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A Peer Reviewed International Journal for the Advancement of Clinical Skills

- 'docendo ac discendo' - 'by teaching and learning'

In this issue:

Preparation for your first surgical firm – an insight into perioperative practice

Patients' attitudes towards participating in clinical skills training purely for teaching purposes

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Clinical examination of metacarpal rotation: proceed with caution

Foreword

Welcome to the latest edition of the International Journal of Clinical Skills (IJOCS), Volume 7, Issue 2, March 2013.

The majority of medical students will enter their first surgical session not having had contact with immediate pre- or post-operative patients, never having set foot in an operating theatre before and with an overwhelming fear of fainting, or doing something inexcusable. A study conducted in Leeds, England, describes the planning, implementation and reflection of pilot sessions which utilise innovative resources and subject specific material. Use this pilot study to help implement perioperative education for your students, thus reducing risks and ultimately improving patient outcomes.

Exposure to real patients with real problems is highly valued by medical students. With medical student numbers increasing globally and opportunities to access real patients in healthcare facilities declining, alternative arrangements have to be made to provide students with a 'real' patient experience, including the use of 'patient volunteers'. However, little is known in relation to patients' experiences of being examined by medial students for purely teaching purposes. An Australian research group present an interesting study which discusses patients' attitudes and experiences. Are volunteer patients a viable alternative to utilising patients in healthcare settings? Find out what the evidence shows.

The dynamic hip screw (DHS) is the most commonly used implant for hip fracture. One of its postoperative complications is infection, which can be associated with a high degree of morbidity and occasionally mortality. Our colleagues at the Trauma and Orthopaedic Department, Glan Clwyd Hospital, Wales, suggest a technical method for the management of deep-seated infection following DHS fixation. This novel technique has the potential to help manage early deep-seated would infection, without compromising stability of the fracture fixation or needing to perform excision arthroplasty. Utilise this technical tip to improve the quality of patient care and reduce morbidity.

Metacarpal fractures are very common with frequent presentation to Accident and Emergency Departments. However, caution is required when assessing such injuries. This interesting paper illustrates how healthy individuals can simulate a rotational deformity in the little or ring fingers of a 'normal' hand and therefore the importance of accurate clinical examination.

As always, your feedback is invaluable for the continued development of the International Journal of Clinical Skills – the only peer reviewed international journal devoted to clinical skills (e-mail: feedback@ijocs.org).

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International Journal of Clinical Skills

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Patients' attitudes towards participating in clinical skills training purely for teaching purposes

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Abstract

Exposure to real patients with real problems is highly valued by medical students. However, with medical student numbers increasing and opportunities to access real patients in health care facilities declining, alternative arrangements have to be made to provide students with a real patient experience. Currently, medical students in their formative years (Years 1 – 3) at The University of Western Australia are exposed to real patient volunteers during their on-campus clinical skills sessions. However, little is known in relation to patients' experiences of being examined by medical students purely for teaching purposes (i.e. in the absence of treatment).

45 patients completed an anonymous survey and 13 patients participated in a focus group regarding their experiences of being examined by medical students during on-campus clinical skills sessions. Generally patients had positive attitudes towards being examined by medical students. These results suggest that utilising patient volunteers for on-campus clinical skills training is a viable option to provide students with exposure to real patients.

Background

Early clinical experiences for medical students are of enormous value in strengthening students' learning in the basic sciences giving their learning an added relevance and highlighting the link between basic sciences and clinical medicine (i.e. making their learning more real and relevant). Early experience helps develop students' professional attitudes, confidence in interactions with patients and increases their interest to learn [1, 2].

Clinical skills (consultation skills and physical examination skills) are taught within the unit Foundations of Clinical Practice in Years 1 – 3 of the medical course and in the Graduate Entry Medical Program (GEMP) at The University of Western Australia (UWA). In the past (pre-2005) all students in Years 1 – 3 and GEMP were assigned to general practitioners in the community which thus gave them exposure to patients in the formative years of the course. However, with medical student numbers in Western Australia increasing it has become progressively more difficult to place all years of students within the primary health care setting. Furthermore, students in the early years of training are unable to obtain exposure to hospital patients because these patients are often too sick to be examined [3] and are less available due to shorter hospital stays [3, 4]. Additionally, these days patients are more aware of their rights to refuse examinations by medical students than they were in the past [5].

