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Title:
Entrustment Decisions and the Clinical Team: A Case Study of Early Clinical Students

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Abstract

Purpose

Clinical learning contexts influence how medical students engage with entrustment decisions. However, it is unclear how students and health care team members perceive the entrustment decision process. This study explored which factors students and team members consider relevant to entrustment decisions in early clinical rotations.

Method

The authors conducted a case study at an academic teaching hospital, interviewing 28 medical students and four health care team members during the clerkship year. Within a social constructivist epistemology, we explored students' and health care team members' perceptions of ad hoc entrustment decisions using semi-structured interviews. Transcripts from the interviews and notes from feedback rounds with students were used for analysis.

Results

Medical students in their core clerkship year perceived clinical residents as critical educational gatekeepers and key facilitators of entrustment decisions. Another important theme emerged around students' motivation, initiative, and willingness to engage with the health care team and patients. Students actively engaged in trust formation processes with different health care team members. The entrustment decision process was perceived as multilateral and dynamic, involving all health care team members and patients. Multiple entrusting supervisors for clerkship students, including nurses and psychologists, emerged from our interview data. They assumed an active role in negotiating entrustment decisions both with and for clerkship students, either facilitating or hindering opportunities. The entrustment decisions emerged as a result of a multifaceted supervisor network interaction.

Conclusions

Supervising residents' ability to integrate students into clinical teams seems to be a critical factor in facilitating entrustment opportunities for clinical activities. Students' active management of informal supervisor networks of health care team members and these team members' willingness to assume responsibility for the students' education emerged as relevant aspects for ad hoc entrustment. Our data suggest that supervision from different health professionals is beneficial for clinical education of medical students and merits further exploration.

Keywords

Competency-based education, undergraduate, entrustment, clerkship, qualitative study

Core Manuscript

Background

Competency-based reforms of clinical curricula have been the focus of recent undergraduate medical education (UME) research in many countries.[1-4] Entrustable professional activities (EPAs) as operationalized competency-based learning goals rely on the emergence of trust between clinical supervisors and trainees.[5, 6] Models of trust emergence in clinical workplaces have been formulated based on theoretical and empirical work in a range of fields, including medicine, higher education, and psychology.[7-9] While perceptions of competence, trust, and how trust emerges have been explored from a graduate medical education (GME) perspective,[10-12] little attention has been paid to how medical students in their first clinical rotations perceive ad hoc entrustment decisions.[13]

One of the first models of trust emergence in clinical workplaces identified five factors as relevant:[8] the respective characteristics of the supervisor and the trainee (competence, experience, and attitudes), the supervisor-trainee relationship (relationship formation, shared expectations, amount of contact), the context (workplace, workload, and workplace culture), and the task (sequencing, complexity, and risk). In a later qualitative study,[11] potential barriers (students' "red-flag" traits, junior status of supervisors) and accelerators (residents' enthusiasm, personal supervision style) for trust formation were explored in the context of GME. In more recent theoretical work, detailed analysis of the entrustment decision process has drawn on additional research in the fields of organizational, occupational, and military psychology.[7] Holzhausen et al.[7] developed a model for the entrustment decision process that also included the degree or intensity of supervision (as an integrative function of the previously mentioned factors) and a feedback loop of the actual outcome of a professional activity on the intention to entrust a trainee in the future.

The differences between learning contexts for and characteristics of medical students in clinical rotations compared to graduate medical trainees must be carefully considered when implementing competency-based curricula in UME.[1, 14, 15] Not only do medical students clearly have a different body of knowledge, skills, attitudes, and experiences, but most medical students also have significantly less or even no experience navigating clinical workplaces[16] compared to residents. Different approaches to engaging with staff, peers, and patients,[15, 17] workplace-based educational designs,[15] hospitals' social hierarchies, and varying perceptions of connectedness[18] may create additional barriers to or facilitate trust formation in clerkships.[13] From a sociological perspective, Billet described the interdependency of individual agency (e.g., of the clerkship students) and the social world in workplace settings (e.g. the interdisciplinary clinical team) as essential for shaping workplace-based learning experiences and cultures.[19, 20]

In contrast to the well-researched perspectives of clinical residents as trainees in GME and the emerging evidence for self-entrustment as relevant to self-regulated learning in workplaces,[21-24] only one study shed light on the negative impact of over- and undertrusting on clerkship students' learning. Summative performance evaluations emerged as limiting students' agency in terms of responding to inappropriate trust.[13] We are not aware of any study that has explored medical students' entrustment perceptions in the context of formative clerkship performance evaluation.

