More than one in nine patients here catch a bug while hospitalised. Half the patients in hospital are on at least one antimicrobial, the umbrella term for antibiotics, antifungal and antiviral medication. These are the key results of the first national study that points out areas where hospitals can improve on patient care. Senior health correspondent Salma Khalik reports the findings.

Hospital patients at risk of catching an infection

Patients warded in a hospital – public or private – have a high risk of catching a bug during their stay. A comprehensive study from July 2015 to February 2016 involving 5,415 adult patients in 13 acute hospitals here found that 11.9 per cent – or more than one in nine – caught an infection while being treated for other conditions.

While most of these infections were mild to moderate, there were some that could be severe, possibly even fatal, and came on top of whatever medical problems patients were already being treated for.

About one in four of those affected had an infection in their bloodstream, while a similar number had pneumonia. Of greater concern is that 7 per cent of healthcare-associated infections (HAIs) were caused by bacteria resistant to conventional antibiotics.

“That means we have to use more toxic and less effective antibiotics,” said Associate Professor Hsu Li Yang, who heads the Infectious Diseases Programme at the Saw Swee Hock School of Public Health and was a member of the study team.

Most of those who caught a “superbug” in hospital were infected with methicillin-resistant *Staphylococcus aureus* (MRSA).

The study, commissioned by the Ministry of Health (MOH), which provided a $1 million grant, was the first of its kind carried out here. A follow-up study will be carried out next year.

A ministry spokesman said: “Further research is necessary to understand the causes and cost of healthcare-associated infections and antimicrobial use in Singapore.”

The MOH spokesman noted that the ministry has been tracking hospital-acquired MRSA over the past five years. The incidence rate has fallen from 0.84 per 10,000 patient days in 2013 to 0.38 last year.

She added that the ministry has been working closely with hospitals since 2009 to reduce the spread of resistant bugs.

The study findings were published in Clinical Infectious Diseases, a leading journal on infectious diseases, last year.

The article noted that HAIs increase the cost of healthcare. In the United States, the estimated annual cost of treating just five major HAIs was close to US$10 billion (S$13.7 billion) in 2012. There are no figures for Singapore.

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Some of the bugs causing the infections here could have been brought in by the patient but had lain dormant until the person’s immune system was breached.

Prof Hsu said a common reason for a breach is the use of catheters, since these allow the bug to bypass the body’s usual protections.

The study found that half of urinary tract infections, a quarter of hospital-acquired pneumonia and a fifth of bloodstream infections were linked to the use of devices.

It noted: “This represents a key target area for reducing the HAI prevalence in Singapore, as device-associated HAIs are considered to be largely preventable.”

Older men in hospital for surgery were identified as the group at highest risk of getting an infection during their stay.

Overall, surgery patients face 1.8 times the risk of other patients, and men had a 1.5 times higher risk of infection than women.

The paper said the 11.9 per cent HAI rate here is higher than the 6 per cent in Europe and about 9 per cent in other South-east Asian countries. But it cautioned that the higher rate here might be due to a different mix of patients.

Singapore has an ageing population. Older people tend to have multiple illnesses that reduce their resistance to bugs.

The risk of an HAI is lower in the private sector, with less than 9 per cent of patients affected, compared with slightly more than 12 per cent in the eight participating public hospitals.

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