Live models are often used during on-campus clinical skills sessions as a substitute for real patients in health care facilities [6]. However, these models are essentially 'normal' and are unable to provide a 'real' clinical experience from either a history taking or physical examination perspective. Thus exposing students to patient volunteers (via a patient database) during the formative years may provide an alternative solution to the problem of accessing patients in health care facilities.

Anecdotal evidence from free written comments on the 'Students Perceptions of Teaching' evaluations indicates that students think highly of these types of clinical experiences. In addition, there had been criticism from hospital based clinicians that medical students were entering fourth year without having seen a 'real patient with a real problem'. Therefore exposing students to real patients in the formative years would have flow-on effects into the upper years of the course as students would be better prepared for clinical practice in the hospital-based years.

Patients generally have very positive attitudes towards being examined by medical students while hospitalised [7] or attending a general practice [8]. They are comfortable with medical students being present while attending an obstetrics and gynaecology clinic [9], but are less favourable regarding the idea of having a medical student present while attending a sexual health clinic [10], and are reluctant to be a medical student's first patient in an emergency department, especially for invasive procedures [11].

Furthermore, once receiving medical student care within a hospital setting, patients are likely to volunteer for future medical student participation [7]. However, these studies are restricted to medical student involvement in settings where patients are attending with the intent of seeking medical care as opposed to attending purely for teaching purposes. Thus, to the best of our knowledge, little if anything is known concerning patients' experiences of being examined by supervised medical students purely for teaching purposes (i.e. in the absence of receiving medical care) in a university setting.

The aim of this study was to examine patients' perceptions regarding being examined by supervised medical students in a university setting for teaching purposes. Specifically, we were interested in understanding why individuals volunteered, what the experience was like, whether they would volunteer again and whether they would recommend others to volunteer. Such information would assist in determining whether utilising volunteer patients in an on-campus setting, during the formative years, is a viable alternative to exposing students to real patients in a community health care setting.

Methods

Participants

Survey patients: All individuals who participated as a real patient for third-year medical students during their clinical skills training at UWA in 2009 were sent a survey package shortly after they had attended their first clinical skills session in that year (respiratory: *N* = 10; neurological: *N* = 5; cardiovascular: *N* = 3; gastrointestinal: *N* = 1; haematology/thyroid: *N* = 3; chronic illness: *N* = 15); thereby giving a total of 37 patients at clinical skills training. The survey package contained a cover letter / information sheet, the survey, a form for a chance to go into a draw to win one of ten personal cheques to the value of $50 as a thank you for completing the survey, and two pre-paid reply envelopes (one for the completed survey and one for the draw).

Focus group patients: Two focus group sessions were held with patients, with a respiratory and/or cardiovascular disorder, immediately following two clinical skills sessions with first-year medical students on the 2nd of October 2009 at UWA. Patients were randomly assigned to one of the two focus groups. One focus group was comprised of six patients (four males) and a female carer from one of the patients, whereas the other was comprised of seven patients (three males). All patients had the option of receiving an honorarium payment of $18 as a thank you for their time.

Procedure

Ethical approval for this study was obtained from the UWA Human Research Ethics Committee.

Survey: Patients were asked to indicate their gender, age and to explain why they volunteered to be examined by a supervised medical student in a clinical setting purely for teaching purposes. Subsequently patients were asked to rate ten statements (Figure 1) on a 7-point rating scale (1 = strongly disagree; 7 = strongly agree). Lastly, patients were asked whether they would volunteer to be a patient again, whether they would recommend others to volunteer and to provide reasons for their responses.

Focus group: Prior to taking part in the focus group all patients were informed regarding the purpose of the session and that their anonymity would be preserved. Permission was obtained from patients to audio record the session. Patients were asked:

A. Why they volunteered
B. Their thoughts about why some individuals with a medical condition choose not to volunteer
C. Whether sessions with students were what they had expected when they were a patient for the first time
D. Whether they felt that they were adequately informed regarding sessions with students prior to the session taking place (and how this could be improved if this was not the case)
E. Where they heard about being a patient
F. At what year of study they thought it appropriate to expose medical students to real patients for non-invasive procedures (e.g. 'listening to the chest')
G. To explain positive and negative aspects regarding being a volunteer patient

At the end of the session patients were thanked and all, but two, were given the identical survey package that was posted to third-year clinical skills patients. Two patients were not given a survey package because they had already completed the survey earlier following a session with third-year medical students.