To address this gap in the literature, we aimed to explore which factors early clinical students perceive as relevant for ad hoc entrustment decisions in clinical workplaces within a formative assessment context. These ad hoc entrustment decisions may be conceptualized as context- and situation-dependent, may occur on a daily informal (delegation of clinical activities) or quasi-formal basis (workplace-based assessments), and may vary in terms of complexity, explicitness, and adequacy (over- or underentrustment).[13, 25] Better understanding of ad hoc entrustment decisions and the role of different health care team members in these processes might help to inform clinical supervisors' training and formative clerkship assessment programs.

Methods

Context

The core clerkship year is the first period during which medical students at the University of Bern fully participate in clinical work. The expected clinical activities of medical students are described in a national competency-based catalogue based on EPAs.[26] Entrustment processes of clinical activities, however, are not formalized or standardized and thus differ across specialties and teaching hospitals. Our supervising clinical staff are primarily involved in ad hoc entrustment decisions (i.e., instant decisions on how much supervision a clerkship student needs for a given clinical activity) during daily clinical work.[25] In this study, we use the term 'clinical supervisor' to denote health care team members who entrust clerkship students ad hoc. Our academic context has no formalized clinical competence committees that make definitive entrustment decisions with implications for graduation. The authors of this study focused on undergraduate medical students' perspectives on informal ad hoc entrustment decisions during their core clerkship year. Typically, clerkship students, final-year medical students, and clinical residents are physically present on the wards throughout most of their shifts. Attending physicians see every newly admitted patient (often together with the resident and student), conduct weekly rounds, and provide daily on-demand supervision as requested by clinical residents, clerkship students, or other team members. Clerkship students spend a month working full-time in each of the following disciplines: internal medicine, psychiatry, surgery, gynecology, and pediatrics. After each clerkship, students rotate based on individual rotation plans into the next specialty, which typically involves changing the teaching hospital. Each student is required to submit at least four signed workplace-based assessments per clerkship rotation with a supervision level rating on a prospective entrustment-supervision scale and narrative feedback for the nine core EPAs defined for UME in Switzerland (introduced in February 2019 at our institution).[26] Students receive no formal (summative) grading at the end of their clerkship rotations but are required to document at least four patient admissions, including history taking, physical examination, and mental status assessment. The purpose of all clerkship (low-stakes, formative) assessments is to facilitate meaningful and actionable feedback and learning.

Design

We designed a case study[27] within a social constructivist epistemology.[28] To leverage the potential of a case study as a qualitative method, Cheek et al.[27] recommended the description of the phenomenon of interest, the analytical frame, the methods and data sources used. We classified our study subject (core clerkship year as early and first full-time

clinical exposure) as a key case since it was one of the first core clerkship programs to implement an EPA-based curriculum within a formative assessment program. The purpose of the study was exploratory, with an approach based on theories of trust formation and entrustment.[6-8, 11-13, 19, 24, 25] The units of analysis included semi-structured interviews with clerkship students and health care team members and notes from in-between and end-of-clerkship feedback rounds with medical students. These feedback rounds offer all students from each clerkship cohort an opportunity to provide feedback on their learning experience to the clerkship director.

To obtain a richer understanding of medical students' perspectives, we used both paired-depth interviews[29] to directly leverage resulting interactions and potentially contrasting views of clerkship students and individual semi-structured in-depth interviews (for four student interviews due to short notice changes in the clinical work schedule). Paired-depth interviews are defined as one researcher interviewing two individuals simultaneously in a single location, thus allowing for observation of the interviewees' interactions or immediate reactions to one another regarding the phenomenon of interest.[29] The use of paired-depth interviews also helped to establish safe research environments.

During the interviews and iterative analysis, we learned that health care team members, including allied health professions, were involved in ad hoc entrustment decisions. To better understand the ad hoc entrustment decision phenomenon, we additionally interviewed purposefully sampled health care team members who were identified by students as being actively involved in such ad hoc entrustment decisions (in the sense of stakeholder triangulation).

Based on the literature, an interview guide with open-ended questions was developed and piloted in February 2019 (not included in the data analysis). We finalized the interview guide based on additional feedback from an interdisciplinary group of educational experts during a research course offered by the Department for Higher Education and Faculty Development at the University of Bern (Figure S1). An adapted version of the student interview guide with the same order of questions was used for the four semi-structured interviews with health care team members.

Participants

Medical students from the clerkship cohort of 2019 were invited to participate in the study. The sample (n=28) consisted of 46% (n=13) male and 54% (n=15) female student interviewees from German-, French-, and Italian-speaking cantons with an average age of 24 years (range: 22–33). The health care team members invited for in-depth interviews (n=4) were all perceived by students as actively involved in ad hoc entrustment decisions and included a second-year psychiatry resident, a certified nurse, a clinical psychologist, and a social worker, each from a different ward. One author informed all participants both verbally and in writing about the study and obtained written consent from all interviewees. Participation was voluntary.

