

Hospital gets smart – with alarm system for beds

THE families of 36 elderly patients at Alexandra Hospital (AH) can sleep easy knowing their loved ones are resting on beds that are far from ordinary.

In each of the 36 Smart Beds at the Geriatric Ward is a system that senses when a patient is about to get out of bed and alerts a nurse to attend to him or her. Rolled-out last month, the Smart Bed system was developed by students and staff from Ngee Ann Polytechnic's (NP) School of Engineering. It is currently on trial at AH.

The system comprises a flat, four-panelled device made up of a series of compression springs that is linked to an alarm. It works by detecting the pressure exerted on the springs in the mattress, explained Mr Koh Wee Hiong, director of NP's electrical engineering division. When

a patient is lying on the bed, the springs are pressed down. When the patient slides towards the end of the bed to get up, the springs on the upper area of the bed are released.

When this happens, nurses are informed via SMS. A light along the corridor and at the nurse's station also switches on.

Preventing falls is a perennial concern for healthcare professionals, as it can seriously hurt the patient and even cause death in serious cases. That is why AH's nursing director Low Beng Hoi is pleased with the new invention, noting that it raises the level of vigilance and adds a pair of "eyes" to aid nurses.

In 2005, there were 115 fall reports at AH, less than 1 per cent of patient admissions. Of this, 57 per cent were aged 65 and above. Since the beds were installed in August,

there have been no falls recorded in the ward. AH plans to introduce the system to 200 more beds soon.

AH's chief executive officer Liak Teng Lit hopes more improvements can be made to make the device lighter and more mobile.

The Smart Bed system could hit the market by next year pending regulatory approvals, estimated Mr Frank Poh, managing director of Plenitum Care, a local company involved in the system's commercialisation. He added the system can be customised for nursing homes and private residences. It is expected to cost between \$400 and \$1,200.

Other hospitals such as Changi General Hospital and Tan Tock Seng Hospital as well as parties from the Philippines and Japan have expressed interest in the system.

— SHERALYN TAY