



For Immediate Release

## **HKSH Introduces Non-surgical Pectus Therapy for Teenage Patients Suffering from “Pigeon Chest”**

(6 February 2014 – Hong Kong) Pectus Carinatum, more commonly known as “pigeon chest” or “bowed chest”, is a deformity of the chest wall in which the sternum and ribs protrude abnormally. In serious cases it often leads to cardio-pulmonary dysfunction. For patients with less severe condition, there is inevitably a heavy psycho-social toll on them, especially those in their teenage years, because of the abnormal and cosmetically unfavourable appearance.

Hong Kong Sanatorium & Hospital’s Department of Physical Medicine and Rehabilitation has introduced a comprehensive non-surgical pectus therapy programme to help patients correct the shape of the rib cage. Together with expert input from rehabilitation medicine specialist, orthotist and physiotherapists, significant improvement can be achieved within two months. The treatment has high efficacy with low risk as no surgical procedure is involved.

### **Pectus Carinatum affects patient’s cardio-pulmonary function and self-esteem**

Pectus Carinatum is the second most common chest wall deformity. According to data from the United States it occurs roughly 1 in 1,000 teenagers, and, more commonly, in boys than in girls, at a ratio of 4:1. The condition tends to occur during adolescence. There is no known cause but the situation can worsen quickly in a short period of time. The physical signs include: protrusion of the chest, uneven shoulders, kyphosis, cervical kyphosis, shoulder protraction and sticking out of the shoulder blades. Other conditions such as scoliosis may appear coincidentally.

Dr. CHOW Chi Ping, Alex, Director of the Department of Physical Medicine and Rehabilitation at HKSH said, “Pectus Carinatum is caused by deformity of the rib cage and this decreases the expansion of the thoracic cavity during normal breathing, leading to shortness of breath, chest pain, chest tightness and subsequently impairment of the cardio-pulmonary function. For more severe cases, patients may need to undergo surgical operation to reshape the rib cage by removing the rib cartilage and cutting the ribs, and that will lead to unavoidable surgical-risk and scarring.”

Even a mild or moderate deformity would still be an embarrassment for a teenage patient. They might become reluctant to participate in activities such as swimming, ball games or dancing that would expose the chest or its contour. They might also be embarrassed to join any group or outdoor activities. In the long run, the deformity would hurt their self-esteem as these teenage patients become socially withdrawn and isolated.

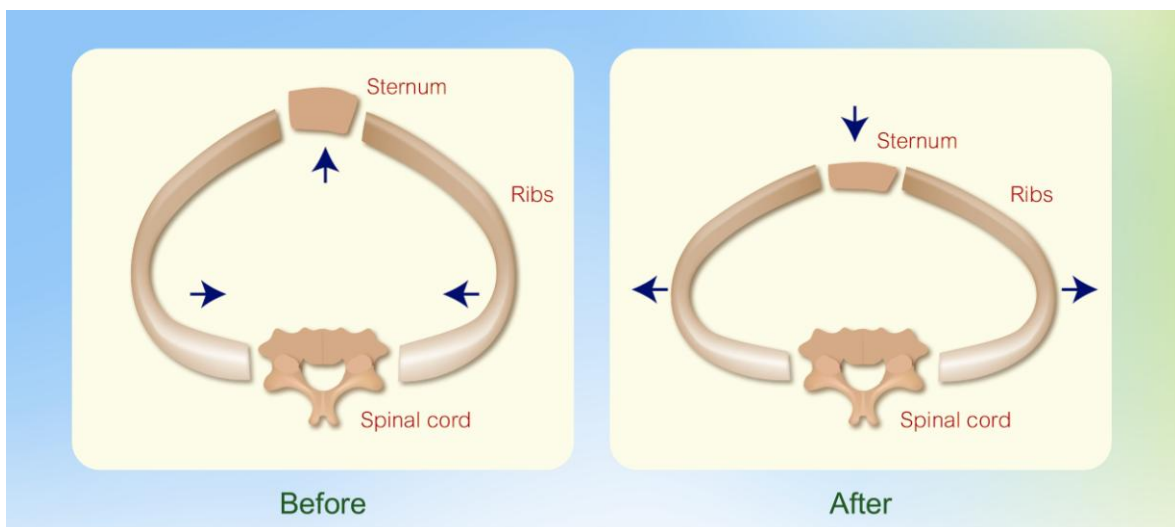


## Personalised Comprehensive Pectus Therapy has over 90% Success Rate

The Department of Physical Medicine and Rehabilitation has introduced the Comprehensive Pectus Therapy since September 2011. With the expert input from our rehabilitation specialist and orthotist, patients receive personalised treatment with a custom-made chest orthosis to correct the shape of the rib cage, followed by a tailor-made exercise programme designed by our physiotherapists. The treatment usually lasts for about 10 months to two years with significant cosmetic improvement is often first observed at about two months. The success rate is over 90%.

“To confirm the diagnosis, patients may need imaging studies such as X rays and CT scan of the chest, followed by electrocardiogram and echocardiogram if co-existing cardiac disease is suspected, before being referred to the orthotist for the measurement and fitting of a custom-made chest orthosis,” said Dr. Chow. The chest orthosis is FDA-registered and is fabricated in the United States. HKSH orthotist will make the measurements of the position and the protrusion of the bones, and the data sent to the United States for the fabrication of the orthosis. The Hospital has treated five teenage patients since 2011, with one fully recovered after a two-year course of treatment.