Data collection

We recruited interviewees personally or via e-mail invitation at the beginning of each clerkship rotation at the University Hospital of Psychiatry in Bern, Switzerland, from March 2019 until October 2019. We used a purposive interview sampling strategy with the intention of including students who differed in terms of gender, age, and clinical experience (i.e., different wards in our teaching hospital, sampling from different months of the clerkship year, originating from different linguistic regions in Switzerland).[30] Depending on the month of the year, the students had prior clerkship experience from rotations in internal medicine, general surgery, pediatrics, or gynecology. All had rotated through an EPA-based psychiatry clerkship. Health care team members involved in clinical supervision of clerkship students were identified through positive student evaluations and invited to participate in semi-structured in-depth interviews. All health care team interviewees described similar approaches to actively engaging with and involving clerkship students and how ad hoc entrustment opportunities arose, leading us to assume sufficient sampling.

The interviews took place in offices at the University Hospital and were audio-recorded and transcribed verbatim. Two authors interviewed 28 medical students in 12 paired-depth interviews[29] and four individual semi-structured interviews over the course of eight months in 2019. We began with open questions that asked students about the factors they perceived as relevant for entrustment decisions and specifically asked about factors known from the literature (i.e., entrustment frameworks) only if they were not mentioned spontaneously by students. The interviews were conducted in Swiss-German and German and lasted on average 46 minutes.

In-between and end-of-rotation feedback rounds took place regularly with all clerkship students in the same rotation. One researcher or a clerkship administrator took written notes based on the students' feedback.

Data analysis

For the student interview data, we applied a framework analysis approach based on general familiarization with the data—identifying a thematic framework (main themes and subthemes), indexing (systematic annotation of transcripts), charting (rearranging data according to thematic framework)—and interpretation of the data (with mapping and summarizing findings).[31-33] An inductive analysis process, informed by models of entrustment in clinical education, was used to generate main themes and subthemes.
After initial familiarization with the recordings and transcriptions of the first interviews, we developed the final codebook with anchoring examples and coded all 16 student interview transcripts.

Semi-structured interviews with health care team members were used to better understand the ad hoc entrustment decisions by triangulating the findings from the different stakeholders (clerkship students and healthcare team). The notes from feedback rounds with students were continuously contrasted with the themes and subthemes emerging from the interviews and informed the final data synthesis.

All interviews were recorded and transcribed verbatim. The qualitative research software MAXQDA (VERBI GmbH, Berlin, Germany) was used to code interview transcripts and to organize the main themes and subthemes. Salient quotes were extracted directly. The research team continuously discussed and reflected on interpretations of the data. In addition, member checking with students was used for validation of findings.

Researchers and reflexivity

Three authors were directly involved in student supervision. The qualitative data in this study were co-constructed through interactions with the participants, as were the interpretations and meanings with which the authors imbued these data. To facilitate comparison and interpretation of the data and to challenge potentially biased views, we assembled a research team with different backgrounds (psychiatry, pediatrics, psychology, medical education) as well as different seniority levels (student, resident, assistant clerkship director, head of department, and medical director). To mitigate power imbalances in interviews, we emphasized the goals of improving clinical teaching, continuously reflected on the research relationship, and separated the research data from any performance evaluation. Results from continuous data analysis were used to inform minor clerkship curriculum structure and content adjustments (e.g., incorporating additional key literature into the online course material or adding a topic on deescalating behavior to the orientation seminar) to make this project immediately meaningful for medical students and clinical teachers.[34]

Ethics

The Regional Ethics Committee of the Canton of Bern (member of the Swiss Association of Research Ethics Committees, Switzerland) deemed this research exempt from ethical review. Confidentiality and anonymity with respect to electronic data were maintained throughout the study. Salient quotes were translated from (Swiss-)German to English, and any names or potentially identifying information were removed.

Results

A total of 16 interviews with 28 medical students in their clerkship year were conducted and analyzed. Interviews with four additional health care team members and notes from monthly in-between and end-of-rotation feedback rounds with medical students were used for triangulation. An overview of the main themes and subthemes that emerged from interviewing students is shown in Table 1. Students reflected on who their most important supervisors were, which factors facilitated entrustment, which professional relationships they considered relevant, and how clinical situations and safety affected entrustment opportunities and decisions (Figure 1).

