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THE ROLE PHYSICIANS ARE PLAYING IN CANADA'S SPACE PROGRAM

Abstract

Canada has played a significant role in the history of space. During the early years, Canada was the first country after USA and Russia to design and build their own satellite. Canada has continued to be among the leaders in space with contributions such as the Canadarm, contributing to space related research and sending humans into space.

Physicians have been playing a significant role in Canadian history, not only in the healthcare field but also virtually in all aspects of life, including sports, inventors, explorers, leaders, politicians, and leaders in their community.

Space has been no exception. Canadian physicians have had major roles in Canadian space history, in addition to the Canadian Space Agency's (CSA) space flight surgeons and researchers. Canadians have applied and were selected to be part of the astronauts to represent Canada and go into space.

Out a very competitive selection process over different selection periods where over 5000 people applied each time to be an astronaut, there have been four physicians selected to be an astronaut.

We conducted a key informant analysis of Canadian physicians that went on to become astronauts to assess if their medical experiences helped them better prepare for roles as an astronaut and conducting research in space. In our findings Canadian astronauts also shared their personal experiences as a physician and as an astronaut, and we also analyzed the particular contributions Canadian physicians have achieved in space such as various research conducted in space.

To put it into context, in total, there have been a total of 14 Canadians selected to be astronauts. So far, 9 of them have ventured into space and 4 of them being physicians (representing nearly half of all Canadians going into space being a medical doctor so far).

Other historical milestones by Canadian physician astronauts include Canada's first female astronaut being a physician, the world's first neurologist in Space was a Canadian, as well as physicians also having a number of Canadian records such as a physician holding the Canadian record for the most time spent on extravehicular activities (EVAs), the longest time a Canadian spent in space was long held by a physician, only for it to be recently broken by another Canadian physician astronaut .