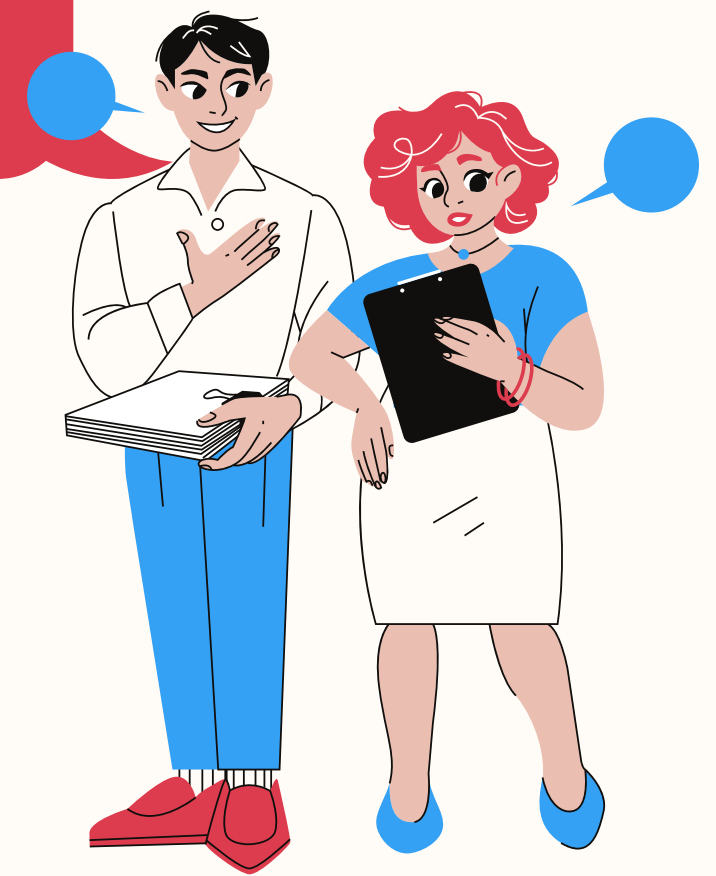


Peer-Assisted Learning (PAL) in Medical Education

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ICME Weekly Meeting (24 September 2025)



Outline

- 1 What is PAL?
- 2 Why and how does PAL work?
- 3 Advantages and Disadvantages of PAL
- 4 Near-Peer Learning, what makes it different?
- 5 Near-Peer Learning in Residency



1 What is Peer-Assisted Learning (PAL)?

“People from similar social groupings who are not professional teachers helping each other to learn and learning themselves by teaching”

(Topping 1996)

- Similar social groupings → not necessarily the same course, or year of study
- Peers → less knowledge on subject matter, less teaching skills, less authority
- Why PAL?
 - General Medical Council (GMC) UK: medical graduates must ‘Be able to demonstrate appropriate teaching skills’
 - Large ratio between students and teachers → supplementary instructions
- Implemented in various health professions educations, in both formal and informal settings

1 What is considered Peer-Assisted Learning (PAL)?

Peer Collaboration / Collaborative Learning

Peer-Mentoring

Supplemental Instruction

Peer Teaching

Peer-Coaching

Peer Tutoring

Peer assessment

Peer monitoring / review

Peer modelling

Peer feedback

Activity is considered PAL when there's overt teaching activity by peer

1 What is considered Peer-Assisted Learning (PAL)?

Examples of PAL Activities in medical education:

- Traditional tutorials, seminars, demonstrations, presentations
- Training basic clinical skills
- Teaching in clinical situations
- Could also include: peer assessment, feedback and observation

Activity is considered PAL when there's overt teaching activity by peer

2 Why and how does PAL work?

Cognitive and Social Congruence



- **Cognitive congruence** → sharing similar knowledge framework
 - “ability to use explanations that were easily grasped by students”
 - Where are the students struggling, which topics are important, difficult, and basic

Vygotsky's Constructivist paradigm

Individuals learn through interactions with their social environment

- Zone of Proximal Development & Scaffolded learning
 - Peer tutors have a similar knowledge background, hence tutees feel more encouraged and achievable, opposed to experts



2 Why and how does PAL work?

Cognitive and Social Congruence

- **Social congruence** → sharing similar social roles
 - “willingness to act informally and displayed a caring attitude”
 - More comfortable, compared to teachers → more supportive and empathic towards tutees’ needs, difficulties, expectations
 - Tutors themselves have just experienced the same thing! in both academic and social situations



- **Active learning**; interchangeable role of tutors and tutees
- **Safe learning environment** to make mistakes and question, relaxed atmosphere, and tutor enthusiasm might motivate tutees!

