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ORIGINAL ARTICLE

The interprofessional learning experience: Findings from a qualitative study based in an outpatient setting

Flemming Jakobsen[a], Anne Mette Mørcke[b,c], and Torben Bæk Hansen[a]

[a]University Clinic for Hand, Hip and Knee Surgery, Regional Hospital West Jutland, Aarhus University, Aarhus, Denmark; [b]Copenhagen Academy for Medical Education and Simulation, Rigshospitalet, Copenhagen, Denmark; [c]Department of Clinical Medicine, University of Copenhagen, Copenhagen, Denmark

ABSTRACT

Clinical interprofessional education has traditionally taken place in hospital wards, but much diagnosis and treatment have shifted to the outpatient setting. The logical consequence is to shift more students' clinical placements from the "bedside" to outpatient settings. However, it is unclear how we ensure that this shift maximises learning. The purpose of this article is to understand the authentic learning experience in an interprofessional outpatient clinic setting. We performed an exploratory case study with interviews of four nursing students, 13 medical students, and six staff members who worked in an interprofessional outpatient orthopaedic clinic from March 2015 to January 2016. The interviews were transcribed and analysed using systematic text condensation. The students' self-reported learning experience in this outpatient clinic was characterised by direct patient contact and by authentic, interprofessional, task-based learning, and a preference for indirect supervision when conducting uncomplicated patient consultations. The supervisors intended to create this interprofessional outpatient clinic experience by having a clear teaching approach based on adult learning principles in a safe and challenging learning environment. The shift to the outpatient setting was strongly and practically supported by the management. This study indicates that student learning can be shifted to the outpatient clinic setting if there is supportive management and dedicated supervisors who establish a challenging yet safe interprofessional learning environment.

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Case study; clinical placement; interprofessional education; outpatient clinic

Introduction

It has been claimed for decades that interprofessional education (IPE) is a vital component of preparing students from different health professions for collaborative practice (World Health Organisation, 2010). Traditionally, IPE has taken place in hospital wards in which patients were hospitalised (Brewer & Stewart-Wynne, 2013; Hylin, Nyholm, Mattiasson, & Ponzer, 2007; Jakobsen, 2016; Jensen et al., 2012; Lachmann, Ponzer, Johansson, & Fossum, 2013; Ponzer et al., 2004; Reeves & Freeth, 2002; Wilhelmsson et al., 2009). However, the change in the role of hospitals, with the greater emphasis on outpatient treatment that has led to a reduction in the number of hospital beds (McKey, 2004), has created a need for new interprofessional learning environments. Much diagnosis and treatment have shifted to the outpatient setting, and the logical consequence is to shift students' clinical placements from the 'bedside' to the outpatient settings. Here, the patient flow is large and often includes a great number of patients with common clinical problems and, subsequently, considerable learning opportunities for students (Dent, 2005) However, speed in patient flow in an outpatient clinic is mandatory, and clinicians are under pressure to see a large number of patients referred to the clinic. Therefore, shifting IPE from the slower 'bedside' setting to the outpatient flow might compromise students' learning experiences.

The Association for Medical Education Europe (AMEE) has produced a guide to outpatient-based teaching. The guide describes opportunities for introducing clinical teaching in ambulatories and outpatient clinics not usually used for clinical placement for undergraduate students. The guide also gives examples of what students could learn there and how it could be organised (Dent, 2005). More recent research has reported that students can learn a great deal by participating in service-learning activities in student-run clinics. The students enhance their clinical knowledge, professional development, and communication skills (Gorrindo et al., 2014; Hansen & Simanton, 2009; Kent, Martin, & Keating, 2016; O'Neill et al., 2013) and because of the learner friendly environment where students can train their practical skills they seem to like it (Latta, Tordoff, Manning, & Dent, 2013). Furthermore, direct communication between students and patients is recommended to give students an authentic role and debrief them (Ashley, Rhodes, Sari-Kouzel, Mukherjee, & Dornan, 2009; Laksov, Boman, Liljedahl, & Bjorck, 2015). Despite this research, there are still a number of unanswered questions related to students' involvement in outpatient settings. For example, matching students' and supervisors' expectations is difficult (Aase, Hansen, Aase, & Reeves, 2016; Elnicki & Zalenski, 2013; Kernan et al., 2008; Liljedahl, Boman, Falt, & Bolander, 2015), and there is no agreement

CONTACT Flemming Jakobsen flemming.jakobsen@vest.rm.dk University Clinic for Hand, Hip and Knee Surgery, Regional Hospital West Jutland, Aarhus University, Lægårdvej 12, 7500 Holstebro, Denmark.

regarding what students actually learn from outpatient-based teaching (Shaheen, Papp, & Torre, 2013; Williams, Hui, Borschel, & Carnahan, 2013).