Salient quotes from interviews with health care team members that yielded insights into the informal network of health professionals involved in medical student supervision and entrustment decisions (Figure 1) are presented along with the main themes. The entrustment factors that emerged and the supervisor network model (Figure 1) were shown to medical students in the context of member checking. Our findings did not need to be adjusted, although some medical students reported that they had not considered the possibility of approaching different health professionals for clinical supervision.

Characteristics of the supervisor(s)

In the interviews, clerkship students identified clinical residents as their most relevant supervisors. The residents' characteristics, including their clinical competence, experience, and clinical teaching quality, were perceived as the main determining factors in their entrustment of clinical activities to students. This became particularly evident for clerkship students when they compared the residents' supervision styles across clerkship rotations:

> "I think it is extremely important…who actually is responsible for you... which resident it actually is…that really makes the difference. It also affects how effectively you learn, not only in psychiatry but also in pediatrics […] there are really big differences: some residents don't let you do anything while others encourage you to do something and then you do it." (Quote from Interview I2B)

Additional themes that emerged around residents related to their general propensity to trust students and their specific preparation for their roles as clinical teachers.

> "[…] they [residents] actually realize you are reliable, and they trust you […] they allow you to do something, and then you give it your best effort. There will certainly be mistakes, but you can discuss them together and they will realize that you can actually do something […] there must be trust in [the clerkship student] (Quote from Interview I14)

Residents who had received their medical degrees from other medical faculties sometimes appeared unfamiliar with the clerkship curricula and the specific learning goals:

> "Yeah well… the residents should know what we are expected to do and that we learn clinical skills before we begin the clerkship year and that we rotate through other hospitals. In one clerkship, they had no idea that I had to do those workplace-based assessments." (Quote from Interview I7B)

In one interview, a resident described how he structures his clinical teaching during a four-week clerkship in psychiatry and how he entrusts clerkship students:

> "In the first week it is typically about [students] observing and seeing everything […] reducing their fear of contact [with psychiatric patients] and getting to know the working environment […]. In the second week it is about actually admitting a patient to the ward, they [the students] need to learn how to organize themselves and how to document […] In the beginning, [the students] just observe and then we discuss it. The next step is that they do it with me being present […], once I realize, ok, they are doing it quite well, they can talk alone to the patient and we discuss their findings and I can see [the patient] again for clarifications or missing information". (Quote from clinical resident)

He also described gradually increasing entrustment per clerkship week by focusing on expectation management and team and workplace integration during the first week; training basic clinical skills, documentation, and presentation skills during the second week;

assigning a first patient in the third week; and by starting independent working trials during the fourth week.

In in-between and end-of-rotation feedback rounds, students expressed stronger wishes to be actively involved in patient care once they had rotated through several specialties and consequently reported experiencing greater frustration if they were treated predominantly as observers.

Characteristics of students

Students' personal attitudes, characteristics, and approaches to navigating the workplace were also perceived as instrumental in influencing entrustment decisions during their clerkships. Although most students regarded their personal characteristics as less relevant than those of the supervising resident, some considered their own behavior to be even more important in achieving entrustment. These differing perceptions also emerged in feedback rounds from the monthly cohorts.

> "It needs to come from oneself. I have the impression that they [residents] don't just tell you to do something. I mean, of course they tell you a bit, but I think if you show initiative and prove that you are capable, you will get much more opportunities to do something. So, I really think it is the student who needs to prove him- or herself and needs to really want it as well. That's why I think you simply should show a lot of interest, because then you also get a lot back." (Quote from Interview I3B)

In addition, students described how they managed their informal networks of potential clinical supervisors. The outcome of these interactions with team members and patients had the potential to either facilitate or hinder their integration into the ward team and consequently influence ad hoc entrustment decisions across clerkship rotations (e.g., ad hoc entrustment from midwives in the gynecology and obstetrics rotation, nurses in pediatrics, medicine, and surgery).

> "Sometimes I told [my supervising resident] that I would join the nurses, and they [the nurses] would let me do the checks on vital signs, for example. I also joined them to do venipunctures or follow-up sessions with patients […] you know, I wanted to see the nursing side and I actively asked for joining them. I don't know whether other students do that, too. But I just want to see everything." (Quote from Interview 14A)

Further opportunities for entrustment emerged from their preparedness for the specific clerkship and their active highlighting of relevant previous clinical experiences from other clerkship rotations:

> "Yeah, well of course, if I get there and I tell them I have no idea about anything, I won't be allowed to do anything, but when I say, 'yes I have done that already', like I already did a MoCA [cognitive screening test] then they will say 'go ahead' […], so it is really helpful if you have done something in one clerkship and tell [the resident] that you know how to do it from a previous rotation." (Quote from Interview I3B)

From the perspective of a social worker, the student's initiative was perceived as facilitating entrustment:

> "I always love it, when medical students approach me and ask about the work I do. We [the resident and social worker] actually have arranged a couple of times for students to join me for half a day […] when I notice someone to be capable and motivated, I also approach them and ask, whether they would be interested in going with a patient to […] support them with outside orientation activities [activities to reintegrate in live outside the hospital]." (Quote from social worker)

In feedback rounds, some students expressed feeling only able to elicit entrustments using mandatory workplace-based assessment forms and reminding the supervising residents that they were required to entrust and observe them at least during the mandatory workplace-based assessments in each clerkship rotation.

