

## Press Information

January 25, 2018

### **Telehealth programme by Changi General Hospital and Philips empowers heart failure patients to be more confident and involved in managing their heart condition**

- *Length of stay for heart failure related readmissions shortened by 67 per cent*
- *Total cost of heart failure-related care for each patient dropped by 42 per cent*

**Singapore** – The positive one-year results of a Heart Failure Telehealth programme, piloted by Changi General Hospital (CGH) and [Royal Philips](#) (NYSE: PHG, AEX: PHIA), showed a 67 per cent reduction in length of hospital stay for heart failure-related readmissions, a 42 per cent reduction in costs of care, and an enhanced quality of care. The heart failure patients enrolled in the telehealth programme benefitted from increased knowledge of their condition and improved self-care abilities, resulting in a greater confidence in managing their heart condition.

The experience obtained from this pilot contributes to the design and development of the national telehealth vital signs monitoring (VSM) project initiated by the Ministry of Health. Following the pilot, CGH will be participating in the national VSM project to enable CGH patients to receive care after discharge from hospital, as they return to their homes and the community.

150 heart failure patients from CGH were enrolled in the programme **between November 2014 and March 2016**. They received telemonitoring support for one year and their results were compared against a group that received support only via phone calls.

#### **Reduced length of stay for heart failure related readmission**

As a result of the telehealth programme, patients had improved knowledge, improved confidence and ability to maintain their heart failure condition. In addition to the timely detection of changes in their clinical condition, the average length of stay for heart failure-related readmission over 12 months was reduced by 67 per cent for heart failure patients under telemonitoring support compared to the group that only received support via phone calls (2.2 days vs 6.6 days).

With reduced heart failure related readmission, this translated to cost savings for both patients and hospitals. The bill size for heart failure related admissions in a year for heart failure patients in the telemonitoring group was 42 per cent (S\$ 2,514) lower compared to patients that received support via telephone calls.

“It is important for patients with chronic conditions to feel that they are empowered and in control of their own health as it increases their capacity to take action,” said Dr. Sheldon Lee, Programme Director and Consultant, Cardiology, CGH. Patients with greater knowledge of their conditions are more confident about self-care, and are more likely to comply with treatment plans. This naturally leads to reduced risk of complications that may necessitate readmission to CGH. We are delighted to see these



encouraging results in the pilot and will continue to look into enhancing the programme further so as to provide sustainable benefits for our patients in the long run.”

### **Improved care compliance with self-management**

Patients in the telemonitoring group were highly engaged in taking care of their own health. 93 per cent of the respondents in the telemonitoring group felt that they were more involved in their own care. After going through the programme, 68 per cent of the patients were more confident and able to maintain their condition versus 34 per cent and 32 per cent respectively before the programme.

Results also suggest that patients on the programme felt more empowered to engage with their healthcare providers. 94 per cent of respondents reported that submitting their weight and blood pressure readings helped them to talk more about their condition during their doctor’s visit.

“This programme has helped me understand how to take better care of my health,” shared Mr. Gan Hwee Sun, 76, who was enrolled in the programme. “I am now more conscientious about healthy eating and being active. I am also very grateful to my telecarer for her concern and regular follow-ups with me. She has shared useful knowledge about heart failure, which has given me more confidence to manage my condition at home. I have been following her advice and now have more energy and am able to walk more without feeling breathless easily.”

### **About the Heart Failure Telehealth programme**

The Heart Failure Telehealth pilot programme was launched in November 2014 by CGH and Philips to help heart failure patients learn how to better manage their heart condition at home; reduce the risk of readmission and premature death. The programme integrated three elements of care: tele-monitoring, tele-education and tele-care support via tele-nurses from Changi General Hospital Health Management Unit.

Heart failure patients in the telemonitoring group were provided a weighing scale and blood pressure monitor to assist them in the daily measurement of their weight, pulse and blood pressure upon discharge from CGH. They also received a personal tablet to wirelessly capture these key vital parameters and to upload it to a central system for monitoring. Tele-nurses then remotely monitored participants’ vital readings and intervened when signs of deterioration were detected. To teach patients how to manage their diseases and ensure care compliance, there were also educational videos, e-quizzes and follow-up calls from tele-nurses.

“To meet the long-term demand for chronic care, we need to start shifting chronic disease management beyond hospital walls and into our patients’ home,” said Mr. Diederik Zeven, General Manager, Health Systems, Philips ASEAN Pacific. “Telehealth, where patients are remotely monitored at home, is a sustainable and scalable model that bridges the care delivery gap. At the same time, this care model also shows positive impact in treatment compliance which results in better quality of life for patients. Staying connected with patients in between their check-ups, ensuring that they remain healthy, thereby reducing hospital readmission rates and healthcare costs are the optimal goals in patient care.”

“With our expertise in advanced connected care technologies, clinical workflow analysis, patient engagement design and people research, Philips is committed to deliver telehealth programmes with clinical and financial impact,” added Mr. Zeven.



### **About Royal Philips**

Royal Philips (NYSE: PHG, AEX: PHIA) is a leading health technology company focused on improving people's health and enabling better outcomes across the health continuum from healthy living and prevention, to diagnosis, treatment and home care. Philips leverages advanced technology and deep clinical and consumer insights to deliver integrated solutions. Headquartered in the Netherlands, the company is a leader in diagnostic imaging, image-guided therapy, patient monitoring and health informatics, as well as in consumer health and home care. Philips' health technology portfolio generated 2016 sales of EUR 17.4 billion and employs approximately 73,000 employees with sales and services in more than 100 countries. News about Philips can be found at [www.philips.com/newscenter](http://www.philips.com/newscenter).

### **About Changi General Hospital**

Changi General Hospital (CGH) is an award-winning public hospital with over 1,000 beds serving a community of 1.4 million people in eastern Singapore. CGH offers a comprehensive range of medical specialties and services, helmed by a highly experienced and skilled team of healthcare professionals who consistently deliver excellent health outcomes and care for patients. CGH is a member of the SingHealth cluster of healthcare institutions.

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