

TELEMEDICINE

General practitioners and nurses often lack the experience and confidence to interpret complex ECGs.

To address this issue, researchers in the UK undertook a pilot study to investigate options that would enable general practitioners to access a reliable and accurate way to support them to interpret ECGs and so assist them with clinical diagnosis and management of the patient's health needs.¹

Telemetric 12-lead ECG machines were used in an identical manner as conventional machines but, the recording obtained was transmitted wirelessly along a land-based phone line to a call centre where a team of clinically trained staff were available 24 hours a day, 365 days per year to interpret the results. The study results identified a number of patient and health system benefits in including reductions in unnecessary hospital attendances leading to cost savings for hospitals, convenience of use by health care staff, and prompt and reliable expertise in ECG interpretation.



With the rapid growth of technological services, this may well be the future of telemedicine diagnostic and interpretation services.

¹ NHS. Cardiac Telemedicine in Primary Care Delivering Benefits for Patients and the NHS in Lancashire & Cumbria: A Report for Commissioners.

WHAT IS TELEMEDICINE?

Technological advances have created innovative opportunities for enormous improvement in health care delivery. Telemedicine is the two-way interactive exchange of medical information via electronic communications to improve a patient's clinical health status across geographic and time barriers.²



Although the terms telehealth and telemedicine are often used interchangeably, a distinction in definition exists from the health information technology perspective. Telehealth refers to a broader range of remote healthcare services such as non-clinical services, such as public health education, provider training, continuing medical education, and epidemiology.³

In the current milieu, health care faces an acute shortage of healthcare professionals, increasing incidence of chronic conditions, population aging, and escalating healthcare costs. In such an environment, telemedicine offers a promising solution to advance delivery of healthcare and improve patient outcomes.

² American Telemedicine

³ World Health Organization. Trade, foreign policy, diplomacy and health. Glossary of trade, globalization, trade, and health terms.

WHY DO WE NEED TELEMEDICINE?

The demand for telemedicine is reinforced by a number of factors:

- The **world population** is projected to grow rapidly in the future. By 2050, this number could rise to more than **9 billion**.⁴
- Population growth, aging population and doctors, and increased physician visits, will surpass the supply of health care professionals. If physician supply and use patterns stay the same, the United States will experience a **shortage of 124,000 full-time physicians by 2025**.⁵
- The global burden of chronic diseases is rapidly increasing worldwide. In 2001, chronic diseases contributed approximately 60% of the 56.5 million total reported deaths in the world and approximately 46% of the global burden of disease.⁶

It has been projected that, by **2020, chronic diseases will account for almost three-quarters of all deaths worldwide**, and that 71% of deaths due to ischemic heart disease (IHD), 75% of deaths due to stroke, and 70% of deaths due to diabetes will occur in developing countries.

- Lack of specialists and health facilities in rural areas. The Society of Rural Physicians of Canada estimates that **only 9.4% of Canadian physicians are rural** while approximately 21% Canadians live in rural areas.⁷

⁴ Population Reference Bureau. Human Population: Population Growth.

⁵ Center for Workforce Studies Association of American Medical Colleges (2012). Recent Studies and Reports on Physician Shortages in the US.

⁶ World Health Organization. The world health report 2002: reducing risks, promoting healthy life.

⁷ Society of Rural Physicians of Canada. National Rural Health Strategy.

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1 800 620 7551 or 416 488 9412 or info@rupertcasemanagement.com

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