
The handshaking habits of hospital doctors before and after the COVID-19 pandemic

SHORT REPORT

SUKI LIYANARACHI

suki.liyanarachi@stolav.no

Department of Paediatric Orthopaedics

St Olav's Hospital, Trondheim University Hospital and

Department of Neuromedicine and Movement Science

Norwegian University of Science and Technology (NTNU)

Author contribution: idea and design, collection, analysis and interpretation of data, literature searches, drafting and review of the manuscript and approval of the submitted version.

Suki Liyanarachi, specialist in orthopaedic surgery, senior consultant and PhD student.

The author has completed the ICMJE form and declares no conflicts of interest.

KRISTIN VARDHEIM LIYANARACHI

Department of Infectious Diseases

St Olav's Hospital, Trondheim University Hospital and

Department of Circulation and Medical Imaging

Norwegian University of Science and Technology (NTNU)

Author contribution: collection and interpretation of data, drafting and review of the manuscript and approval of the submitted version.

Kristin Vardheim Liyanarachi, specialist in infectious diseases, senior consultant and PhD student.

The author has completed the ICMJE form and declares no conflicts of interest.

DON RANSI LIYANARACHI

Department of Otorhinolaryngology

St Olav's Hospital, Trondheim University Hospital

Author contribution: collection and interpretation of data, drafting and review of the manuscript and approval of the submitted version.
Don Ransi Liyanarachi, specialist in otorhinolaryngology.
The author has completed the ICMJE form and declares no conflicts of interest.

LARS GUNNAR JOHNSEN

Orthopaedic Trauma Department
St Olav's Hospital, Trondheim University Hospital and
Department of Neuromedicine and Movement Science
Norwegian University of Science and Technology (NTNU)
Author contribution: design, analysis and interpretation of data, drafting and review of manuscript and approval of the submitted version.
Lars Gunnar Johnsen PhD, specialist in orthopaedic surgery, senior consultant and associate professor.
The author has completed the ICMJE form and declares the following conflict of interest: he has received lecture fees from the Norwegian Association of Physiotherapists.

Background

During the COVID-19 pandemic, health authorities recommended less interpersonal physical contact. Our hypothesis was that hospital doctors greet new patients with a handshake less frequently after the pandemic than before.

Material and method

In January 2024, we undertook a pragmatic cross-sectional survey of a sample of doctors from three different clinics at a large Norwegian hospital. The doctors were asked to report their handshaking habits before and after the pandemic.

Results

A total of 152 hospital doctors took part in the study. Before the pandemic, 143 of these doctors (94 %) greeted outpatients with a handshake, while 115 (76 %) greeted hospitalised patients with a handshake. After the pandemic, these figures had fallen to 35 (23 %) and 33 (22 %) respectively. A total of 139 doctors (86 %) reported that they had changed their greeting habits. Of these, 95 (73 %) had changed their greeting habits for reasons of infection control.

Interpretation

After the pandemic, hospital doctors are less inclined to greet patients with a handshake than before the pandemic.

Main findings

In a cross-sectional survey of hospital doctors, 86 % responded that they had changed their greeting habits after the COVID-19 pandemic.

The doctors reported that they now greeted new patients with a handshake less frequently. The majority had changed their behaviour for reasons of infection control.

In the western world, a handshake is an important way of greeting other people and making a first impression [\(1\)](#). In surveys conducted prior to the COVID-19 pandemic, patients responded that they wanted doctors to greet them with a handshake [\(2, 3\)](#). From the doctor's perspective, a handshake will not only serve as an introduction and build a relationship; it also provides an opportunity to learn something about the patient's state of health [\(4\)](#). Infection can be transferred through hand contact, and it has been demonstrated that pathogens can be transmitted by shaking hands [\(5\)](#). Good hand hygiene is important to prevent infection [\(6\)](#). During the COVID-19 pandemic, health authorities recommended social distancing and less interpersonal physical contact [\(7\)](#).

