

and healthcare assistants found the daily intervention helpful, and, in general, awareness of infection control guidelines was heightened. Staff were satisfied using the local action card, as they found the regional and national guidelines voluminous and complicated.

In conclusion, we found that daily evaluation by an experienced infection control nurse improved compliance of infection control guidelines and was helpful to both patients and staff. This approach improved patient flow and was cost-effective.

Conflict of interest statement

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None.

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Challenges remain for nosocomial infection control in China



Recent events in several Chinese hospitals have raised the public's awareness of nosocomial infection. On April 23rd, 2019, a father whose neonate died during hospital stay posted in his WeChat social media account his suspicion of the 'infection outbreak' in Shunde Hospital of Southern Medical University, southern China. On May 11th, after investigation an official declared that there had been five neonatal deaths out of 15 infections due to echovirus 11 infection in the hospital. On April 22th, 2019, 69 out of 161 patients who had received haemodialysis treatment in Dongtai People's Hospital, Jiangsu, eastern China, were reported to have hepatitis C virus (HCV) infection. In response to these incidents, the Chinese

Table 1

Reported nosocomial infection events in China, 1993–2019

Location, year	Pathogen	No. of deaths/ infections/ receiving treatment	Reason
Shunde Hospital of Southern Medical University, Guangdong, 2019	Echovirus 11	5/15/NA ^a	NA
Dongtai People's Hospital, Jiangsu, 2019	HCV	0/69/161	NA
Zhejiang Provincial Hospital of Traditional Chinese Medicine, 2017	HIV	0/5/NA	Injection syringe shared
An outpatient in Donggang, Liaoning, 2013	HCV	0/99/NA	Injection syringe shared
A health centre in Chaoyang, Guangdong, 2009	Rapid growing <i>Mycobacterium</i> sp.	0/18/38	Surgical instrument sterilization failed
A hospital in Huoshan, Anhui, 2009	HCV	0/19/58	NA
A hospital in Shanxi, 2008–2009	HCV	0/20/47	Repeated use of one-off haemodialyser
A maternal and child care service centre in Jixian, Tianjin, 2009	<i>Enterobacter cloacae</i>	5/6/NA ^a	NA
The First Affiliated Hospital of Xi'an Jiaotong University, 2008	NA	8/NA/94	Incorrect disinfection and hand washing
Shenzhen Maternity & Child Healthcare Hospital, 1998	<i>Mycobacterium chelonae</i>	0/166/292	Glutaraldehyde concentration mistake
Shenyang Maternity & Child Healthcare Hospital, 1993	Coxsackievirus B	15/44/NA ^a	Cross-infection

HCV, hepatitis C virus; HIV, human immunodeficiency virus; NA, not applicable or no reported data.

^a Neonate.

government released 10 basic regulations on nosocomial infection on May 23rd, which is believed to be a milestone for nosocomial infection control. Stricter management systems will be required for hospitals and health centres throughout China.

Iatrogenic infection by pathogens such as echovirus has been reported worldwide [1–3]. Over the years a series of nosocomial infection events has been reported in China (Table I). Although various regulations have been issued, inadequate disinfection and isolation may be widespread in hospitals and community health centres. Several factors contribute to the malpractice arising in tandem with rapid social development in the country. First, the numbers of doctors and nurses have not risen in line with the increasing number of people seeking medical services, which may make it difficult to maintain standards of infection prevention. Second, the ability to identify, report, and control infection in hospitals is relatively poor, especially compared with infectious disease control in the field, which has been strengthened since the severe acute respiratory syndrome (SARS) outbreaks in 2003. For example, Shunde Hospital had missed the chance of identifying the infection and had failed to respond promptly and properly when the second infected neonate with similar symptoms was diagnosed.

While the Chinese government now tries to strengthen primordial and primary preventions for the Healthy China 2030 goal, healthcare infection among medical communities (i.e. quaternary prevention) should be emphasized. This is important to protect individuals and groups at risk of overmedication with anti-infective drugs, as well as to protect patients from an increasing number and range of nosocomial infections.

Conflict of interest statement

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