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Letter to the Editor

Measurement of body temperature to prevent pandemic COVID-19 in hospitals in Taiwan: repeated measurement is necessary



Sir,

On 3rd April 2020, 990,338 people had confirmed SARS-CoV-2 infection and 51,215 people had died of coronavirus disease 2019 (COVID-19) globally. COVID-19 has become a critical public health challenge worldwide [1–3]. Although Taiwan is very close to China, the number of confirmed cases of COVID-19 is much lower in Taiwan compared with other neighbouring countries [4,5]. The Taiwanese Government has been aggressive and proactive to prevent COVID-19 transmission, and almost all hospitals have taken many effective strategies to prevent hospital infection. These include use of personal protective equipment, education, information sharing, performance of drills, closure of as many entrances to hospital buildings as possible, establishment of outdoor quarantine stations to check body temperature, and completion of a TOCC history (travel, occupation, contact and cluster) sheet for every visitor before hospital entry.

Kaohsiung Municipal Ta-Tung Hospital (KMTTH) is a 428-bed community hospital in Kaohsiung, Taiwan. Currently, the policy at KMTTH is to assess all persons in an outdoor quarantine station to avoid importation of infection.

Together with TOCC history and presence of respiratory symptoms, fever is a key warning sign of COVID-19. Therefore, almost all Taiwanese hospitals have established temperature monitoring at outdoor quarantine stations using techniques such as infra-red temperature detectors and forehead thermometers. Febrile patients are prohibited from hospital entry and are sent to the Emergency Department for assessment. However, these thermometers can give normal values, or even hypothermia, in visitors who are actually febrile due to the influence of environmental factors, such as outdoor temperature, wind and rainfall. Erenberk *et al.* reported that accurate determination of fever in cold environmental conditions requires at least 10 min for children to become acclimatized after coming in from the cold [6]. Another problem is that some patients may take antipyretics to avoid being blocked at outdoor quarantine stations.

The risks of visitors with COVID-19 entering hospitals and staying in crowded waiting areas are very real. A large outbreak of Middle East respiratory syndrome coronavirus infection following a single patient exposure in Seoul provides a miserable, but important, lesson [7].

In response, at KMTTH, all patients have their temperature checked again in the waiting area and inside the clinics. In March 2020, 40,887 patients attended KMTTH for medical services. Only five patients were found to have fever (>38°C) at the outdoor quarantine station. However, a further 37 patients were identified with fever when a second temperature recording was made inside. As such, it is recommended that medical institutions with outpatient services should take patients' body temperature for a second time after they have acclimatized to being indoors. This simple intervention could play an important role in hospital infection prevention and control.

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Conflict of interest statement

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