Mr. LEUNG Wing Kin, Keith, Prothetist & Orthotist at HKSH explained, “The principle of the chest orthosis is simple: reshaping the rib cage by exerting external force on the protruding rib cage. In general, the chest protrusion would improve significantly in two to three months. To prevent relapse, it is preferred to continue wearing the orthosis for at least 10 months or up to two years, depending on the severity of conditions. The treatment is more effective for young patients of age 10 or below, as their bones tend to be more malleable.” Continuous monitoring by orthotist is important as frequent adjustment is required during the treatment period. The success rate is over 90% if the orthosis is worn and adjusted properly.



## Enhancement of Treatment Outcome by Physiotherapy

The role of the physiotherapists is to assess the undesirable effects of Pectus Carinatum, such as weak elasticity of soft tissues and uneven muscle strength. Ms LAW Ka Yee, Rainbow, Senior Physiotherapist of the HKSH explained, “These problems can lead to poor postures like kyphosis, cervical kyphosis or shoulder protraction. Some patients also suffer from non-structural scoliosis, which causes uneven shoulders and sticking out of the shoulder blades. The physiotherapist will design a customised rehabilitation exercise programme to resolve these problems and enhance patients’ cardio-pulmonary function.”

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### **Additional Information:**

#### **Patient’s sharing (Protruding sternum)**

Henry, aged 16, showed physical sign of protruding chest wall in mid-2013, and diagnosed with Pectus Carinatum. He began to wear a chest orthosis in October 2013. After three months of bracing, the chest contour became flattened. He recalled, “I felt a little uncomfortable at the beginning but I got used to it after a few days. It has become part of me, and I don’t have any discomfort even if I wore it during sleep. The improvement is quick and obvious; and I am happy about it.” The treatment duration is expected to be around a year.



Before

Protrusion of the chest, shoulder protraction and with slight kyphosis



Treatment for 2 months

The chest and shoulders were straightened, kyphosis improved significantly



### **About the Department of Physical Medicine and Rehabilitation**

Physical Medicine and Rehabilitation is a medical specialty aiming to restore the health and functional abilities of people after disease and injury such as stroke, spinal cord injury, amputation, nerve injury, joint replacement, spinal pain or other chronic pain conditions. Through comprehensive evaluation, intensive physical and medical treatments, our interdisciplinary team works together to help patients increase their function ability, alleviate pain and disability, and maximize performance at work, in school, during recreation and in all other aspects of life.

### **About Hong Kong Sanatorium & Hospital**

Hong Kong Sanatorium & Hospital is one of the leading private hospitals in Hong Kong. With the motto “Quality in Service Excellence in Care”, the Hospital is committed to serving the public as well as promoting medical education and research.

For media enquiries, please contact:

Department of Corporate Affairs, Hong Kong Sanatorium & Hospital

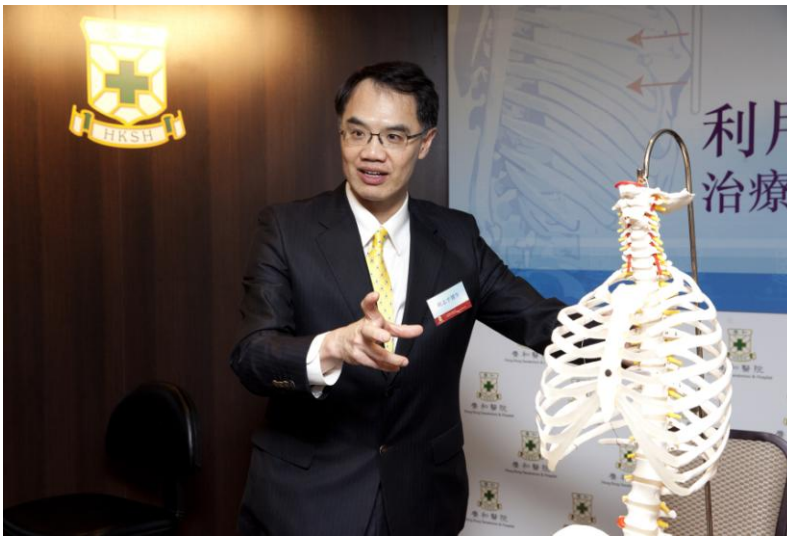
Carol KWOK      Tel: 2835 7082

Tracy CHUHG    Tel: 2835 8079

Email: [media@hksh.com](mailto:media@hksh.com)

**Photos:**

1. Dr. CHOW Chi Ping, Alex, Director of the Department of Physical Medicine and Rehabilitation at HKSH said, “The chest protrusion will lead to shrunken thoracic cavity. In serious cases, cardio-pulmonary function could be affected.”



2. Mr. LEUNG Wing Kin, Keith, Prosthetist & Orthotist at HKSH shows the application of the chest orthosis. He said, “The mechanism of the chest orthosis is similar to orthodontia, applying external force on the protruding sternum, pushing it back to normal shape.”



3. Dr. CHOW Chi Ping, Alex, Director of the Department of Physical Medicine and Rehabilitation, and Mr. LEUNG Wing Kin, Keith, Prosthetist & Orthotist at HKSH encouraged patients to seek medical help as early as possible because “The treatment is more effective for young patients as their bones tend to be more malleable.”



4. Ms LAW Ka Yee, Rainbow, Senior Physiotherapist at HKSH said, “Physiotherapy exercise can strengthen the muscle and increase the elasticity, enhancing the treatment outcome and helping patients to resume proper postures.”





5. (From right) Mr. LEUNG Wing Kin, Keith, Prosthetist & Orthotist, Dr. CHOW Chi Ping, Alex, Director of the Department of Physical Medicine and Rehabilitation and Ms LAW Ka Yee, Rainbow, Senior Physiotherapist

