Health care using telephone and telemonitoring technology benefits heart failure patients

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Providing patients with chronic heart failure access to remote monitoring, for example by telephone or telemonitoring using wireless technology, reduces deaths and hospitalisations and may provide benefits on health care costs and quality of life. These are the conclusions of a new Cochrane Systematic Review by an international team of researchers.

Remote monitoring of patients can reduce pressure on resources, particularly for conditions like chronic heart failure, which exert a large burden on health services. In structured telephone support, patients provide vital data, such as heart rate and rhythm, blood pressure and weight, over the phone, whereas telemonitoring usually involves digital, wireless or Bluetooth transmission of data to a heart specialist.

The review included studies involving over 9,500 participants, comparing both of these technologies to usual care for patients with chronic heart failure. Studies that provided intensified specialist follow-up to patients in the intervention and/or control arms were excluded, since the additional resources provided may have confounded the effects of the intervention.

Details on deaths and hospitalisations for 25 peer-reviewed studies were analysed. The length of follow-up of these studies ranged from three to 18 months, with many studies reporting outcomes after 12 months. Telemonitoring was effective in reducing mortality in patients with chronic heart failure (102 per 1000 vs. 154 per 1000 in the control group). However, no significant benefit was seen with structured telephone support on mortality for patients in these trials (112 per 1000 vs. 127 per 1000 in the control group).

Both structured telephone support and telemonitoring significantly reduced the number of patients who were admitted to hospital due to worsening of heart failure. Hospitalisations due to heart failure occurred at a rate of 164 per 1000 with structured telephone support compared to 213 in a control group, and at a rate of 225 per 1000 with telemonitoring compared to 285 in a control group.

"There are benefits of structured telephone support and telemonitoring for patients with chronic heart failure," said lead researcher Dr Sally Inglis of Baker IDI Heart and Diabetes Institute in Melbourne, Australia. "These technologies can provide specialised care to a large number of patients who otherwise may have limited access to this type of specialised healthcare."

Some studies also showed patients' quality of life improved and that health care costs had been reduced. "More work is required on the cost-effectiveness of telemonitoring to establish the best business models. These may vary depending on

the local organisation of health services. The optimal duration of monitoring has not yet been addressed" said Dr Inglis.

This review can only reflect the individual included studies. Of all the relevant evidence on these technologies which was included in the review, some studies were not as well conducted or reported as the authors would have liked - a point picked up in an Editorial published to accompany the review.

SOURCE [1]

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