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### A Questionnaire Investigation regarding the Neglect of Hand Washing, Assessed by Nurses in Hospitals in Japan

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Hand washing is the most important and basic means of reducing the spread of infection in health-care facilities (1). A questionnaire-based survey was carried out anonymously in 12 hospitals and sanatoriums in Japan from August 20 to September 20, 2001, in order to identify and quantify factors that affect the neglect of hand washing by medical staff members. Of 2,648 nurses at the hospitals enrolled, 49.6%, i.e., 1,313 nurses answered the questionnaire. Nurses were asked to answer in free form with regard to failing or neglecting to wash their hands when they should have done so. The questionnaire included frequency of such experience (including finger disinfection using an alcohol-based hand rub), time slot, circumstances, and number of patients they made direct contact with per day, etc.

The number of patients they made direct contact with per day was  $13.3 \pm 9.4$  persons on average. A total of 1,020 nurses (77.7%) answered that they neglected to wash their hands when they should have done so. The frequency of the neglecting to wash hands was  $7.5 \pm 14.3$  times per month on average for all the respondents, and  $10.2 \pm 15.8$  times per month for the 1,020 who admitted to neglect washing their hands. Of 624 who responded to the question, 488 (78.2%) answered that it occurred in patient rooms (Fig. 1). Of 785 cases from 627 respondents, 430 cases occurred during night duty (54.8%), and 355 cases occurred during day duty (45.2%)

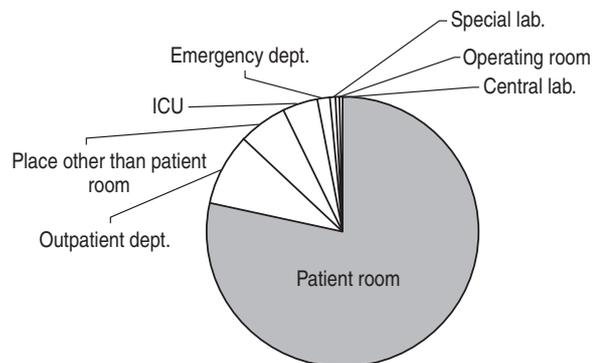


Fig. 1. Places where nurses could not or did not wash their hands.

No. of answers: 622: Patient Room (except for ICU) 78.5%; Consultation Room/ Treatment Room in the Outpatient Department 5.8%; ICU/ Postoperative Recovery Room 4.2%; Emergency Department 1.3%; Special Laboratory & Treatment Room (laboratory for radiography, endoscopy, electromyography, etc.) 0.8%; Department of Operation 0.6%; Central Laboratory Department/Central Phlebotomy & Treatment Room 0.3%.

(Fig. 2). The higher frequency during the night duty may be caused by a smaller number of nurses on night duty (20-40% of day-duty nurses). Five hundred eighty nurses described situations in which hand washing was neglected. Four hundred eighteen said it occurred during direct care of the patients (72.1%), and 251 said it was during medical treatment

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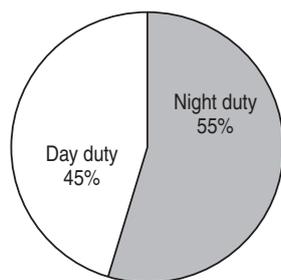


Fig. 2. Time slots in which the instances of the neglect of hand washing occurred (two or more answers were possible; 785 cases).

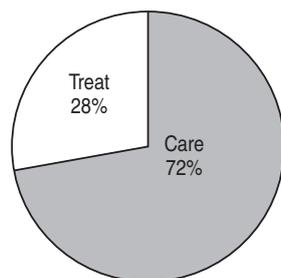


Fig. 3. Duty at the time of the event (two or more answers were possible; 580 cases).

of the patients (27.9%)(Fig. 3).

Details of the situations in which nurses neglected to wash their hands were classified into the seven categories described below (Fig. 4).

① Category <I was too busy>: Six hundred three (55.1%) were in this category. The specific contents of the descriptions are as follows. “Despite the small staff on night duty, there came too many nurse calls.” “I was incessantly pressed for time on account of the many patients under my responsibility during night duty.” “While another staff was having a break, her patients and mine called me at the same time.” “Physicians gave me instructions one after another without pause.” “Two or more urgent nurse calls were heard.” “Another patient in the same room called me urgently.” “When I was hurrying to a washstand, a patient stopped me for care.” “When I was

about to wash my hands, another staff member asked me to do something else.”

② Category <It was an urgent situation>: This category included 147 cases (14.0%). The descriptions are as follows. “When I was giving assistance to a patient vomiting, another patient in the next bed nearly fell down.” “During aspiration, a patient in the next bed showed disquieting behavior.” “During treatment, another patient in the same room nearly fell from the bed”, or “tried to pull out the tube for drip infusion”, or “was about to pull out the ileus tube.” “When I was going to a washstand after treating a patient, another patient was about to fall down on the floor.” “Finding a patient in the midst of respiratory arrest, I had to attend to the patient immediately without washing my hands.” “It was an urgently pressing delivery.” “The dialysis stopped due to a power failure.” “While giving assistance to a patient with the bedpan, another patient of the next bed showed a suddenly worsening condition, and I had to do cardiac massage immediately.” “During treatment, the alarm bell of piece of equipment rang.”

