

Developing infection prevention and control education with Asian Universities

Marja Silén-Lipponen, Principal Lecturer, PhD

Leena Koponen, Senior Lecturer, MHSc, PhD-student

Mikko Myllymäki, Senior Lecturer, MHSc

Ulla Korhonen, Senior Lecturer, MHSc

Savonia University of Applied Sciences, Unit of Health Care, Kuopio, Finland

João Graveto, Project coordinator, PhD

João Pardal, Technical Manager, MSc

Nursing School of Coimbra, Portugal



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- ▶ **Infection prevention and control (IPC) education** is essential for the development of the appropriate knowledge and skills of healthcare workers.
- ▶ Asian Nursing Universities have limited practice hours and lack of suitable equipment to practice IPC skills leading to shortcomings in pedagogy and students IPC competency.
- ▶ **Capacitating Asia's Nursing Students on Innovative and Sustainable Prevention and Control of Healthcare Associated infections (PrevInf)**
 1. Designing of a PrevInf Model for Asian countries
 2. Designing the PrevInf E-Book for nursing students and teachers
 3. **Designing simulation scenarios** to support IPC education

Marja s-l 13.10.2023



SAVONIA
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PrevInf
InovSafeCare Project Extension

Scenario based simulation (SBS)

based on a detailed written scenario, has structured debriefing and aims to practice clinical and non-technical skills



Standardized patients

Involves the use of individuals trained to portray the roles of patients, family members or others to allow students to practice eg. physical exam, history taking and communication skills.



Patient simulators

Life-like manikins designed to react physiologically to the treatment. Manifest vital signs, clinical signs and symptoms.



Structure of scenario based simulation

- Briefing (10-15min)
 - learners will be given objectives, rules, roles and they will get familiar with the simulation environment. capabilities of the simulation environment
- Simulation (10-15min)
 - 2-4 participants
- Debriefing (30-45min)
 - The most important element of simulation learning process
 - A structured and guided reflection process in which students actively appraise the cognitive, affective and psychomotor performance.

Simulation in action based on the written scenario



THE TITLE OF THE SIMULATION:

Prevention of respiratory tract infections associated with sputum suction in tracheostomy patients

Targeted Students

Academic year: The second-year students

Target degree Program: Bachelor

Name of the course: Infection prevention and control

Clinical learning objectives:

After the simulation student is able to:

1. Assess when to suction the airway for tracheostomy patients.
2. Identify risk factors and measures to prevent respiratory tract infections for tracheostomy patients when suctioning sputum.
3. Perform sputum suction technique aseptically, ensuring safety for tracheostomy patients.

Non-technical learning objectives:

Student is able to:

1. Guiding and supporting the patient and family member during the sputum aspiration of the tracheostomy patients.
2. Coordinate effectively in care-team activities.

Preliminary readings, questions, etc. materials for students to prepare themselves for the simulation:

Preliminary readings:

- Nguyen Manh Dung & Vu Thi La (2020). Some common Health care- associated infections, Infection prevention and control in nursing practice, The Vietnam Education Publishing House Limited Company, pages 184 – 190.
- Nguyen Minh Chinh & Vu Thi La (2020). Technique of suctioning the airway, Fundamental of Nursing II, NDUN, pages 172 – 197
- Ministry of Health (2014), Decision No. 1904 QD-BYT on promulgating the document "Guidelines for specialized technical procedures for resuscitation - first aid and anti-poison"
- St George's Healthcare NHS Trust (2012), Guidelines for the Care of Patients with Tracheostomy Tubes

- Videos:

+ Technique of suctioning sputum through tracheostomy tube (12 mins):

https://www.youtube.com/watch?v=GfsYK6gJrt0&feature=emb_logo

Cultural dimensions of scenario-based simulation

Table 2. Assumed special features of debriefing in different parts of the world (according to Chung et al. 2013, Aura, Silén-Lipponen & Huovinen 2020)

	Eastern Asia	Northern Europe	North America	South America	Australia	Africa
Talking time - facilitator	A lot	A little	Average	A lot	A little-average	Quite a lot
Talking time – learners	A little	A lot	A lot	A lot	A lot	Quite a lot
Interaction patterns	The facilitator participates in almost all discussions	Students talk a lot to each other	Students talk a lot to each other	The facilitator participates in almost all discussions	Students talk a lot to each other	The facilitator participates in almost all discussions
Interaction style	Mostly opinion / statement based	Mostly questions and answers / discussion	Mostly questions and answers / discussion	Mostly opinion / statement based	Mostly questions and answers / discussion	Mostly opinion / statement based
Initiative for interactions	From the facilitator	From the facilitator and learners	From the facilitator and learners	From the facilitator and learners	From the facilitator and learners	Mostly from the facilitator