3 Advantages to PAL

Tutors: to teach is to learn twice

- Learning from preparing to teach!
 - Engage with content, synthesize and verbalize what they know, identify & address their own area of weakness
 - Increasing their knowledge, but also in their **skills to learn**
 - Training their teaching skills → might come in handy to teach / educate patients
 - Boosting confidence and self-efficacy
 - learning through teaching (Dandavino, et al. 2007):

Self-explanation

Deliberate
Practice

Metacognitive
Awareness

3 Advantages to PAL

Tutees

- Learning certain knowledge or skills
- More opportunities to ask questions freely, receive feedback from peers
- Increase learning skills → willingness to admit deficiencies & receptivity to feedback
- Social objectives:
 - self confidence, personal responsibility for learning
 - learning from student role models: motivate and encourage students!
 - meeting others from same course, ability to cope with university life



3 Advantages and Disadvantages to PAL

Educators and Institutions

- Higher efficiency of teaching by staff
- Helping address curricular outcomes, and help students gain experience of teaching
- Nurturing a culture of collaboration instead of competitiveness in students

Possible Disadvantages of PAL

Inadequate depth of knowledge, fear of teaching the wrong thing

Lack of teaching skills → overloading tutees with information or confusion

Personality or personal relationship clashes between tutors-tutees



3 Advantages and Disadvantages to PAL

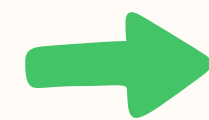
Key to maximizing
the advantages
and minimalizing
the disadvantages:
Program Design

Table 45.1 PAL planning framework

Domain	Question
Background	What is the current situation and context in the curriculum? Why is this PAL project being considered now? Who is responsible for the project, and who will lead it?
Aims	What are the aims and objectives of the project for tutors? What are the aims and objectives of the project for tutees? What are the aims and objectives of the project for the institution?
Tutors	Who will be tutors, and how will they be recruited? What training will tutors require, and how will this be provided? How else will tutors prepare themselves and reflect afterwards?
Tutees	Who will be tutees, and how will they be recruited? What related prior knowledge and experience will tutees have already? What information and preparation will tutees require before the interaction?
Interaction	What will be the format of the interaction, and what resources are required? What would be a typical plan of activities during the PAL interaction? When and where will PAL interactions occur, and how will they be arranged?
Evaluation	What feedback will be collected from participants, and how will it be used? How else will the project be piloted and evaluated? What are the academic hypotheses, and how will they be tested?
Institution	Who are potential stakeholders in the project? What are the staff time and funding implications of the project? How could the project be developed, and how might it affect the curriculum?
Realization	What are the potential pitfalls or barriers to the success of this project? What are key points on the timeline for this project? What actions need to be taken to develop the project, and by whom?

4 Near-Peer Learning, what makes it different?

- Near-peer: similar social standings, higher in training years
 - Tutor has more knowledge and experience than the tutee
- *“may be able to provide a more expert commentary as compared with peers, while retaining the low-stakes environment”* (Cowan, et al. 2025)



Possibly reducing the disadvantages of PAL

- How far can the years stretch and still count as near-peer? (Stephens, et al. 2016)
 - Proximity of tutor and tutee influences how teachers are perceived
 - for Y2 medical students, between Y3-Y4 and Y5 is already different!
 - **Decrease in cognitive and social congruence** → graduation as a hallmark
 - Near-peer teachers greatest asset → ability to bring student perspective to their role

5

Near-Peer Learning in Residency

- Residents spend a quarter of their time teaching students and peers
 - Shared task – not just working in a similar place
 - Chain of communication between senior and junior residents
- Topics: medical knowledge, procedural skills, patient care, clinical reasoning, patient safety, lifelong learning, IPE, professionalism, simulation on emergency and critical care
 - Could be used in highly practical and immediately relevant teaching
 - Motivation for tutees → “Hidden curriculum”: expectations and tips regarding certain clinical rotations and courses, how to cope in stressful situations



5

Near-Peer Learning in Residency

- Are there any disadvantages of senior residents as near peers?
 - Knowledge deficits compared to lecturers → lies on integrity in admitting deficiencies
 - Residents still tried to maintain **reputation** in front of their senior resident near-peers → desire to look **competent**, avoiding **shame** (Cowan, et al. 2025)
 - On-call residents are afraid to **burden** their seniors → **hesitant** to ask for feedback (Lu, et al. 2022)
 - ➔ Dual roles of seniors as assessors / supervisors
 - ➔ Possibly reducing the advantages of nPAL?
- Available studies focuses on residents-as-teachers program evaluations or curriculum innovations, and less reports on learning process in near peers
 - when in reality, near-peer learning happens in formal and informal settings in residency!

Implications and Future Research?

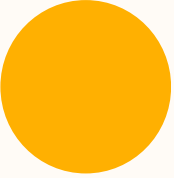
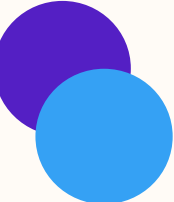
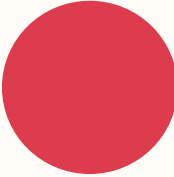
Research Topic

How do residents learn clinical reasoning from their seniors in the clinical workplace?

- Near peer learning as one of the frameworks that supports the study's theoretical framework?
 - Benefits for seniors as near-peer teachers and juniors as tutees?
 - Disadvantages unique to near-peer learning in residency and how to mitigate them?
 - Influencing factors on near peers - compared to faculty and peers



Conclusions

-  PAL is one of the learning methods widely used in health professions education
-  PAL has both advantages and disadvantages – which can be addressed through proper program design – though its distinct features may still provide notable benefits
-  nPAL offers more knowledgeable and experienced tutors
-  While being widely used in residency, the near peer learning process could still be explored due to the unique roles of residents

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Thank You!

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