

「Asia-Pacific Medical Network Project in
Kyushu University Hospital」 TEMDEC
(Telemedicine Development Center of Asia)
Annual Report : Vol.10

Shimizu, Shuji
Kyushu University Hospital

Nakashima, Naoki
Kyushu University Hospital

<https://doi.org/10.15017/1518012>

出版情報：「超高速ネットワークを利用したアジア遠隔医療プロジェクト」 TEMDEC活動報告. 10, 2014-
03. TEMDEC事務局
バージョン：
権利関係：

11. Closing

The Prospect of Telemedicine Diffusion from Developing Countries

For the medical purpose of caring for human life, we usually meet face-to-face to get as much effective information as possible through multiple channels, maintain safety, and obtain the maximum effect. This principle is the same whether the communication is between medical staff and patients or exclusively between medical staff (including medical students).

However, telemedicine (or remote medicine) makes it possible to conduct medical procedures between widely separated points. There are reasons telemedicine should depart from the basic principle of face-to-face meeting. There are few medical institutes in rural areas, and it is difficult and costly to access them because (1) the distance necessary to travel is too far or traffic infrastructure is undeveloped; (2) medical resources are poor in terms of the number of doctors and nurses in addition to medical institutes; and (3) there are economic problems such as undeveloped medical insurance systems and a great deal of deprivation among citizens. To improve these types of situations, telemedicine has been gradually developed through information communication technology.

As in other industries, new medical technology developed in advanced countries, including medicinal products and devices, has spread to developing countries. Telemedicine, in contrast, has the potential to spread from developing countries to advanced countries, because advanced countries do not have the same needs experienced by developing countries (items 1–3 described above). Is it, therefore, possible to say that telemedicine technology is only for developing countries? I do not think so.

Japan is the top runner of a low birth rate and a rapidly aging population, with 23% of people aged 65 years or older in 2010, and this percentage is still rising. Other advanced countries are also following this trend. Stronger tendencies towards aging can be seen in rural villages and remote islands. At the same time, medical doctors want to reside in urban areas, and many rural medical institutes have consequently been closed. In other words, the concentration of younger doctors is shifting to urban areas while aging persons become more concentrated in rural areas. This situation is, in fact, quite similar to that of developing countries, where few clinics are found in villages, and medical resources are located only in big cities. Thus, developing countries can be seen as models of advanced countries 10 or 20 years in the future.

We should make advances in the situation by implementing telemedicine technology in developing countries and then spreading it to advanced countries with aging populations. Although telemedicine technology originated in advanced countries, we can make it more effective by first considering cost-effectiveness in developing countries and then using it in advanced countries. We have termed this phenomenon of transplanting innovation created in developing countries into advanced countries “reverse innovation.” I believe we can use reverse innovation in the field of telemedicine.

The TEMDEC network has expanded gradually. Together, we can dream of the future of telemedicine.

March 2014

Kyushu University Hospital

Naoki Nakashima, MD, PhD

