

Interprofessional Work on the Wards

Bode SFN, Friedrich S & Straub C. **‘We just did it as a team’: Learning and working on a paediatric interprofessional training ward improves interprofessional competencies in the short- and in the long-term.** *Medical Teacher.* 2022;45(3):264-271. <https://doi.org/10.1080/0142159X.2022.2128998>

Reviewed by: Nabanita Hossain and Maggie Costich

What was the study question?

Does medical student (MS) and nurse trainee (NT) participation in an inpatient interprofessional (IP) training rotation improve their short- and long-term IP competencies?

How was it done?

A two-week rotation was developed called the **Interprofessional Training Ward in Paediatrics (IPAPAED)** where two MS and 2-4 NT worked together as IP teams, supervised by registered nurses and pediatricians as IP learning facilitators. Participants received an introduction to IP education and collaboration, and each day, the team participated in IP handoffs, admissions, rounds, discharges, and a daily guided IP reflection. Participants completed the Interprofessional Socialization and Value Scale (ISVS) and Interpersonal Collaboration Scale (ICS) surveys prior to the rotation and then again following the rotation and 6-34 months later. Qualitative data was obtained from structured focus groups and open-ended responses on surveys.

What were the results?

MS and NT participants had a significant increase in scores on both the ISVS and ICS immediately following the rotation. Differences remained significant at long-term follow up for the ISVS and ICS, both in the ‘accommodation’ and ‘communication’ domains. Participants reported better communication, particularly during disagreements of medical care, and better respect of the daily routines of each professional group. Participants also reported a sense of IP team identity in qualitative responses.

What are the implications?

Working on an IP team involving both medical students and nursing trainees can assist with improving IP competencies both in the short and long-term. While multidisciplinary teams involving GME trainees are becoming increasingly common, rarely do MS and NT have the opportunity to work together and learn from one another. The authors make a compelling argument that not only are IP teams involving both MS and NTs feasible, but they may lead to sustained positive effects on IP collaboration and stronger relationships in the future. Future work should consider looking at more objective IP outcome measures as all data assessed was obtained through self-report.

Editor’s Comment: This study describes the development of a rotation that focuses on true interprofessional work in an authentic setting - with real patients - structured in such a way to deliberately foster IP work between nursing trainees and medical students. This really pushes us to “think outside of the box” of our traditional clerkship experiences for students, and consider what other ways we can authentically foster IP development. (KFo)

E-learning vs. T-learning

Hadvani T, Dutta A, Choy E, Kumar S, Molleda C, Parikh V, Lopez MA, Lui K, Ban K, Wallace SS. **Effectiveness of Modalities to Teach Evidence Based Medicine to Pediatric Clerkship Students: A Randomized Controlled Trial.** Acad Pediatr. 2021 Mar;21(2):375-383.

<https://dx.doi.org/10.1016/j.acap.2020.09.012>

Reviewed by: Maya Neeley

What was the study question?

What is the effectiveness of a traditional didactic session (TDS) as compared to a self-paced, interactive, multimedia module (SPM) on the application of evidence-based medicine skills among medical students during a pediatric inpatient rotation?

How was the study done?

This study was a cluster-randomized controlled trial that took place over a year at a quaternary care children's hospital. During their 2-week inpatient block, students were randomized into two groups: one receiving TDS and the other receiving SPM. During the second week of the block, all students were asked to formulate a clinical question based on a patient they cared for and complete a critically appraised topic form (CAT). This form prompted them to create a PICO question, identify an ideal study design for their question, write search terms, select an article, and perform an appraisal of it. Students were also asked to complete a survey at the beginning and end of the 2-week block and again 3 months post-intervention assessing knowledge, attitudes, confidence, and accessing evidence of varied data sources. The primary outcome was a numeric score given to the CAT forms based on the validated Fresno Tool. Secondary outcomes were related to survey results.

What were the results?

127 students participated in the study; 64 in the TDS group and 63 in the SPM group. Participant characteristics were similar between groups. There was no significant difference in mean CAT scores between the TDS and the SPM sessions. Small but statistically significant improvements were seen in all outcomes from precourse to postcourse in both TDS and SPM interventions. Improvements were sustained from precourse to 3-month post intervention for knowledge and confidence for SPM and TDS, but not sustained along those same time points for attitudes towards EBM and accessing evidence. There were no significant differences in knowledge, attitudes, confidence, and accessing evidence between TDS and SPM groups across time points.

How can this be applied to my work in education?

This study demonstrates that a SPM learning module is as effective as a TDS module for application of EBM concepts to patient care. TDS can be difficult to sustain due to time constraints and availability of both students and instructors. In addition, there has also been a rapid shift to promote asynchronous learning through electronic platforms where students are comfortable learning and can choose to engage in learning when and where it feels best to them. SPM may be a promising method of teaching EBM to medical students.

Editor's Note: The study authors make the excellent point that TDS requires faculty expertise and an ongoing time commitment, while SPM requires a larger time commitment up front but less ongoing support. The results of the study are reassuring that institutions can make the best choice based on their local resources with knowledge that both approaches are effective (JG)

Horses and Zebras

Bai, S., Zhang, L., Ye, Z. *et al.* **The benefits of using atypical presentations and rare diseases in problem-based learning in undergraduate medical education.** *BMC Med Educ* 23, 93 (2023).
<https://doi.org/10.1186/s12909-023-04079-6>

Reviewed by Srividya Naganathan

What was the study question?

Do more challenging cases on Practice based Learning (PBL) curriculum impact student satisfaction and self-directed learning?

How was the study done?

Two hundred and ninety-four third year medical students at University of Hong Kong were introduced to the PBL curriculum. The case scenarios included common disease with typical symptoms (CDTS), common disease with atypical symptoms (CDAS) and rare disease (RD). All the students completed 4 cases of CDTS, after which they were randomly assigned to 3 groups to complete 6 more cases: group 1 continued to study CDTS (n=100), group 2 had CDAS (n=98) and group 3 studied RD (n=96). All the students completed an anonymous questionnaire survey. Kruskal-Wallis tests were performed on collected data.

What were the results?

Students found all the 3 types of cases interesting. Although group 2 and 3 rated their cases as more difficult compared to group 1 ($p < 0.001$), the majority of the students preferred difficult cases. Students felt that both CDAS and RD cases were more authentic and logical ($p < 0.05$). CDAS case scenarios were perceived as better at achieving the learning objectives ($p < 0.05$) and promoting critical thinking skills ($p < 0.01$). Students were also more satisfied with the CDAS and RD cases and felt that they were beneficial to long-term learning. In addition to improved thinking skills, students also felt that the RD cases improved their interpersonal skills and communication, professionalism and metacognition when compared to CDTS cases ($p < 0.01$).

How can I apply this to my teaching?

Based on this study, students appear to be more engaged and have improved diagnostic reasoning when discussing rare diagnoses or atypical presentations. However, from a practical standpoint, students need to be taught to initially consider common diagnoses before pursuing evaluation for rare diseases. Curriculums should contain the right balance of case mix including both common and atypical presentations of common conditions as well as rare conditions.

Editor's Note: I really liked that they used cases (CDAS) that we probably more often encountered in clinical practice (also noted by students). I was surprised to see that students liked the CDAS and RD cases. While student perception is important, application of this teaching would probably be of more interest. (AKP)