The article presents the findings from a study based on the following two research questions: (1) what characterises students' interprofessional learning experience and approach to learning? (2) How is the interprofessional learning experience implemented and supported by supervisors and managers? The overall purpose of this article is to enhance understanding of interprofessional learning during which students take care of authentic patients and acquire relevant learning experiences (Brewer & Barr, 2016; Oandasan & Reeves, 2005) in an outpatient clinic setting with a pedagogical approach based on adult learning methods (Barr, Koppel, Reeves, Hammick, & Freeth, 2005; Hean, Craddock, Hammick, & Hammick, 2012).

Background

The study was conducted at the orthopaedic outpatient clinic at the Regional Hospital West Jutland in Denmark to which patients were referred for check-up after fractures and orthopaedic surgery.

The setting was intended to be safe for the students, who were given an authentic professional role when examining and treating patients (Ashley et al., 2009). The authentic professional role was enabled by using task-based learning where the students together performed all tasks around the patient, including removing plaster casts and sutures, estimate range of motion, give instructions, and dictate for the record (Dent, 2005).

On two weekdays, one medical student and one nursing student together examined and treated patients on their own patient list. For this purpose, the management dedicated one of the normal examination rooms to a student list from 9 to 12 of the two weekdays. The nurse who supervised the nursing students had supervision as her main task. When she was not supervising students, she had only administrative tasks, which she without problems could leave if the students called for her. The surgeon who supervised the medical students most often simultaneously treated his own patients in the outpatient clinic or the operation theatre. Three to four patients, who came for relatively simple procedures such as removal of sutures or control of range of movement, were selected for the interprofessional student list by the surgeon or the nurse the day before they should be seen. The pair of students then read the selected patient records for the next day. First thing in the morning, they presented their plans and challenges for the surgeon and nurse supervisors, who could ask clarifying questions and, if necessary, give further instructions. The pair of students then used half an hour for final reading, practical preparations, and distribution of roles and tasks between them. The students then conducted the patient consultations alone as an interprofessional student team, but could call a supervisor at any time if they could not fulfil the task. When they had finished their list of patients, they participated in individual reflective supervision with their supervisor. Finally, without the supervisors' presence, the students together reflected on their collaboration and the learning outcomes.

As recommended by Dent (2005), the goal was to use task-based learning with indirect supervision to enhance the students' ability to conduct consultations in an authentic interprofessional setting where patients had well-defined symptoms and diagnoses. The set-up with pre-consultation instruction and post-consultation indirect supervision was intended to match the students' and preceptors' expectations and to create a safe learning environment for the students and patients.

Methods

We chose an exploratory qualitative case study approach to describe and analyse the characteristics of the interprofessional outpatient learning experience and explore the experiences of students, clinical supervisors and managers concerning the learning outcomes, learning environment, and practical organisation (Yin, 2014)

Study context

Because the interprofessional placement for medical and nursing students in the outpatient clinic was a new initiative, we decided to follow it closely by interviewing all stakeholders involved in the project throughout 2015. The participants were the students and staff who worked in the interprofessional orthopaedic outpatient student track at the Regional Hospital West Jutland in 2015. In all, there were five nursing students during their 6th semester, 14 medical students during their 12th semester, two nurse supervisors, three surgeon supervisors, and one charge nurse.

Data collection

Data were collected via semi-structured interviews by the first author (Brinkmann & Kvale, 2015). The interview guide for the students had questions about (1) supervision and the learning environment; (2) the workload and the patients; (3) the learning outcome that is uniprofessional, interprofessional, strengthening of professional identity, and finally future applicability of lessons learned. The interview guide for supervisors and charge nurse had questions about (1) their opinion on the teaching approach, including support, challenge, and individualising the supervision, and (2) leadership and practicalities, for example, temporal and spatial conditions for supervision. In the group interviews, all group members were encouraged to comment and nuance their answers. The interviews were transcribed by the first author before analysis.

