

“Economies of Scale” as a critical factor behind the stagnation of Regional Healthcare Networks in Hokkaido: Investigating low levels of patient registration

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Abstract

Hokkaido faces challenges to the effective implementation of its healthcare infrastructure because of demographic factors such as negative population growth and an aging population, and economic factors, including financial difficulties faced by local governments. Regional healthcare networks have been built to overcome these problems and streamline healthcare delivery. However, the number of registered patients is only 1% of the total population. This study investigated the factors that cause the stagnation of the number of registered patients in the regional healthcare networks in Hokkaido. Our survey identified 46 networks in 21 medical regions. The average ratio of registered patients in Hokkaido was 4.1%, regional healthcare networks in the Sapporo area were dysfunctional. We estimated the factors influencing the ratio. The ratio of networked medical institutions in the region and the dummy variable for their business size were statistically significant for Hokkaido and for the secondary medical areas, excluding the Sapporo medical area. It follows that the number of registered patients in a network could be determined by the ratio of connected medical institutions and the size of their business. The problems could be overcome by exploiting the economy of scale in the networks. Establishing a prefecture-wide network would increase the number of registered patients and lower the overall cost of the networks.

Keywords

Regional healthcare networks, Ratio of registered patients, ratio of connected medical institutions, economies of scale, Hokkaido