through advocacy efforts, capacity building, educational events, international research collaboratives, and unique virtual internships, InciSioN contributes to the development of future generations of global SAO across the globe.

**RESULTS:** Since the formal establishment of the organization in 2016, InciSioN has grown to unite over 5000 members in over 75 countries and 31 formally established National Working Groups across all world regions. Through a system of virtual internships, members of the network have contributed to the World Development Indicators surgical data collection 2016 for the World Bank. InciSioN has created the standardized capacity-building curriculum Training Global Surgery Advocates, and established the annual Global Surgery Day on May, 25th as a global awareness day on surgical care around the world.

**CONCLUSION:** The rapid global expansion of the organization and its increasingly loud voice in the worldwide global surgery discourse highlight the importance of including the future of the OR in global health discussions and shifting existing short-term paradigms to more sustainable, long-term thinking. (J Surg Ed 76:1030–1033. © 2019 Association of Program Directors in Surgery. Published by Elsevier Inc. All rights reserved.)

**KEY WORDS:** global surgery, education, global health, advocacy

**COMPETENCIES:** Professionalism, Interpersonal and Communication Skills, Systems-Based Practice

## INTRODUCTION

In the midst of an ever-increasing health workforce crisis, an additional 1.27 million surgeons, anaesthesiologists, and obstetricians (SAO) are needed by 2030 to reach the Lancet Commission on Global Surgery's target of 20 SAO providers per 100,000 population.<sup>1</sup> To scale-up access to surgical care for all, inclusion of the future health workforce from the start of global surgery discussions and interventions will prove vital.

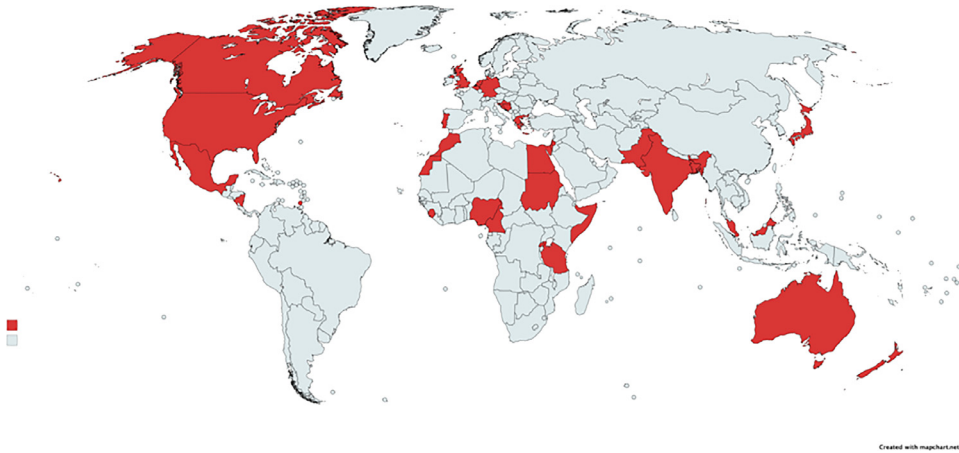
InciSioN, the International Student Surgical Network, is an international nonprofit organization for students, residents, and young doctors in global surgery.<sup>2</sup> InciSioN started as the *Global Surgery Working Group* in 2014, bringing together students with a common passion for surgery and global health online. Due to an exponential increase in the group's members, it officially became InciSioN at the start of 2016. Today, InciSioN represents over 5000 members in over 75 countries and 31 National Working Groups (Fig. 1). Its work is driven by its International Team (IT), consisting of 42 people from 31 countries, speaking a total of 28 languages in 2018 (Fig. 2). IT members distribute evenly across world regions and in 2018 comprised 24 female and 18 male members without pre-existing quotas, highlighting the strength and diversity of InciSioN's IT. Through promotion of safe surgical care, education, and research pertinent to global surgery, InciSioN aims to contribute to the development of future generations of global SAO.

## ADVOCACY

To advocate effectively, it is paramount to form a unified voice pliable across different social, geographical, and

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**FIGURE 1.** Distribution of national working groups affiliated to incision. Map created with [www.mapchart.net](http://www.mapchart.net).

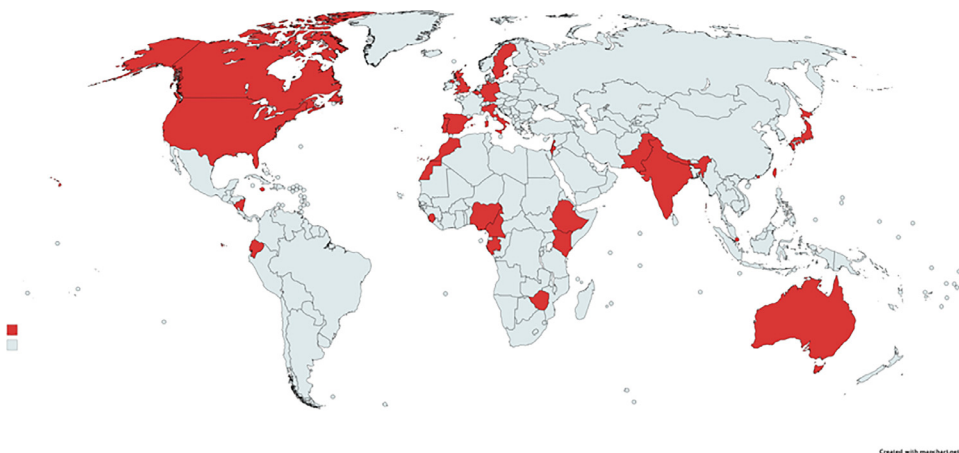
political contexts. As generations growing up with increasing freedom of speech, digital communities, and online learning, students and residents have become increasingly vocal and aware about global health issues. In the young field of global surgery, InciSioN has raised the voice of *the future of the operating room (OR)*, spreading awareness about relevant issues on- and offline.

