

Comparing simulation-based training and online interactive discussion for interprofessional learning among medical, nursing and pharmacy students

Submission date 15/07/2026	Recruitment status No longer recruiting	☐ Prospectively registered ☐ Protocol
Registration date 21/07/2026	Overall study status Completed	☐ Statistical analysis plan ☐ Results
Last Edited 21/07/2026	Condition category Other	☐ Individual participant data ☒ Record updated in last year

Plain English summary of protocol

Background and study aims

Interprofessional education (IPE) has a high pedagogical value in educational settings for healthcare professionals. IPE can be delivered via various teaching methods, including simulation training and online interactive discussions. Simulation-based IPE involves realistic clinical scenarios in hospital-like environments, often using high-fidelity manikins, and concludes with a debriefing session to support reflection and learning. Online IPE provides a flexible alternative, allowing students from different disciplines to discuss clinical cases and learn collaboratively. While these two approaches have shown benefits for improving self-efficacy in communication and teamwork, clinical knowledge and collaborative attitudes, it remains unclear which method is more effective. Furthermore, direct comparisons between simulation training and online discussion across a broad range of healthcare disciplines are limited. As such, comparing their effects may help guide the future development of IPE programmes.

This study aims to conduct IPE for medical, nursing and pharmacy students using simulation training and online interactive discussion and to evaluate its effects on attitudes towards interprofessional collaboration, perceived self-efficacy and readiness for IPE.

Who can participate?

Year 3-6 students in bachelor's degree programmes in medicine, nursing and pharmacy in the Chinese University of Hong Kong.

What does the study involve?

The study involves two phases. In the first phase, 20 clinical scenarios covering common acute medical, surgical, emergency, and paediatric conditions will be developed for either simulation-based IPE or online interactive discussion. Twenty final-year nursing students will be recruited to design the scenarios based on challenges they experienced during clinical placements. The scenarios will be reviewed by medicine, nursing, and pharmacy educators and students, then refined through trial runs and feedback.

In the second phase, the IPE activities will be implemented. Students will review preparatory materials before participating in either simulation training sessions or online discussion sessions. During the simulation sessions, groups of four to seven students from medicine, nursing, and pharmacy will work collaboratively to assess patients, make clinical decisions, provide appropriate treatment, and practise communication and teamwork skills. The sessions will be followed by guided debriefing and feedback provided by clinical lecturers from the three disciplines. During the online discussion sessions, groups of four to eight students from medicine, nursing, and pharmacy will discuss case scenarios and develop patient management plans. A clinical lecturer will facilitate the discussions, while healthcare professionals from other disciplines will share their expertise related to the scenarios through pre-recorded videos. At the end of each session, the clinical lecturer will provide feedback on the students' performance.

What are the possible benefits and risks of participating?

Students may benefit from an improvement to their attitudes towards interprofessional collaboration, perceived self-efficacy and readiness for IPE. There are no risks associated with participating in this study.

Where is the study run from?

Faculty of Medicine, The Chinese University of Hong Kong.

When is the study starting and how long is it expected to run for?

April 2024 to June 2025.

Who is funding the study?

Teaching Development and Language Enhancement Grant (TDLEG) for the 2022-25 Triennium, The Chinese University of Hong Kong Grants Committee funded scheme.

Who is the main contact?

Prof. Ka Ming Chow, kmchow@cuhk.edu.hk

Contact information

Type(s)

Principal investigator, Scientific, Public

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Additional identifiers

Study information

Scientific Title

Interprofessional education in healthcare: a comparative study of simulation training and online interactive discussion

Study objectives

- 1) To evaluate and compare the effects of simulation-based-Interprofessional education (IPE) and online interactive discussion on students' attitudes towards interprofessional collaboration, perceived self-efficacy and readiness for IPE.
- 2) To explore students' satisfaction with and learning experiences during sim-IPE.