Results

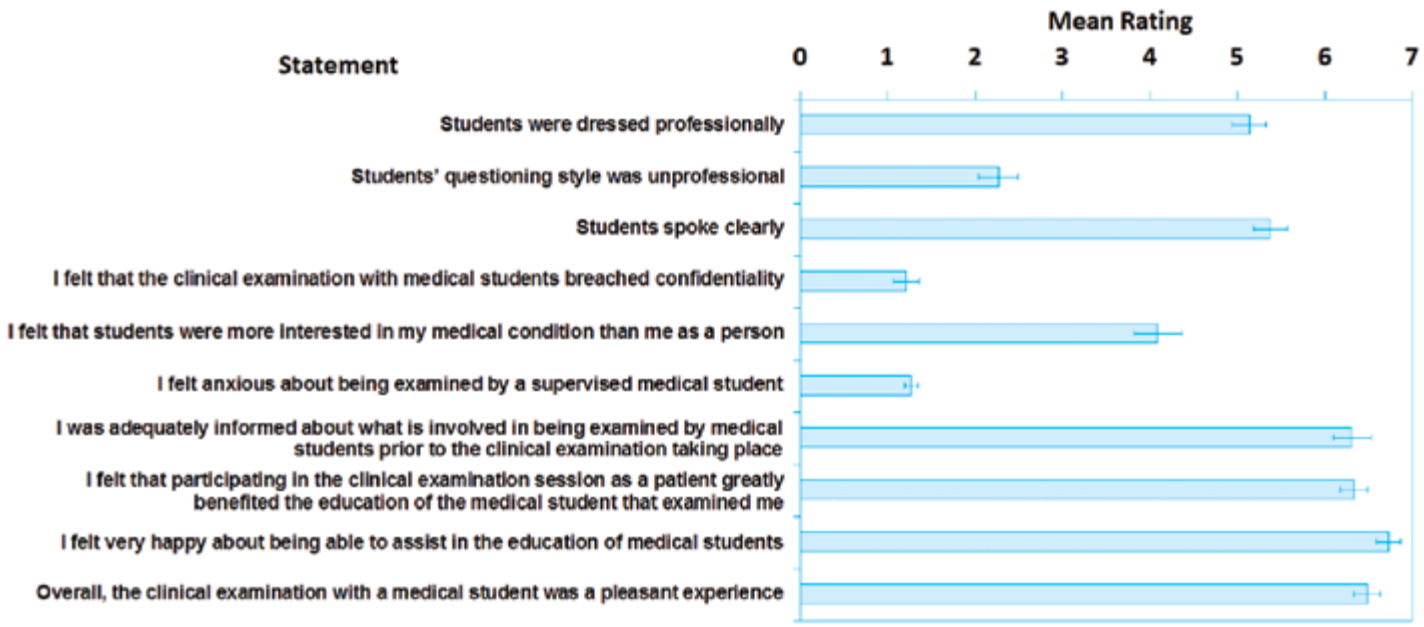
Survey

A total of 48 surveys were issued (37 patients at clinical skills training plus 11 focus group patients). Of these 48 surveys, 45 completed surveys were returned from the patients. 24 patients were male. Patients had a mean age of 62.9 years (*S.D* = 14.4, range = 21 – 83, *n* = 45).

Reasons for volunteering: Upon analysis of survey responses, patients' reasons for volunteering included: interest, desire to help students learn, recommendation by someone, that they themselves or their children studied at UWA, gratitude towards those that saved their life, and that they wanted to give something back to the medical profession.

Ratings: A one sample Wilcoxon signed-rank test was performed to compare the median score of each statement (Figure 1) to the midpoint value of the scale (4). Participants' median ratings for all but one statement, *'I felt that students were more interested in my medical condition than me as a person'*, significantly differed from the scale's midpoint (all p values were $p \leq 0.001$).