Students' professional relationships

The curricular design of clerkships, which, in some rotations, included pairing students with a clinical supervisor—typically a resident—was perceived as important for entrustment opportunities. If students had succeeded in establishing efficient working relationships with the whole team, including nurses, psychologists, and social workers, they were able to manage their informal supervisor network (Fig. 1) and approach those health care team members who were available (i.e. nurses, psychologists and social workers who were members of the ward team but were not formally in charge of supervising medical students). Students described how informally supervising nurses would remind them of the tasks with which they had been entrusted.

Some students classified these pairing phenomena under the theme of integration into their ward teams:

> "For me, personally, it is important that you are integrated right from the beginning, and that you get introduced to everybody on the team. When everybody knows you, you are given more opportunities to do something, and that really worked well." (Quote from Interview I7A)

While reflecting on the factors that are relevant for entrustment decisions, students described situations in which their successful integration into the health care team actually facilitated entrustment processes with nurses, psychologists, and social workers during their psychiatry clerkship rotation. These clinical activities included working through a behavioral analysis with a patient, performing venipunctures, or accompanying patients to mental health residential facilities. A nurse described in an in-depth interview how she had asked a motivated clerkship student whether he wanted to do a check on a suicidal patient, discussed the required level of supervision with him, and gave him feedback. The following quote illustrates how students have agency in terms of eliciting entrustment from other health professions:

> "If someone is motivated, like [the student] is trying to pick my brain, I also let them do something, then I do sit down with them, explain how to check on a suicidal

> patient, I let them do the check and let them report back to me and sometimes let them document their findings." (Quote from nurse)

The ability to form relationships was also referenced in the context of establishing rapport with psychiatric patients:

> "I had the feeling, it is the same regarding relationships with patients […] they wouldn't have sent me alone to a patient if it wasn't right … you know … rather one with whom you got along well, like one you had a good rapport with." (Quote from Interview I6A)

In some students' reflections, patients specifically had requested to talk to a student rather than other health care team members, which led to the entrustment of follow-up discussions with patients in some instances.

Clinical situation: context and task

Situational aspects, including the workplace context and culture as well as the complexity of the clinical activity, also emerged as relevant entrustment factors. In some rotations, students reported feeling categorically excluded from specific tasks because the attending physician did not want students to write directly in the patient's electronic record. Students also reported that some midwives did not want students to be present. Furthermore, in working contexts that involved many invasive procedures, it seemed easier for students to classify tasks as simple or complex, thus gauging the appropriateness of being entrusted with them.

One student therefore believed that it would be easier to be entrusted with talking to patients in psychiatric care than to be entrusted with surgical responsibilities, because in psychiatry, the residents can more easily rectify communication mistakes:

> "I don't know, maybe because it is often less invasive than surgery. I understand that I cannot easily contribute to a laparoscopy [but] I can talk to a patient, and if it doesn't go well, it is not irreversible. You can fix it: usually the residents will take over and ask differently or clarify something. That's why in psychiatry I am more assertive in asking 'Can I go evaluate the patient's suicidality?' or 'can I assess the patient's mental status while you [the resident] listen and can interfere if it's wrong?' That's why I think the attitude in psychiatry is maybe a bit more important [as compared to surgery]." (Quote from Interview I13A)

A psychologist reported that whether students are given exposure to psychotherapeutic work depended on her knowledge of the students' curriculum and their motivation:

> "When I know they will be on the ward for four weeks […] I always offer them to participate in group therapy sessions or in individual psychotherapy sessions […] if they want, they can join, but it is not part of my job description to teach medical students […] I think that is a pity, because it really is about interdisciplinarity." (Quote from psychologist)

High workloads and hectic clinical workplaces were perceived as barriers to students' entrustment with clinical activities. Again, clinical residents' ability to facilitate supervision by other residents when they were unable to accommodate clinical teaching was perceived as relevant for entrustment opportunities:

> "There were times when my resident was constantly being paged and I was basically only in his way. [The resident] told me to go with her [other resident] for a day, saying she might need my help, so I spent a day there, which was beneficial for my resident and myself … but you need to have those opportunities, otherwise I would have just walked behind him all day long without doing anything." (Quote from Interview I4A)

The theme of hectic workplace environments, high acuity situations, and staffing emerged from reflections on several different clerkship rotations and was not specific to one area of specialty.