Data analysis

We used systematic text condensation, starting with reading through the transcripts to get a general impression of the material. After this, the first author performed a preliminary coding and copied the meaning bearing units to a new document where sub-codes were added in an iterative process (Table 1). Finally, the coding was discussed among the three authors to reach consensus (Malterud, 2012).

Table 1. Illustrating examples of quotes, themes, and subthemes emerging from the analysis.

Example of quote	Theme	Subtheme
Student: I think it's awesome that we are alone with the patient—that there is not a supervisor sitting in the corner—because then the patient would instinctively have looked to the senior supervisor	Supervision	Challenging learning environment
Student: Working together gives a picture of reality	Learning outcome	Professional identity
Supervisor: The students are at different clinical, theoretical, and personal levels, and, therefore, one has to meet them where they are and try to build them up from there	Teaching approach	Individualise
Charge nurse: We have prioritised that the students get their own room for the consultations	Leadership and practicalities	Spatial conditions

Ethical considerations

In most countries, research involving human participants requires ethics approval. In many other countries, including Denmark, only research that involves some kind of risk to participants can be approved (or not approved). The Danish National Committee in Health Research Ethics always exempts studies concerning teaching interventions and interviews (Central-Danish-Region, 2016). In this study, no potential harm to participants existed. Danish medical and nursing students have access to patient records when they work as a clerk at a certain department or clinic because they take part in patient management and treatment. Therefore, the students are trained in confidentiality and rules. All Danish health students have substantial clinical training at hospitals, outpatient clinics, and general practice. Patients are routinely informed that student consultations are part of their admittance and hospital/clinic visits, and further consent is never sought by hospitals or healthcare providers. In this study, the students always started the consultation by introducing themselves as students, and the patients could refuse to be seen by the students and could always ask for a second opinion if they wished. Thus, all participants, students and patients, volunteered and were informed of the project. The interviewed students agreed to have their statements presented anonymously in research papers.

Results

The interprofessional outpatient learning experience was launched in February 2015. In the period from March 2015 to January 2016, we performed four group interviews with two to four participants and nine interviews with single persons. The average length of the interviews was 20 minutes. Four of the five nursing students and 13 of the 14 medical students participated in the interviews. All five supervisors and the charge nurse also participated in interviews. In the following paragraphs, we present the results from the interviews concerning: (1) students' learning experiences and approach to learning in the interprofessional orthopaedic outpatient clinic; and (2) ways in which the learning experience was supported by supervisors and management.

The students' learning experiences and approach to learning

During the interviews, the students were asked about supervision, workload and relevance, and learning outcomes. Their experiences are presented in the following.

Supervision

The supervision before the students performed the consultations was always interprofessional with the two students and their supervisors present. When asked in the interview if this was not waste of time the answer from the students was: 'No on the contrary, it would be waste of time to do it separately'.

The students reportedly received the supervision they needed before and after the consultations and they appreciated that they could call for a supervisor during the consultation if necessary. The medical students' and the nursing students' notes in the record were as a matter of routine approved by their supervisors and supplemented with oral feedback, but some of the medical students did not get oral feedback, in which they missed, because they felt unsecure about the quality of their notes. The students appreciated the way they were challenged when presenting their plans for the supervisors and when they were performing consultations and made decisions. However, one of the students said that at one occasion, she had too much instruction instead of being challenged. In principle, the medical students were supervised by the medical supervisor, but in the interviews, they regularly reported that they were also supervised by the nursing supervisor during the consultations, for example, if the medical supervisor was busy in the operation theatre. The medical students found supervision given by the nurses to be helpful and sufficient. One of the medical students said:

> If the supervising nurse is super experienced, she is normally able to answer our medical questions, so it is fine to be supervised by a nurse. (interview 2/line 107)

Contrary to the medical students who were supervised by both surgeons and nurses, the nursing students received all their supervision only from nurses. In particular, the students appreciated indirect supervision that allowed for direct communication with the patients. One of the nurse students stated:

> I think it's awesome that we are alone with the patient—that there is not a supervisor sitting in the corner—because then the patient would instinctively have looked to the senior supervisor. (interview 13/line 303)

Workload and relevance

The patients could be more or less complicated than expected, which sometimes resulted in consultations that were longer or shorter than expected. A nursing student said that when they were seeing patients without complications, they sometimes felt that they could have had more patients. While a medical student said that sometimes you could not foresee challenges, like meeting a psychiatric patient asking lots of questions or a

patient where there were problems with removal of a cast. Therefore, the students generally found the workload of only three to four patients to be convenient. Students also found the assigned types of patients to be relevant. Even if the patients were 'uncomplicated', there were so many practical things that the students should take care of that held great learning potential for them. For example, one of the medical students explained:

> There was a patient, where I in the beginning thought it was mostly a nursing task, but I found out that there still was something I had to examine—the range of motion and gait function—so it was a fine experience. (interview 9/line 101)

Learning outcomes

The students reported that they learned how to handle unexpected situations and gave an example, where a patient by a mistake was booked to show up before the students started their day. The patient was right up in the red zone and said that he was so angry because they wasted his time—and it was not the first time. The students said to the patient that they were sorry and during the consultation, they got him calmed. In the interview, the student reported that it had been fine experience, because the two students together could reflect on the experience 'because it is probably not the last time you will have an experience like this'. Experiences like this strengthened their professional identity in the interprofessional setting in which they supplemented each other when working together on a patient task. One of the nursing students said:

> Working together gives a picture of reality. One has to know what they have to do, what I have to do, and how we do it together. (interview 9/line 262)

The students' self-reported learning experiences in this outpatient clinic were characterised by direct patient contact and authentic, interprofessional, and task-based learning. The students appreciated the learning experience and the interprofessional approach.

They also preferred indirect supervision when conducting uncomplicated patient consultations.

The supervisors' and charge nurse's experiences and approach to teaching

During the interviews, the supervisors and managers were asked about their intended teaching approach and leadership. Their experiences are presented in the following paragraphs.

The supervisors learned from teaching

The supervisors found it rewarding to work with the students and as far as possible challenge and support the students learning. However, it could be a challenging task to stand back, as expressed by a surgeon:

> I think that perhaps I'm sometimes a little too quick to give them the answer—so it's definitely something I could improve. (interview 8/line 42)

Sometimes the supervisors got surprised, because the students saw things that the supervisors did not know about:

> They were fantastic and talented. In the other day, one of the students went deep into something that I was not updated on, so I had to read up on it as well. (surgeon in interview 6/line 52)

The nursing supervisors also realised the necessity of reflecting on nursing:

> If you do not reflect, you learn nothing, and I think you can learn all life. We build our work and reflection on dialogue with the students. (interview 7/line 43)

Teaching approach

The supervisors explained that their intention was to help the students to observe, analyse, and reflect. They explained that they found it to be quite acceptable if the students were a little tense about the task, but they also attempted to find patients who would match the students. The supervisors explained the approach in the following way:

> The students are at different clinical, theoretical, and personal levels, and, therefore, one has to meet them where they are and try to build them up from there. (interview 10/line 7)

> In the beginning, we try to find easy patients, where the students can follow a clinical guideline. Later, we can give them patients that are more complex. (interview 7/line 106)

In the beginning, it was a challenge for the nurses to let the students be alone with the patients without a supervisor present. However, soon, they decided to support the task-based approach in which the students were alone with the patients because it could stimulate authentic learning. The charge nurse said:

> It was a barrier for the nurses to let go of control and let the students be alone—what is seen and done? Part of nurses' cultural tradition is to have control over what happens to the patient (interview 5/line 13). But they have come to terms with it now because it does not make sense to monitor the students that close[ly]. (interview 5/line 67)

All supervisors agreed on providing interprofessional preconsultation instruction with both of the students and both of the supervisors present. Their rationale was that nurses and surgeons in an outpatient clinic normally are very dependent on each other during their daily work, and it, therefore, also felt rewarding to use an interprofessional approach when supervising. A medical supervisor said:

> Because we in everyday life collaborate a lot interprofessionally and are dependent on each other, I think it is important that the training also is interprofessional. (interview 10/line 71)