Figure 1: Mean ratings of statements on a 7-point scale (1 = strongly disagree, 7 = strongly agree) made by patients regarding their experience of being examined by medical students. SE bars are shown.



All statements were rated by 45 patients with the exception of the following two statements: *'Students were dressed professionally'* (N = 44) and *'I felt that the clinical examination with medical students breached confidentiality'* (N = 43).

Volunteering again: 44 patients indicated that they would volunteer again because they were happy to help students and found the experience enjoyable, rewarding, interesting, and/or pleasant. One patient, who was 83 years old, indicated that he would not volunteer again by commenting *'I'm getting too old to participate even though I was happy to participate'*.

Recommending others to volunteer: All, but one of the 44 patients, that responded to the question regarding whether they would recommend others to volunteer indicated that they would recommend it. These patients reasoned that it is important for students to learn and that they themselves enjoyed the experience e.g. *'I realise the difficulty of recruiting volunteers and advocate volunteering because students will ultimately be doctors and need as much practice with patient interaction as possible'*. Some patients commented that they had already asked others to volunteer. The reason given for not recommending others to volunteer was stated as *'This is a very personal decision. However, I would gladly talk with another person to help with their decision'*.

Focus group

Reason for volunteering: Patients commonly reasoned that they volunteered out of thanks and wanting to give something back; e.g. *'lucky to be alive, so give something back'* (Patient 4); *'gratitude… it's a great opportunity for me to do something back for the doctors that saved my life'* (Patient 5); and *'I really want to give something back to the medical profession that has given me 15 years so far of good life afterwards'* (Patient 11).

Some patients participated for altruistic reasons and that they wanted to make something good out of a having a medical condition; e.g. *'if what I've got is of any value to the students learning, well I'll let them feel and prod and poke if that makes it any better for them'* (Patient 3); and *'somewhere down the track they need to learn and if in any way I can be of help to anyone I'll do it'* (Patient 7).

Patients also volunteered because of the nature of their medical condition. For example Patient 10 explained that she had an abnormal sounding heart, was now living a healthy life with no medication and did not need further surgery and so volunteered because *'it's also very good for them* [students] *to know that you can fix your patient'*. Patient 9 explained that *'the first time I was ever admitted to hospital that I remember, there were just hoards and hoards of medical students coming through to see me. Because I'd been told that I was a one in a million …over time I've seen the good that comes out of doctors having actually practiced on people, especially in relation to bedside manners'*.

On the other hand, Patient 8 stated that they had volunteered due to a family member's medical condition: *'…my daughter has Type 1 diabetes… I've come to see how important it is for well trained caring people to keep coming through. So I thought that would be some way of helping outcomes for her and people like her in the future'*.

Others indicated that they had a family member that studied/studies medicine or that they themselves studied a health profession and therefore saw how important it is for the students to be exposed to real patients; e.g. *'I've got a medico son so I remember what we went through with him and how important it was to have this sort of help given'* (Patient 4). Patient 6 indicated that many of her family members studied medicine and thus she had *'always been interested in medicine'*.

Patient 13 stated *'I'm just purely a volunteer. I give blood and I think well when I got approached to come here I thought why not'*.

Reasons for not volunteering: Several patients indicated that some individuals may not volunteer because there may be a lack of awareness of the need for patients due to possible *'lack of marketing'* (Patient 12). Patient 2, who responded to an e-mail within the UWA e-mail system, wondered *'if an email going out is really the best way to approach people'*. It was explained to both groups that advertisements were also placed in community newspapers. To this comment, it became apparent that newspaper adverts may not be successful as several patients had not seen these adverts and because such adverts are not very personal; e.g. *'a more personal approach, yeah. I can't guarantee that if I'd just seen it in the paper I would have come'* (Patient 4).

Both groups mentioned that individuals may not volunteer because they were not comfortable with the process; e.g. *'some are not comfortable'* (Patient 1) and *'because they are just uncomfortable with having someone prodding and poking'* (Patient 10). Furthermore, the idea of fear was mentioned; e.g. *'a lot of people are terrified of anything to do with medicine I've discovered'* (Patient 6); and *'could some people be scared they might find something else that's wrong with them?'* (Patient 13).