Discussion

We used a case study design based on theories of trust formation in clinical workplaces to explore medical students' and health care team members' perceptions of entrustment decisions during early clinical rotations (i.e., the core clerkship year). Data from student interviews were triangulated with data from interviews with health professionals who were part of a typical clinical ward and notes from feedback rounds with students. Interprofessional ad hoc entrustment was found to emerge from interactions between proactive students and different health care team members. Clinical residents, as educational gatekeepers in the clerkship rotations, either facilitated or hindered meaningful ad hoc entrustment opportunities. Other team members' openness to and sense of responsibility for interprofessional clinical supervision seemed to be critical in this context. Finally, students' active management of these informal networks with health care team members emerged as a potential facilitator for ad hoc entrustment decisions.

Two findings from our case study add to the existing body of literature regarding ad hoc entrustment decisions.[7-9] The first is that clerkship students are potentially confronted with ad hoc entrustment decision processes from multiple potential clinical supervisors, including all health care professionals present in a team rather than one single supervisor.[7-9] Nurses or midwives in several clinical rotations (e.g., pediatrics, gynecology) had a direct impact on whether clerkship students were entrusted, even at the lowest supervision level (i.e., being present and observing). Second, the entrustment decision process is not unilateral and static but rather is multilateral and dynamic. Both findings (multiple potential clinical supervisors and the multilateral process) are visualized in Figure 1. In a formative assessment context (in contrast to summative assessment contexts[13]), clerkship students can play an active role in negotiating the outcome of ad hoc entrustment decision processes if they know how to navigate the clinical workplace.[16]

From a residents-as-teachers perspective[35-37] our findings suggest that residents should be prepared for their gatekeeping function with respect to clerkship students' clinical learning experiences and entrustment decisions. Studies by Billet[19, 20] and Sagasser et al.[24] offer theoretical and empirical insights into how the individual engages with and is influenced by the social environment in the workplace. Based on this research and our findings from the

present study, clerkship students should be supported and coached in their self-entrusted engagement with different health care team members, and their active pursuit of ad hoc entrustment opportunities as a self-regulated learning strategy should be further explored as a self-regulated learning strategy. These aspects of (educational) leadership may go beyond the standard clinical teaching skills of 'residents as clinical teacher' programs.[35, 38, 39]

Our study's surprising finding that some health care team members seemed to assume a professional educational responsibility beyond that which was expected from them might be regarded as in line with Solbrekke's and Englund's work on professional responsibility.[40, 41] Through the exercise of professional judgment (situated judgment of educational opportunities versus standardized boundaries between professions), both individuals' and of society's interests can be better served.[40] They point out that professional responsibility includes, among other things, situated judgment, trust, negotiated standards, and proactivity, which differs from the professional accountability discourse that sometimes dominates curriculum design.[40, 41] Incorporation of Solbrekke's and Englund's concepts into ad hoc entrustment decisions opens up new possibilities for clinical teaching of clerkship students.

Helping clerkship students to identify a network of clinical supervisors from different health professions within their assigned ward team thus could provide new learning opportunities and facilitate ad hoc entrustment exposure. The benefits of network support compared to support from a single individual supervisor have been described in the context of academic and workplace mentoring,[42, 43] and this might also apply to clinical supervision of clerkship students. Coaching students to actively manage their professional relationships and to seek opportunities for ad hoc entrustment from available health care team members might be an overlooked factor in helping students achieve their expected learning outcomes.[37] Instead of waiting to receive tasks from a busy resident, they might approach other team members to seek out additional opportunities for clinical learning and supervision. Additional data concerning ad hoc entrustment instances among ward team members are needed to better understand this facet of workplace-based learning.

Limitations and strengths

A limiting factor of this study is the focus on one medical school in a central European country. Cultural norms in other societies and the role of hierarchy in clinical workplaces, even between clinical specialties, might have a significant impact on how much agency students actually have and whether learning from other health professions is feasible.[15, 16] The data from the interviews with a resident and health care team members who were actively involved in ad hoc entrustment decisions (as experienced by students) represent only a few individuals who may have been particularly motivated and interested in clinical teaching. Follow-up studies should thus systematically explore the perspectives of health care team members with different levels of engagement across disciplines. To the best of our knowledge, the paired-depth interview method remains underutilized in medical education research. One of this case study's strengths, therefore, lies in tapping those moments in which students directly contradicted each other, for example, with respect to which factor they considered most relevant for ad hoc entrustment decisions. The ensuing discussion between them highlighted crystallization points that allowed us to gain a thicker and richer understanding of their experience.