Leadership and responsibility for practicalities, time, and place

The supervisors found that the examination rooms functioned well for the purpose. However, the project involved some additional challenges for the rest of the ward because they then missed the room that morning. The charge nurse expressed how this problem was also a question of leadership and management responsibility, as they gave priority to the student list in the outpatient clinic. The managers not only approved the project, but also they felt responsible for the practicalities and the discussion about development of a safe learning environment at the ward. It was expressed in this way by the charge nurse during the interview:

> I think it is excellent and I monitor the situation all the time—and I see a super potential for the supervisors and the permanent staff. (interview 5/line 143)

There had been talk about this project for a long time, but all of a sudden, the manager decided: we will start the project next week. The supervisors acknowledged the managers' decision and support of the project in comments such as this one from a nurse supervisor:

> He just set it up—and that was fine—because if you plan too much, it can take a hundred years. (interview 7/line 231)

In conclusion, the supervisors and charge nurse clearly intended to establish a safe and challenging task-based interprofessional learning environment for the students in which the supervisors always took the students' theoretical and personal level into consideration when they found patients for them. The managers backed it up in word and deed by taking responsibility for practicalities and the learning environment.

Discussion

A key finding in this study was that it is possible to establish IPE in an outpatient setting without compromising the learning experience. The students' learning experiences and approach to learning in this outpatient clinic setting was characterised by direct patient contact and authentic interprofessional task-based learning. The AMEE guide about clinical teaching in outpatient clinics is about medical students (Dent, 2005), but the principles described can easily be used in an interprofessional setting. We used, what in the guide is called a 'team member model', where the students work in a separate room and are provided supervision before and after having seen the patients. According to Dent (2005), this model has the downside of not seeing so many patients and fewer interactions with the surgeon. However, instead of letting the students observe many patients, we used the principles of adult learning and decided to let them actually work as a team, in which they then had to consider often unexpected questions and issues from the patients. In interprofessional adult, learning responsibility for learning is shared between the individual and the team (Barr, 2013).

The supervisors created the outpatient clinic learning experience by having a clear teaching approach to the safe and challenging learning environment, which was strongly and practically supported by the management. Interprofessional leadership is described to involve at least six elements: (1) environment, (2) situation, (3) leader(s), (4) team members, (5) power, and (6) communication (Drinka & Clark, 2016). In this case, establishment of an interprofessional student-run outpatient clinic had been discussed for a long time. What happened was that the management used its social power and communicated to the team members how he felt that the environment was ready for starting up and that it should start next week. The decision was accepted by the team member's realising that 'if you plan too much, it can take a hundred years'.

The students appreciated the direct patient contact and, therefore, preferred indirect supervision. Our findings are in line with international recommendations concerning outpatient-based learning with direct patient contact, (Reeves, Lewin, Espin, & Zwarenstein, 2010) authenticity, task-based learning, and indirect supervision (Ashley et al., 2009; Dent, 2005; Ericson, Masiello, & Bolinder, 2012; Gorrindo et al., 2014; Hansen & Simanton, 2009; Latta et al., 2013; O'Neill et al., 2013).

In a meta-ethnographic synthesis, Reeves et al. (2016) found that supervision in an interprofessional context was influenced by three factors. First, contextual characteristics are about logistical and organisational issues. The interprofessional outpatient clinic had decided to allocate space for the students by giving them their own room for consultations. However, when we look at the supervisors' conditions, there is a difference between the two professions. The nurse supervisor is available for the students all the time, while the surgeon supervisor had to supervise on top of the normal profession-specific tasks. Apparently, in this setting, the difference has no influence on the students' perception of being provided sufficient supervision. Second, facilitator experiences including preparation, collaboration, and co-facilitation. These three issues were for the most part carried out in the collaboration between the nurse supervisor and the surgeon supervisor, when they planned and conducted the joint supervision for the students. As a supplement to this, the supervisors acquired professional and pedagogical knowledge by reflecting on their supervision style. Third, the use of different facilitation strategies was demonstrated when the supervisors graded their pedagogical approach in correlation to the students different theoretical, clinical, and personal level (Reeves et al., 2016).