Designing SBS education in PrevInf project

A new reflective scenario scripting process →

supportive feedback →

12 simulation scenarios about HAI prevention and control

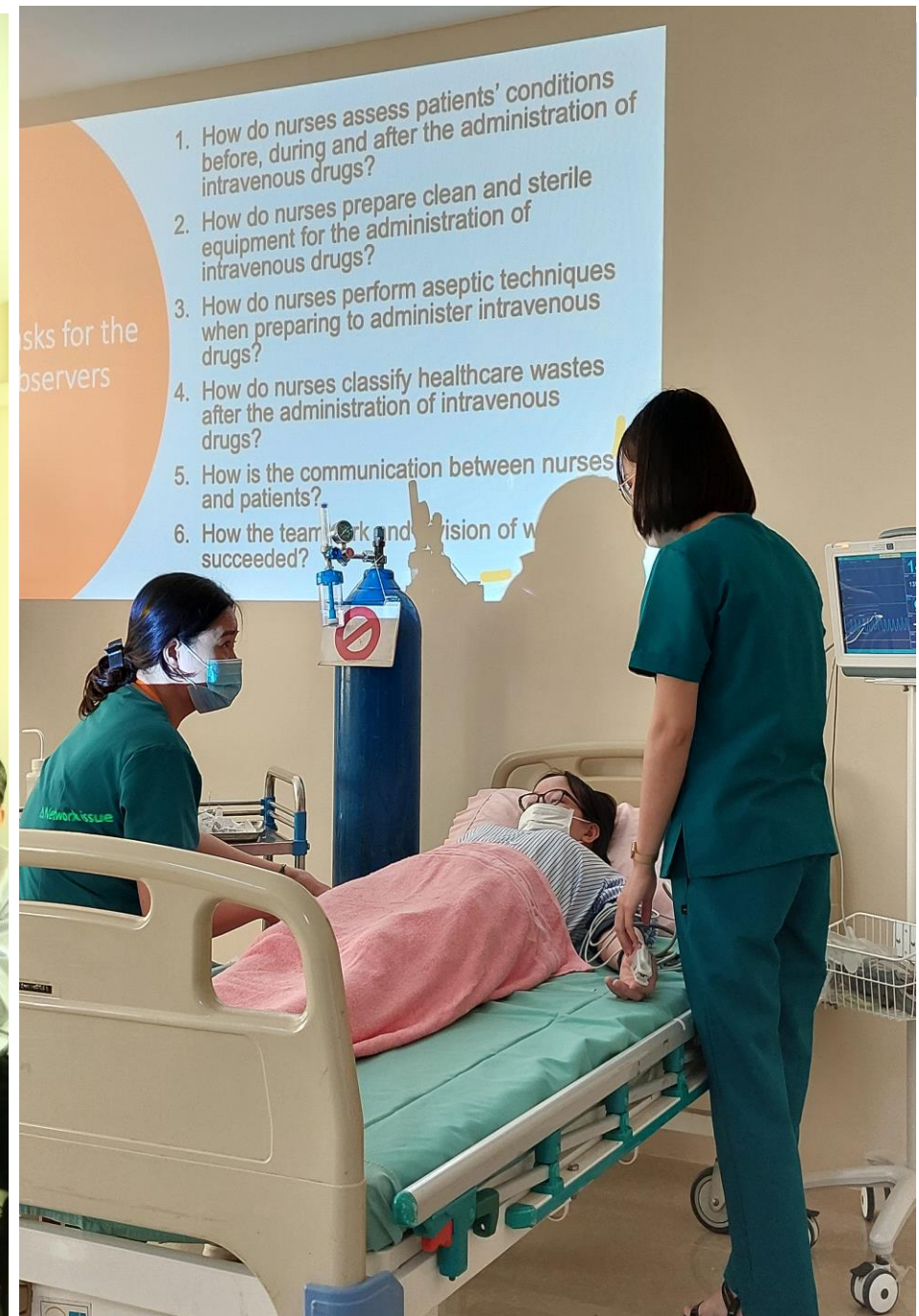


Method of the guidance	Timing	Objective
Zoom guidance with all the partners by using videos and zoom presentations	First 6 months of the project	Learning some aspects of the SBS
Individual partner team guidance session	Half a year period in the 1. project year	Learning to design a scenario
Rehearsing SBS in practice	Since 2. year of the project in transnational meetings	Learning to use SBS in practice
Pilotings x 2 with students and teachers	Second and third year of the project	Learning to implement SBS based on local cultural customs

Briefing and simulation in action



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Questions for the observers

1. How do nurses assess patients' conditions before, during and after the administration of intravenous drugs?
2. How do nurses prepare clean and sterile equipment for the administration of intravenous drugs?
3. How do nurses perform aseptic techniques when preparing to administer intravenous drugs?
4. How do nurses classify healthcare wastes after the administration of intravenous drugs?
5. How is the communication between nurses and patients?
6. How the teamwork and division of work succeeded?