Conclusion

Clinical residents' ability to integrate students into teams and facilitate meaningful entrustment opportunities seem to be critical factors for competency-based clinical learning in medical students. Students' active management of informal supervisor networks of health care team members and these professionals' sense of responsibility for the students' education emerged as potentially relevant aspects for ad hoc entrustment decisions. Future research should explore ways of explicitly leveraging the interprofessional team on a clinical ward for ad hoc entrustment opportunities for clerkship students in a busy clinical workplace.

List of abbreviations

CBME	Competency-based Medical Education
EPA	Entrustable Professional Activity
UME	Undergraduate Medical Education
GME	Graduate Medical Education

Declarations

Ethics approval and consent to participate

The Regional Ethics Committee of the Canton of Berne, Switzerland (Kantonale Ethikkommission Bern, Gesundheits- und Fürsorgedirektion des Kantons Bern, Member of the Swiss Association of Research Ethics Committees), deemed this research exempt from ethical review. Confidentiality and anonymity with regard to electronic data were maintained throughout the study. Salient quotes were translated from (Swiss-)German to English, and any names or potentially identifying information were removed.

Consent for publication

Not applicable.

Availability of data and material

Not applicable.

Competing interests

All authors declare that they have no competing interests.

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Authors' contributions

SP, CN, SK, and SH conceptualized the study. SP, AK, and NM were responsible for the data collection and extraction. SK, WS, CN, and SH were involved in ongoing category refinement, the final data synthesis, and in drafting and revising the final manuscript.

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Table legends

Table 1. Overview of main themes (entrustment factors) and subthemes regarding how 28 medical students in their clerkship year (March–October 2019) perceive entrustment decisions during their clinical rotations, University of Bern, Bern, Switzerland

Figures' legends

Figure 1. Exemplary ad hoc entrustment network perceived as relevant by students during the core psychiatry clerkship rotation. The main themes emerging from the framework analysis and the identified network of supervising individuals are represented. Thicker lines indicate the dominant interaction and ad hoc entrustment outcome negotiation during clerkship rotation.

Supplemental material

Supplemental Figure 1. Translated—Interview guide—Student perceptions of ad hoc entrustment decisions

Table 1

Overview of main themes (entrustment factors) and subthemes regarding how 28 medical students in their clerkship year (March–October 2019) perceive entrustment decisions during their clinical rotations, University of Bern, Bern, Switzerland

Main theme	Subtheme	Explanation
Residents' characteristics		
	Propensity to entrust	General willingness to entrust clerkship students, having had a chance to directly observe a student's performance
	Resident's workload	The time a resident can dedicate to explaining, clinical teaching, and facilitating contact with patients or other potential supervisors from the health care team
	Resident's clinical experience	The more clinical experience a resident had, the more likely they were to be perceived as willing to entrust medical students. More experienced residents were also perceived as better clinical teachers.
	Specific didactic preparation	Resident's knowledge about clerkship structure, clerkship year, workplace-based assessments, and learning objectives in the clerkship
	Teaching motivation	Resident's general motivation to invest time and effort in coaching a clerkship student
	Trust in student	The resident must feel confident that a clerkship student would ask for help if the student was uncertain or encountered a situation that was too complex.
Students' characteristics		
	General workplace performance	Student's behavior in the workplace in terms of self-organization, demonstration of responsibility and accountability, time management skills
	Showing initiative	Narratives around the student's active approach in asking for work, explicitly showing interest and motivation to learn, using mandatory workplace-based assessments to elicit entrustment
	Clinical experience of student	Previous clinical work experience in other clerkship rotations that the students can cite in asking for (re-)entrustment
	Specialty-specific preparation	Coming prepared for the clerkship rotation, having the relevant clinical skills (e.g. assessing the mental status)
	Student's attitude	Demonstrated ability to show empathy, ability to engage with patients and to critically self-reflect, willingness to manage difficult emotional situations
Students' professional relationships		
	With residents	Ability to establish a working relationship with one or more residents on the ward through curricular design or based on own initiative
	With patients	Ability to gain patients' trust and to establish therapeutic relationships with them
	With healthcare team members	Opportunities for entrustment from nurses, psychologists, and social workers, depending on the student's degree of integration into the ward team
Clinical situation		
	Context	The acuity and severity of the clinical situation will place the student in a more active (a stable, calm patient) or passive (an unstable, agitated, critically ill patient) role and will determine their entrustment opportunities.
	Task	Students use the perceived complexity and associated risk (potential harm) of a task to determine whether it should be entrusted to them.
Safety		
	Patient	The assessment of whether a patient would be at risk if the student performed a particular task determines the student's entrustability.
	Personal	The student's own safety should be considered in the decision whether they should be entrusted with a task.