The ethical perspective of letting students see patients on their own was discussed before the start of the project. Our choice was based on earlier research, where we found no difference in complications for patients hospitalised in an Interprofessional Training Unit and a conventional ward (T. B. Hansen, Jacobsen, & Larsen, 2009). All patients agreed to be treated by the students, and earlier findings from Sweden show that patients are satisfied with being treated by students (Hallin, Henriksson, Dalen, & Kiessling, 2011; Lindblom, Scheja, Torell, Astrand, & Fellander-Tsai, 2007).

The students reported that the interprofessional collaboration and independent patient contact strengthened their professional identity and practical competences. To reach their ultimate goal of helping patients, students must develop two qualities: practical competence and a state of mind that includes confidence, motivation, and a sense of professional identity (Dornan, Boshuizen, King, & Scherpbier, 2007). Therefore, Dornan and colleagues (2007) further recommend that clinical workplace learning should be characterised by 'supported participation'. Based on our findings, their conclusion also seems to apply to IPE in the outpatient setting. The interprofessional approach in this project in which the students were equal in the situation had a common focus on the patient, collaborated, and had access to supervision created a solid basis for successful learning.

We also confirmed that one of the most important reasons behind successful implementation was that the managers backed it up in word and deed by taking responsibility for practicalities and the development of the learning environment. Such supportive management practice is one of the important mechanisms in organising effective interprofessional education (Dent, 2005).

The medical students were often supervised by nurses in this setting. The reason for this difference was the diversity in

resource allocation, as the nurse supervisor had supervision as her main task, while the surgeon supervisor simultaneously had other tasks. The situation with better staffing for nurse supervisors is not foreign and is, for example, repeatedly described in the literature on Interprofessional Training Units (Carlson, Pilhammar, & Wann-Hansson, 2011; Jensen et al., 2012). We noted that the medical students in this study actually felt that they were provided sufficient supervision also when they were supervised by nurses. Earlier studies have found that medical students missed supervision from their medical supervisors (Reeves, Freeth, McCrorie, & Perry, 2002). One of the reasons for our finding supervision provided by nurses sufficient could be the nurses' pedagogical approach, where they kept the balance of giving the students independence and support simultaneously (Dornan et al., 2007; Manninen, Henriksson, Scheja, & Silen, 2015). Newly, qualified doctors can learn from nurses by informal learning (Burford et al., 2013; Varpio et al., 2014), but more research about the eventual consequences of informal interprofessional learning or formal supervision from supervisors from other professions versus being supervised only by supervisors from the same profession is needed.

The study has a number of limitations. Data collection started only one month after the interprofessional outpatient learning experience was launched. This means that in the beginning, there were some uncertainties concerning the pedagogical approach and organisational issues, so the approach may have changed during the study. However, interprofessional clinical training has taken place in the hospital since 2004, yielding much practical experience (Jacobsen, Fink, Marcussen, Larsen, & Hansen, 2009). It is also a limitation that all results are self-reported and, as such, imply a risk of social desirability bias. Furthermore, it is a limitation that all results presented in this article derive from the same setting with few participants, which may reduce transferability to other settings. It is also important to bear in mind that an explorative study like this will not give a full description of all aspects concerning interprofessional clinical learning in the outpatient clinic, but hopefully it can shed light on until now unknown possibilities and strategies for interprofessional clinical learning in an outpatient clinic (Malterud, 2012).

However, the findings in this study indicate that an outpatient clinic can function as a safe and challenging interprofessional learning environment. The students received the necessary supervision, and they especially appreciated the indirect supervision that allowed for direct communication with the patients. They found the assigned type of patients and the workload to be convenient and appreciated the direct patient contact and authentic, interprofessional, and task-based learning that characterised the learning experience.

Concluding comments

There are some conditions for establishing a safe and challenging interprofessional learning environment. The management and the staff in the clinic have to back up and take responsibility for practicalities, including reasonable temporal and spatial conditions. The clinical tutors have to be dedicated to helping the students to learn to observe, analyse, and reflect, while examining and treating patients who match the students' capability. Therefore, we definitely see a feasible way forward towards greater use of outpatient clinics for interprofessional clinical training of students in the future and recommend that departments initiate more pilot projects. Our exploratory qualitative case study should be followed up with more research concerning the students' learning outcomes, the best teaching and supervision approaches, the patients' perspectives, and the clinical outcomes for patients seen by students instead of by trained staff.

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Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

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