③ Category <I was doing the same duty for two or more patients>: One hundred fourteen responses (10.4%) were in this category. The situations were produced during regular duties, such as diaper changes, disposal of excretes, collection of urine from bags for dwelling catheters and collection of excretes from drains. This category included assistance to a doctor who makes a quick round of patients without giving enough time for a nurse to do what he asked.

④ Category <I forgot to wash my hands>: Ninety-nine (9.0%) were classified into this category. “It was in a busy time slot during night duty.” “The outpatient department was crowded with patients.” “I was upset.” “A nurse call made me forget to wash my hands.” “I tend to forget to wash my hands when wearing gloves as I feel a lesser sense of filthiness with them.” “If it is not a patient with infection, I am not alert enough to wash my hands.” “I forget to wash my hands after a minor treatment.” “I forget to wash my hands when I am preoccupied with something else.” “I easily forget unless I consciously remember that hand washing is important.”

⑤ Category <I do not recognize the necessity of washing hands>: Ninety-five (8.7%) were in this category. Responses were as follows. “Washing hands is troublesome.” “A waste of time.” “It is all right if my hands look clean.” “Others may

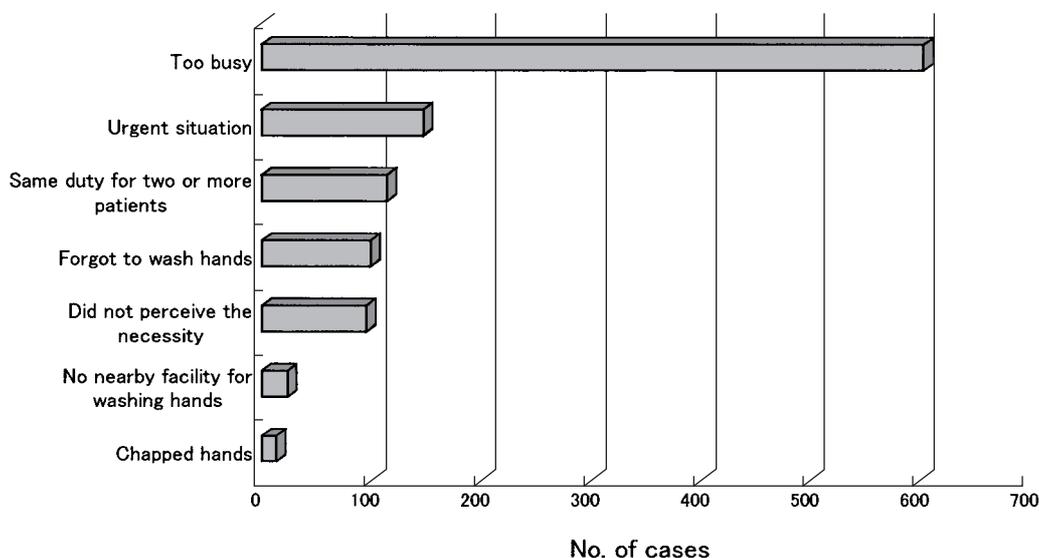


Fig. 4. Reasons that nurses could not or did not wash their hands.

not be washing their hands. Not washing my hands makes no difference.” “No problem as I use a clean side of my hand.” “Answering nurse calls is a priority.” “There is no need of washing hands for diaper changes.” “Not time enough to wash my hands after every treatment.”

⑥ Category <No facility for washing hands near the site of the duty>: Twenty-three (2.1%) were in this category. “There is no fast-dry finger disinfectant at the bedside” or “on the desk for medical examination at the outpatient department.” “The washstand is too far.” “There is no facility for washing hands in open areas such as the dining room.”

⑦ Category <My hands are chapped>: Thirteen (1.1%) were in this category. “Hands are chapped by alcohol” or “by powder of gloves.” “Dermatitis and wounds smart with alcohol.” “To avoid chapping, I use gloves instead of washing my hands.”

The above results clearly show typical situations that nurses are confronted by every day. Busy duty, particularly during the night, emergencies and urgencies, and moments of disorganization all contribute to the neglect of hand washing. Too few

nurses in a ward and inadequate hospital design may be aggravating factors. Repetitive actions, such as diaper changing, and carelessness and lack of attention also lead to the neglect of conscientious hand washing. Thus, a notice stating “Wash your hands” posted on a wall or the availability of an infectious control manual may be useful. However, the neglect of hand washing appears to be caused more by the style in which a hospital is managed. Hospital design and their general management may have to be reexamined from the viewpoint of hospital infection control. For such an undertaking, analyses such as those presented in this report will be of value.

#### REFERENCE

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