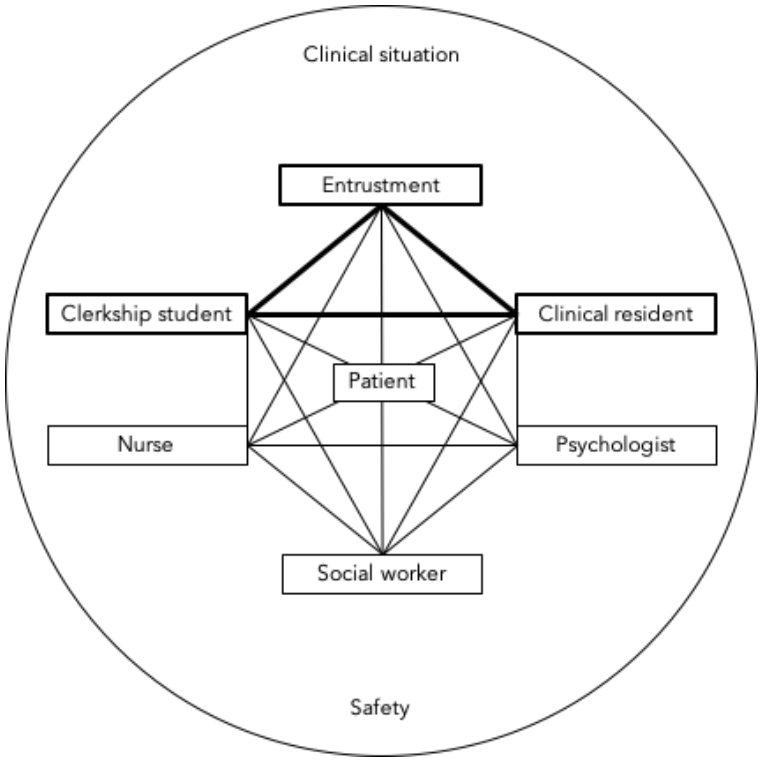

Figure 1. Exemplary ad hoc entrustment network perceived as relevant by students during the core psychiatry clerkship rotation. The main themes emerging from the framework analysis and the identified network of supervising individuals are represented. Thicker lines indicate the dominant interaction and ad hoc entrustment outcome negotiation during clerkship rotation.

Supplemental Figure 1. Translated—Interview guide—Student perceptions of ad hoc entrustment decisions

Interview structure:

- Introduction of interviewers and research team
- Summary of project and research purpose (including written consent form)
- Answer any general/administrative questions that the interviewee may have

Main goals:

- To gain an understanding of how clerkship students perceive entrustment decisions and processes (i.e., being allowed to take responsibility) during their clerkship rotations

- To understand how clerkship students decide how much direct/indirect supervision they need

- To understand how clerkship students construct the decision process before assuming clinical responsibility

- To understand what the roles of the different health care team members are in the context of ad hoc entrustment decisions

Transition questions:

- How have you liked your clerkship rotations so far?
- Was there something that you found particularly interesting or surprising?
- Could you describe a typical day on the ward from your perspective?

Main questions:

Experience and perception of being entrusted and taking clinical responsibility (ask both interviewees):

- How are you involved in taking care of patients on the ward?
- Who is primarily responsible for your supervision?
- How important is it for you to be actively involved in clinical activities? Why?
- Can you describe your experiences of being given clinical tasks?
- What clinical activities have you been allowed to perform?
- Were you surprised to be allowed to do them? If yes, why?
- What factors do you think are relevant to being allowed to do a clinical activity? Why?
    - In addition to exploring spontaneously mentioned factors, ask specifically about student characteristics (interest, experience, motivation, etc.), supervisor characteristics (interest, experience, motivation, etc.), relationship with supervisor, clinical situation and context, students' performance in clinical context
- How do you decide how much supervision you need for a clinical activity?

- Can you describe a situation in which patient safety was relevant to your being allowed to do something?

Roles and meanings of the different health care team members for being allowed to take responsibility:

- How would you describe the role of these team members when it comes to you taking clinical responsibility?
    - Nurses
    - Psychologists
    - Social workers

- Could you describe a situation in which one of these health care team members allowed you to take clinical responsibility?

Ending questions

- What should the clerkship curriculum ideally look like?
- Do you have any final questions or comments?