We wanted to investigate whether the handshaking habits of hospital doctors had changed after the pandemic, and the potential reasons for such a change. We also wanted to study whether the doctors' level of clinical experience or departmental affiliation had an impact on potential changes to their handshaking habits.

Material and methods

In January 2024, a self-designed digital questionnaire was sent to all doctors in clinical practice at three clinics at Trondheim University Hospital. Doctors were included who worked in the departments of orthopaedics, otorhinolaryngology or in any department at the Clinic of Medicine (departments of nephrology, haematology, infectious diseases, gastroenterology, stroke, geriatrics and endocrinology). These departments represent a wide range of surgical and medical disciplines that provide both elective and emergency treatment. Recently qualified doctors and licensed medical students were also invited to take part. No sensitive personal data were collected. The link to the questionnaire was sent to the doctors' email address at the hospital.

The doctors were asked to indicate whether they believed their handshaking habits with new patients had changed since the pandemic, and if so, the reason for this change. Participants were asked if they greeted new patients by shaking their hand before and after the pandemic. The response options were 'yes, usually', 'no, generally not', 'sometimes' and 'not applicable'. Pragmatic phrases were chosen for the response options to avoid yes and no answers, which are frequently interpreted as 'always' and 'never'. The objective was not to establish

whether the doctors *always* greeted new patients with a handshake, but what was/is their usual practice. The doctor's level of experience, age and position were recorded, but not their sex. A distinction was made between outpatients and hospitalised patients.

The project was approved by the clinic's management and research committee. The Regional Committee for Medical and Health Research Ethics confirmed that their pre-approval was not required.

Results

A total of 152 hospital doctors took part. The response rate from the department of orthopaedics was 86 % (62 of 72), from otorhinolaryngology 88 % (21 of 24) and from the Clinic of Medicine 71 % (69 of 97). A total of 9 % of participants were aged 20–29 years, 34 % were 30–39 years, 29 % were 40–49 years, 18 % were 50–59 years and 10 % > 60 years. A total of 83 (55 %) participants worked in surgical departments, i.e. orthopaedics ($n = 62$) and otorhinolaryngology ($n = 21$), while the remaining 69 (45 %) worked in medical departments.

In respect of outpatients, 143 doctors (94 %) reported that before the pandemic, they would normally shake the patient's hand. After the pandemic, this number was 35 (23 %). In respect of hospitalised patients, the corresponding figures were 115 (7 %) and 33 (22 %) (Table 1). A total of 130 doctors (86 %) reported that they had changed their greeting habits after the pandemic. These doctors responded that they now shake the patient's hand less often, have less interpersonal physical contact when greeting patients and/or are more focused on hand hygiene. Of these doctors, 95 (73 %) responded that this was for reasons of infection control. Only three licensed medical students took part in the study. When they were categorised with junior doctors as LIS 1, LIS 2 and LIS 3, 44 (85 %) responded that they changed their handshaking habits after the pandemic. In the category of senior consultants and specialists, 86 (86 %) responded that they had changed their handshaking habits. Furthermore, 82 % of doctors in surgical departments and 88 % of doctors in medical departments responded that they had changed their greeting habits after the pandemic.

Table 1

Reported handshaking habits when greeting new patients before and after the pandemic, based on a survey of hospital doctors at three clinics in Trondheim University Hospital in January 2024 ($N = 152$). Responses are given in numbers (%).

Question and response options	Outpatients		Hospitalised patients	
	Before the pandemic	After the pandemic	Before the pandemic	After the pandemic

	Outpatients		Hospitalised patients	
Do you greet new patients by shaking their hand?				
Yes, usually	143 (94)	35 (23)	115 (76)	33 (22)
No, generally not	3 (2)	70 (46)	14 (9)	76 (50)
Sometimes	2 (1)	43 (28)	22 (14)	38 (25)
N/A	4 (3)	4 (3)	1 (1)	5 (3)

Discussion

Our sample of hospital doctors reported that after the COVID-19 pandemic, they greet patients with a handshake less frequently than before, and they put this down to infection control. Even before the pandemic, campaigns were proposed to reduce handshaking practices in the health service [\(8\)](#) because we know that handshakes transmit more pathogens than alternative forms of physical greeting [\(9\)](#). The doctors' change in behaviour appears to be consistent with previously proposed campaigns.

