The importance of investing in medical education in transplantation: A perspective from Latin America

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Many students in Latin America and some Caribbean countries do not pursue the scientific career. Only 2% of the population have a degree in fields that are related to medical or biological education when compared with all with higher education; this number is much lower when compared to Europe (5%), US (7%) and Canada (10%). Many of these skills gaps are found in the region's largest economies, such as, Argentina, Brazil and Chile. Despite strong job opportunities and rapid economic growth in technology and scientific markets, Latin American countries are not producing the graduates necessary to meet the demands in medical education and to become truly competitive in the global community. (1)

In addition, there a lack of correlation between total health spending and disinvestment in certain areas such as transplantation. On one hand, health spending has exceeded economic growth over the past five years, resulting in an increased share of the economy devoted to health. For example, the growth in health spending was more rapid in Nicaragua, Bolivia and Paraguay (2). However, this increase in investment in the health system is not transferred to spending in the field of solid organ transplantation. For example, the number of transplant programs and the number of liver transplants performed in these countries are extremely low. Bolivia (11.5 million inhabitants) did not perform any deceased donor liver transplants in 2018 (0 pmp) and Paraguay (7 million inhabitants) performed 2 liver transplants (0.29 pmp) in 2019 (3).

The lack of qualified health professionals is a major deterrent to transplantation in Latin America. One of the major reasons for this pertains to the financial barriers that those interested in transplantation face. Many also reside in areas with low resources that have poor access to training opportunities in leading academic centers. Thus, many patients with end organ failure pursue transplantation in other countries. This leads to a movement of sick patients around the world with or without agreements between countries. In addition, people tend to travel to receive care that is not available in their home country or that is perceived as superior to the one received where they live (4).

We believe that there is a need for strategic investment in transplant education as lack of training in human resources is one of the main barriers to setting up transplant teams (5). Investing in medical education is investing for the future. Activities under the umbrella of medical education includes academic teaching, clinical training and research, which all play an essential role in the development of a health professional in transplantation, including nurses, physicians, social workers, pharmacists etc. Specifically focussing on a physician, from the formative years in medical school until completion of training in their chosen field, the time to complete these activities can be prolonged, commonly over 10 years. This considerable lag time from monetary investment to return in terms of clinical service and research is a barrier and deterrent

to pursue medical education. Financing can come through loans, reimbursement programs, scholarships, government funding and support from private funds, such as, foundations or pharmaceutical companies. Analysis of medical education funding is complex and requires examination of many factors that affect different roles and responsibilities of funding organizations involved.

We urge members of The Transplantation Society, to consider investing in medical education as an important long-term strategy. We believe financial support of those interested in pursuing transplantation should be prioritized. This can be achieved through collaborations with other countries that have a robust transplantation training infrastructure. Latin America has a significant number of countries that could benefit from greater investment on professional training in the field of transplantation and development of technologies that already exist in other parts of the world. In many cases, the lack of technically trained professionals is related to the high barriers to access training funding as mentioned above. We believe that to increase access to transplantation to patients in Latin America first requires increasing access to transplantation relies on individual effort. However, creating equitable opportunities for professional training of individual and teams, as well as creation of transplantation programs should be a priority for governments, and for all stakeholders involved in transplantation.

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