On May, 25th 2015, to highlight the resolution WHA68.15 “*Strengthening emergency and essential surgical care and anaesthesia as components of universal health coverage*”, InciSioN established *Global Surgery Day* as a global awareness day to advocate for safe and affordable surgical care for all. Every year since then, InciSioN has been leading the Global Surgery Day campaign globally, joined by an increasing number of international organisations. Additionally, InciSioN raises its voice regarding key (e.g., universal health coverage) and under-addressed issues (e.g., role of surgery in addressing noncommunicable diseases and primary healthcare) within global surgery.<sup>3–5</sup> Recently, a Human Rights working group was established to address

relevant issues, including gender equity, access to surgical care as a human right, and refugee health.<sup>6</sup> On December, 10th 2018, InciSioN was inaugurated as newest member of the G4 Alliance, joining over 80 professional societies as the first student body in the G4 Alliance.

## CAPACITY BUILDING

The overarching *forte* of InciSioN lies in its roots of equity across all levels. Members are empowered to engage in open discussions sharing individual viewpoints from a wide array of backgrounds, allowing for equitable partnerships to find their way from grassroots organizations (InciSioN and its National Working Groups) to wider communities. In addition, active collaboration between members is highly conducive to peer learning, rooted in cultural awareness going beyond traditional medical curricula and clinical experience. Integration of global surgical work during medical school and residency puts



**FIGURE 2.** Distribution of incision international team 2018 members. Map created with [www.mapchart.net](http://www.mapchart.net).

members and alumni at an advantage in further training and professional careers. The skills honed in advocacy, diplomacy, governance, and ethics allow individuals to approach their clinical and nonclinical (i.e., research or policy) work with an open-minded and holistic approach, empowered to hold policymakers accountable for their actions influencing surgical care.

## EDUCATION

Aiming to train future leaders, InciSioN established *Training Global Surgery Advocates* as a 3-day standardized workshop on the basics of global surgery, advocacy, research, ethical issues, and policy work. In collaboration with existing conferences or within National Working Groups, students and residents are trained to train others, allowing for an increasingly bigger pool of global surgery advocates, equipped with the necessary tools to hold leaders and policymakers accountable for existing disparities in access to care.<sup>7</sup>

In 2018, InciSioN held the inaugural InciSioN Global Surgery Symposium, IGSS2018, in Leuven, Belgium, attracting 228 participants from 49 countries, including 12 fully-funded *Travel Scholars* from 12 low- and middle-income countries, and 32 expert speakers from 5 continents. In 2019, InciSioN is hosting IGSS2019 in Kigali, Rwanda, further pushing for equity in surgery at all levels.

InciSioN has co-organized (e.g., Global Neurosurgery Conference 2017 in Rabat, Morocco) and contributed to events (e.g., Consortium of Universities for Global Health 2017 Global Surgery Satellite Session in New York, USA) around the world, and delivered workshops at conferences in Tanzania, Egypt, Romania, Germany, United Kingdom, Mexico, Canada, Pakistan, and Japan.

### Global Surgery in Medical Curricula

In 2017, InciSioN helped establish the first Global Surgery university course in Germany at the TU Munich, in collaboration with the German Global Surgery Alliance and the Harvard Program in Global Surgery and Social Change. The course addresses relevant topics ranging from human resources for health and universal health coverage to governance and global health policy. These experiences, together with other models of integrating global surgery in medical education, draw the attention to wider academic recognition of global surgery, to strengthen efforts to train future generations.<sup>8</sup>

## RESEARCH AND VIRTUAL INTERNSHIPS

Research can be daunting for students and young doctors, especially when mentors or research opportunities are

not available. Through peer and professional support, InciSioN aims to lower the threshold for novice researchers to engage and learn in international research projects.

Recently, InciSioN members drove the 2016 World Development Indicators surgical data collection for the World Bank.<sup>9</sup> Following an open application process, 2 selected members from each world region received weekly online training on data analysis and communication skills by researchers and surgeons from King's College London and Stanford University. Members were assigned countries according to their native languages to gather data from assigned Ministries of Health. This *virtual internship* allowed members to engage in high-impact research, be trained by experts, and closely connect with like-minded people through opportunities otherwise unavailable.

Through its international research collaborative, InciSioN has embarked on independent research projects developed through crowdsourcing by members under the mentorship of senior researchers in InciSioN's Board of Trustees and Board of Advisors. For example, InciSioN is conducting baseline assessments of national surgical systems through its National Working Groups, and evaluating the commonalities and differences in mental health in surgical specialties in a multi-country study. With the resulting group authorship, traditional author hierarchies are prevented, increasing the sense of unity by individual research collaborators. InciSioN hopes to expand its impact by driving international global surgery research through a diverse network of senior-mentored and peer-supported trainees from around the world.

## CONCLUSION

InciSioN is an innovative nonprofit organization by and for students, residents, and young doctors, providing a platform to develop future generations of global SAO around the world. The rapid expansion of the organization and its increasingly loud voice in the worldwide global surgery discourse highlight the importance of shifting existing short-term paradigms to more sustainable, long-term thinking and including future generations in the global health discourse.

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