Patient 9 mentioned that her husband, a transplant recipient, would not volunteer because *'he didn't want to be defined by his disease'*. To which another patient added *'if you're the sort of person that would share anything you might be more disposed to actually volunteer'* (Patient 10).

Others mentioned that people may not volunteer because they *'think it* [is] *a waste of time'* (Patient 11), because *'some people are apathetic'* (Patient 7) and because *'they just can't be bothered doing anything and they don't think that it's actually helping other people'* (Patient 1's carer). Patient 7 even explained that she had mentioned volunteering to members of her support group and *'some of them sort of said, "oh god I couldn't be bothered"'*.

Other issues that were raised are that some individuals *'don't want to be examined by unprofessional students'* (Patient 11) and that some individuals are *'intimidated by being questioned by people who are educated'* (Patient 9).

Expectation: Patients were asked to indicate via a show of hands whether being a volunteer patient was what they had expected, when they were a patient for the first time. All patients indicated that the experience was what they had expected.

Adequately informed: Patients were asked, again via a show of hands, whether they were adequately informed as to what is involved in being a volunteer patient, prior to the session taking place. All patients in one focus group (Patients 1 – 6) indicated that they were adequately informed. However, patient 6 indicated that she was not contacted until 18 months after being recruited and thought she *'was forgotten'*. This situation was clarified by explaining that students study different medical conditions throughout the year and thus suitable patients were only contacted just prior to the teaching session for which their medical condition is of interest. Another patient then added that this now explained why he, but not his wife, was invited to attend the session that day.

Four out of seven patients in the second focus group (Patients 7 – 13) indicated that they were adequately informed. Two patients explained that the document they received prior to the session did not explicitly mention anything in relation to being physically examined and if they were unfamiliar with these sessions then they would have felt unprepared. Patient 12 suggested that this could be improved by providing volunteers with an outline of the events to take place: *'Maybe give a dot point. There'll be an introduction, a ten minute history taking, one or more students will examine you, depending on what you have. There will be a summary from one of the students at the conclusion of the examination'*.

Recruitment source: Patients responded that they heard of volunteering from their Probus Group (a social club for retirees), an advert in a little magazine at one of the local hospitals, newspaper advertisements, university student and staff e-mails, second-hand from a friend who saw the staff e-mail advert, from a sibling who was a medical student, from their specialist, and from their GP who was part of the medical teaching staff.

Time of exposure to real patients for non-invasive procedures: All patients indicated that they thought it is appropriate to expose medical students to real patients for non-invasive procedures from the beginning of their studies (i.e. first year).

Positive aspects of volunteering: When patients were asked what aspects they thought were the best in relation to volunteering, most patients focused on the students' level of enthusiasm and willingness to learn; e.g. *'seeing the young people, they're gorgeous, enthusiastic, keen as mustard and it's nice to be part of that'* (Patient 2); and *'they can't learn enough is the feeling I get. Teach me more'* (Patient 7). Others focused on particular instances of the learning process; e.g. *'see them learning and sometimes you see when they hear something unusual for the first time in their life, it's like oh yeah, I've heard that, that sound, you know'* (Patient 5). Others commented on the positive interactions they experienced with medical students – e.g. *'I like talking to them because one of my first experiences of medical student was, he sat down and took the time - like sat down on the floor, I was sitting on the couch and just talked to me about me. I thought that's wonderful, because doctors don't have the time'* (Patient 9); and *'the whole interacting and you've contributed something vital to their learning'* (Patient 10).

Negative aspects of volunteering: Patients were asked if they had any suggestions for change regarding the use of real patients. Within the first focus group (Patients 1 – 6) Patient 2 commented on the nature of the timing of the blocks of sessions by stating *'it would be easier for me to come if it was a two-hour block rather than an hour off and then another hour'*. The reasoning for this was explained to the patient.

Within the second focus group (Patients 7 – 13) several issues were raised regarding the way time with the students was utilised. Patient 7 suggested that students should be provided with a brief patient history prior to the session *'so that when they come in they're not going to waste a whole lot of time on age and your background … and then go straight into asking and looking at whatever your problems are'*. Patient 9 had *'a converse thing to that going in there with them knowing nothing'* because *'if you give them a little bit they may forget to go anywhere near that area'*. Patient 11 added *'I think it would be wrong to give them any information because we're trying to teach them how to be doctors and when you go to a doctor's surgery you're not going to have a piece of paper that will say, I'm a female and I'm 72'*.

