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The need for a joint response. Perioperative mortality in Latin America and the time for LASOS Study

La necesidad de una respuesta conjunta. La mortalidad perioperatoria en latinoamérica y el momento para el estudio LASOS

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We need more than 100 million additional surgical procedures each year in low- and middle-income countries (LMICs) to achieve safe, timely and affordable surgery at population level (1,2). As with any human system, perioperative and medical health care have inherent risks that can vary among populations, including between and within countries, specific settings, and individual providers. Indeed, increasing the volume of surgical activity includes expecting an increase in complications and deaths after surgery, especially in fragile perioperative health systems (3).

Perioperative mortality has declined significantly over the past 50 years, with the greatest decline in developed high-income countries, (4) but there has been a paucity of epidemiological research to describe perioperative mortality and complications after surgery, especially in LMICs (5). Latin America includes 33 countries and 14 territories, with a huge diversity in socio-cultural factors, ethnicity, geography, and political systems. These in turn, lead to widespread differences in healthcare provision and the population of patients who require surgery. As an example, Colombia is a predominantly urban country (76% of the population) of over 48 million inhabitants (6) with a widespread variability in the surgical systems across the country. Urban settings show top-quality hospitals and educational programs while rural

remote locations have a deficient, fragmented, and disorganized healthcare provision (5). Recent studies have recognized the critical importance of social deprivation and population inequities as risk factors for poor patient outcomes after surgery, (7,8) including timely and affordable access to elective surgical care (9).

The availability of objective and robust data allowed clinicians, researchers, and healthcare policymakers to focus on the issues of greatest importance to our patients and contextualize our populations in terms of needs, and availability of surgical services. Nevertheless, in LMICs the large size of the surgical population makes longitudinal epidemiological studies difficult or impossible to be conducted. Routine national datasets are either unavailable or not accessible, and there is little or no research delivery workforce to collect source data. In addition, several barriers to promoting collaborative research have been identified including language barriers, the frailty of health care systems, inappropriate data registries, limitations with approvals from ethical committees and individualism and selfishness in research (10). However, previous collaborative studies during the COVID-19 pandemic were successfully conducted (CovidSurg, CovidSurg-Cancer, CovidSurg Week and CovidSurg 3), including many Latin American countries with a very important number of hospitals, professionals and

patients involved (11). Recent experiences were conducted by advancing in wide collaborative research strategies aimed to deliver rapid benefits from robust data to communities (12).

In recent years, we have seen an increase in large national and international well-designed epidemiological studies of surgical populations (13-16). Studies have addressed study design problems by engaging frontline clinical staff in data collection by using a pragmatic approach. The European Surgical Outcomes Study (EuSOS) was the first of these large prospective international epidemiological studies of non-cardiac surgical patients (13). Then, the International Surgical Outcomes Study (ISOS) provided more detailed data describing patient outcomes after elective surgery in 27 countries of varied economic status around the world (14). Later, the African Surgical Outcomes Study (ASOS) (15) included 25 countries in Africa and showed that patients were twice as likely to die after surgery when compared with the global average in ISOS, despite being younger with fewer comorbid diseases and undergoing fewer complex surgeries.

Now it is time to go to Latin America! In a similar approach than during the COVID-19 pandemic (17) a new call to Latin America is ready! You are more than welcome to joint efforts from each hospital with surgical capabilities in any Latin American country. The Latin American Surgical Outcomes Study (LASOS) will employ the same seven-day cohort study design allowing us to generate equivalent data to compare with previous studies in other parts of the world (16). We will explore social-economic factors at the hospital level, taking account of the profound diversity of health systems (public vs private) in most Latin American countries. Also, we will address the important and still not sufficiently explored question of ethnicity and its relation to surgical health outcomes, a priority issue in a continent with structural inequalities.

You can contribute from wealthy university hospitals in major cities to small regional hospitals in remote regions. LASOS is led by anesthetists, surgeons, and intensivists from across Latin America and

worldwide, working together to collect data and ensure all eligible patients are recruited. At the time of this editorial, we already have 20 countries taking part. The study will run during the second semester of 2022 and local coordinators will each choose a representative data collection week for their center. If the data prove as valuable as those collected in previous similar studies, we can expect LASOS to light a path towards improved outcomes for all surgical patients in Latin American hospitals as well as an opportunity to build a large collaborative network for future research in this subject.

If you want to find out more, or to join the LASOS initiative, please visit our website for details of how to contact us: <https://lasos-study.org/>

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