Ethics approval required

Ethics approval required

Ethics approval(s)

Approved 31/01/2023, Survey and Behavioural Research Ethics Committee of The Chinese University of Hong Kong (Faculty of Social Science, Sino Building, The Chinese University of Hong Kong, Shatin, New Territories, -, Hong Kong; +8523943 4096; fssc02@cuhk.edu.hk), ref: SBRE22 0487

Primary study design

Interventional

Allocation

Non-randomized controlled trial

Masking

Open (masking not used)

Control

Active

Assignment

Sequential

Purpose

Health professions education research

Study type(s)

Health condition(s) or problem(s) studied

Interprofessional education among medical, nursing and pharmacy students

Interventions

Twenty clinical scenarios involving common acute medical, surgical, emergency and paediatric problems will be developed. Half of the scenarios will be created for sim-IPE, and the other half will be created for online interactive discussion. Participants will be assigned to either one of the intervention groups according to the time frame in which they entered the study. In the sim-IPE group, four to seven students will participate in each session led by three clinical lecturers. Each

150-minute session includes two acute care simulation scenarios, consisting of briefing (10 minutes), simulation activities (30 minutes), and facilitated debriefing with immediate feedback (30 minutes). All sessions will be video recorded. In the online interactive discussion group, four to eight students will participate in each session and work in small groups to discuss two acute care case scenarios under the guidance of a clinical lecturer. The 2-hour intervention includes facilitated case discussions (45 minutes) and debriefing with feedback (15 minutes). Health professionals from other disciplines, including occupational therapy, physiotherapy and dietetics, will be invited to share their professional expertise regarding the scenarios through video recordings.

Participants will complete a set of questionnaires before and after the IPE activities. Each participant will receive a cash coupon with a value of HKD100 (USD12.9) upon completion of the IPE session and both pre-and post-simulation surveys, and another cash coupon with a value of HKD100 (USD12.9) after participating in focus group interviews.

Intervention Type

Behavioural

Primary outcome(s)

1. Attitudes towards interprofessional collaboration measured using Interdisciplinary Education Perception Scale (IEPS) at Pre- and post-intervention
2. Perceived self-efficacy for interprofessional experiential learning measured using Self-Efficacy for Interprofessional Experiential Learning Scale (SEIEL) at Pre- and post-intervention
3. Readiness for IPE and learning experiences measured using Readiness for Interprofessional Learning Scale Questionnaire (RIPLS) at Pre- and post-intervention
4. Satisfaction with simulation experience measured using Satisfaction with Simulation Experience Scale (SSES) at Post-intervention
5. Qualitative data measured using Focus group interviews at Post-intervention

Key secondary outcome(s)

Completion date

30/06/2025

Eligibility

Key inclusion criteria

Year 3 to 6 students in the Bachelor of Medicine and Bachelor of Surgery (MBChB), Bachelor of Nursing (BNurs) and Bachelor of Pharmacy (BPharm)

Healthy volunteers allowed

Yes

Age group

Adult

Lower age limit

20 Years

Upper age limit

38 Years

Sex

All

Total final enrolment

101

Key exclusion criteria

Not meeting the key exclusion criteria

Date of first enrolment

01/04/2024

Date of final enrolment

30/04/2025

Locations**Countries of recruitment**

Hong Kong

Study participating centre

Faculty of Medicine, The Chinese University of Hong Kong

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Hong Kong

Hong Kong

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Sponsor information**Organisation**

Chinese University of Hong Kong

ROR

<https://ror.org/00t33hh48>

Funder(s)**Funder type**

Funder Name

Chinese University of Hong Kong

Alternative Name(s)

The Chinese University of Hong Kong, , , Hēunggóng Jūngmàhn Daaihohk, CUHK,

Funding Body Type

Government organisation

Funding Body Subtype

Universities (academic only)

Location

Hong Kong

Results and Publications

Individual participant data (IPD) sharing plan

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

IPD sharing plan summary

Available on request