Another concern raised was that patients felt that not all students had a go at seeing the patient; e.g. *'they should all go through the routine'* (Patient 13). This discussion then related back to the utilisation of time which the group discussed earlier. Patient 13 also raised the point that all students know that for a particular session all patients have a particular type of disorder and thus asked *'why can't I go there and they find what I've got wrong?'*. It was explained to patients that the students they were seeing were first-year students and thus they were not at that stage in their studies when they could make diagnoses.

Discussion

The aim of the present study was to examine patients' perspectives regarding being examined by supervised medical students on-campus purely for teaching purposes. Specifically we were interested in establishing why individuals volunteered, what the experience was like, whether they would volunteer again and whether they would recommend others to volunteer. This information is valuable for medical educators in terms of potentially increasing the number of volunteer patients for on-campus clinical skills sessions.

Common reasons patients stated for volunteering included that they wanted to give something back to the medical profession, out of thanks to those that saved their life, that they themselves or their children studied at The University of Western Australia (UWA), and that someone recommended them to volunteer. These findings suggest that individuals who survived a severe medical condition and those affiliated with the university may be ideal populations for medical schools to target when seeking

new patient volunteers. Given that the majority of patients indicated that they would recommend others to volunteer, suggests that volunteer patient numbers could be increased by utilising current patients to assist in seeking new volunteers.

Within the focus groups a general sense of camaraderie was evident in that all patients implicitly encouraged each other on in regards to the importance of assisting medical students in their clinical skills training. Furthermore, there was the sense that older patients passed the importance of assisting medical students onto younger patients to ensure that patient numbers are maintained when older patients would cease to participate as a direct consequence of their age.

When focus group patients were asked where they had heard of volunteering it was established that community newspaper adverts are not ideal recruitment sources. Thus it is not recommended that medical schools allocate funding to newspaper patient recruitment adverts, which can be expensive. Individuals preferred a more personal recruitment approach thus reinforcing the idea that utilising current patients to assist medical schools in seeking new volunteers may be optimal. All patients indicated that they would volunteer again with the exception of the oldest volunteer patient who indicated that he was getting too old.

Generally patients' ratings of statements indicated that they had positive perceptions regarding medical student examinations. Survey patients generally rated that they were adequately informed regarding the sessions with students whereas a few focus group patients stated the converse. Some focus group patients were unaware that they would only be contacted when required and that they would be physically examined. One patient suggested that a clear outline of events to take place within the session should be given to patients so that they are fully aware as to what to expect. Making such amendments may further positively enhance the volunteer patient experience which is important for medical schools in terms of retaining existing patients and recruiting future patients.

When focus group patients were asked what aspects they liked best in regards to volunteering, most commented on the students' keenness and the positive interactions that they had with them. On the other hand, when patients were asked to comment on the negative aspects of volunteering, they commented on aspects that were beyond the students' control. For example, one patient commented that it would be easier to attend for a solid few hours without a break. Other patients commented on the utilisation of time with the students and how much prior information students should receive on a patient. Some patients felt that students should be provided with a patient's history prior to the session whereas others disagreed. These findings suggest that prior to patients attending a session, medical educators should adequately inform patients of the session's intended purpose, the students' year of study and what they could expect of students within a particular year of study. All focus group patients found it appropriate to expose first-year medical students to real patients for non-invasive procedures.

Conclusion

Patient volunteers had positive attitudes towards participating in clinical skills session on campus. Thus utilising volunteer patients for on-campus clinical skills training during the formative years is a viable alternative to utilising patients in health care settings which are difficult to access. Providing students with exposure to real patients with real medical conditions during the formative years will more adequately prepare the students for the hospital based years. Thus medical schools can still provide students with exposure to real patients in the absence of accessing patients in health care facilities. Furthermore, the present study highlights that in order for medical schools to be successful in utilising real patients for on-campus training, they need to provide patients with adequate information pertaining to sessions with students. Informing patients in regards to on-campus sessions is important in terms of enhancing the patient experience and to facilitate patient recruitment via existing patients.

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Declarations

The authors have no financial or other interests to declare in relation to this paper.

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