Our hospital doctors' greeting practices before the COVID-19 pandemic are consistent with published patient expectations. Two studies have shown that 70–80 % of Portuguese and US patients considered it important to greet doctors with a handshake [\(2, 3\)](#). An Irish study showed that doctors who introduce themselves are also the ones who shake patients' hands [\(10\)](#), and that this was in accordance with the patients' wishes. Our knowledge is insufficient about Norwegian patient expectations, and about the permanence of the changes in greeting habits observed in our study. However, we believe that many doctors have now lost a natural opportunity to introduce themselves to the patient, and that they need to be more aware of this.

Strengths and weaknesses

We have included multiple disciplines and clinics with different organisational cultures and management styles. Medical and surgical disciplines are both represented. The response rate is high, and we believe our sample is representative of hospital doctors in Norway. Potential weaknesses include the fact that the survey is based on self-reported data collected through a non-validated questionnaire developed by ourselves.

Conclusion

Our sample of hospital doctors reported that they had changed their handshaking habits after the pandemic, generally for reasons of infection control. Fewer doctors now greeted new patients with a handshake, and this finding appeared to be irrespective of medical discipline or level of clinical

experience.

We would like to thank Hanne Kvalvik, quality advisor, for her assistance in collecting the data. The article has been peer-reviewed.

REFERENCES

1. Chaplin WF, Phillips JB, Brown JD et al. Handshaking, gender, personality, and first impressions. *J Pers Soc Psychol* 2000; 79: 110–7. [PubMed] [CrossRef]
2. Makoul G, Zick A, Green M. An evidence-based perspective on greetings in medical encounters. *Arch Intern Med* 2007; 167: 1172–6. [PubMed] [CrossRef]
3. Nuno J, Fernandes S, Silva TR et al. What attributes do patients prefer in a family physician? A cross-sectional study in a northern region of Portugal. *BMJ Open* 2021; 11. doi: 10.1136/bmjopen-2019-035130. [PubMed] [CrossRef]
4. Woodside KJ. A piece of my mind. A handshake. *JAMA* 2013; 310: 481. [PubMed][CrossRef]
5. Hamburger M. Transfer of beta hemolytic streptococci by shaking hands. *Am J Med* 1947; 2: 23–5. [PubMed][CrossRef]
6. Folkehelseinstituttet. Håndbok for håndhygiene i helsetjenesten. <https://www.fhi.no/sm/handhygiene/handhygieneveilederen/?term=> Accessed 13.5.2024.
7. Folkehelseinstituttet. Råd for helsevirksomheter med én-til-én-kontakt. <https://www.fhi.no/historisk-arkiv/covid-19/koronavirusveilederen-arkiv/en-til-en-helsetjenester/#rd-til-helsepersonell> Accessed 13.5.2024.
8. Sklansky M, Nadkarni N, Ramirez-Avila L. Banning the handshake from the health care setting. *JAMA* 2014; 311: 2477–8. [PubMed][CrossRef]
9. Ghareeb PA, Bourlai T, Dutton W et al. Reducing pathogen transmission in a hospital setting. Handshake versus fist bump: a pilot study. *J Hosp Infect* 2013; 85: 321–3. [PubMed][CrossRef]
10. Gillen P, Sharifuddin SF, O'Sullivan M et al. How good are doctors at introducing themselves? #hellomynameis. *Postgrad Med J* 2018; 94: 204–6. [PubMed][CrossRef]

Publisert: 15 August 2024. Tidsskr Nor Legeforen. DOI: 10.4045/tidsskr.24.0069

Received 31.1.2024, first revision submitted 4.4.2024, accepted 13.5.2024.

Published under open access CC BY-ND. Downloaded from tidsskriftet.no 27 January 2026.