Learning principles of scenario-based simulation



Confidentiality



Safety



Equality

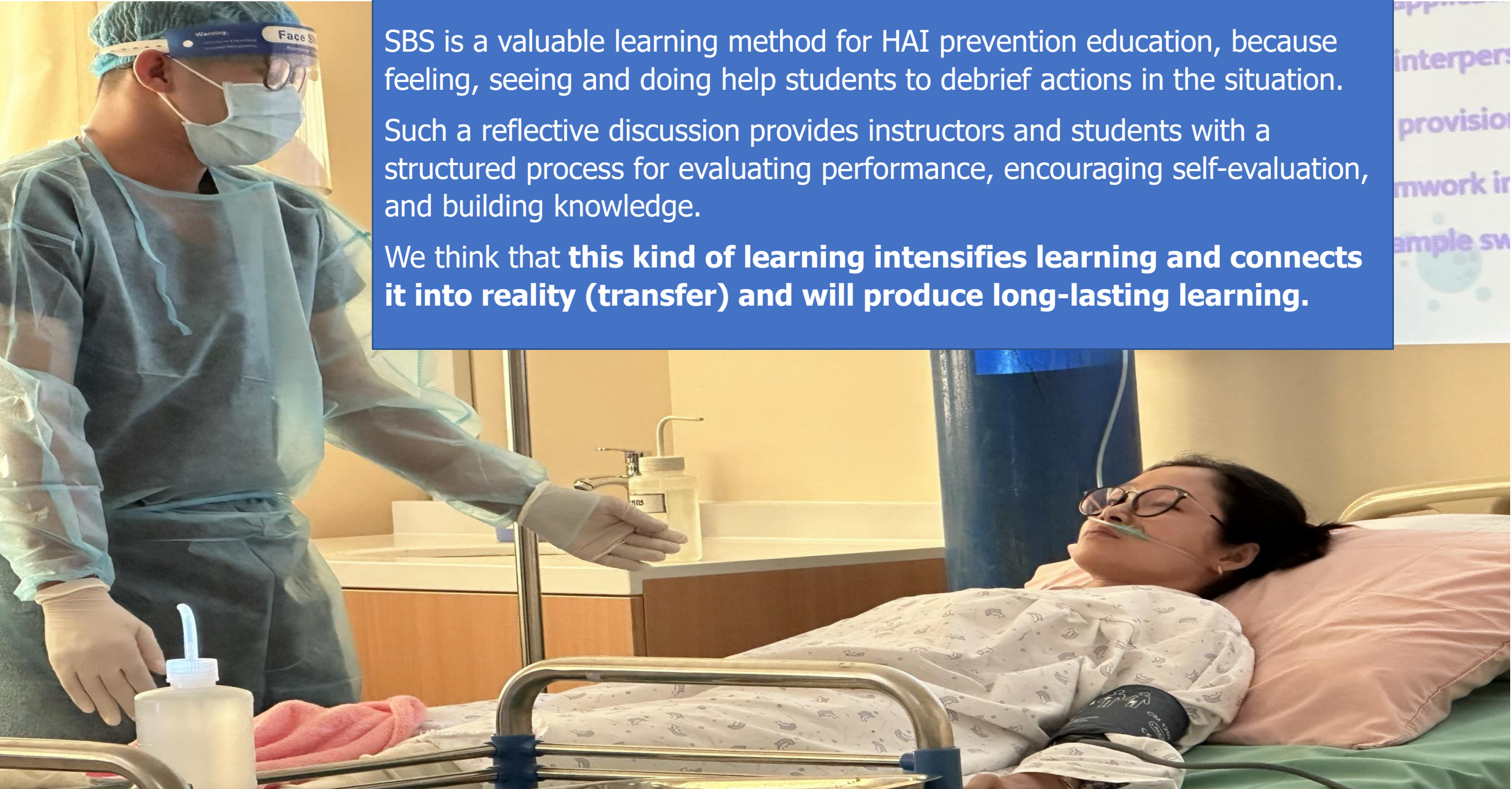


Collaboration



Peer-Learning

Understanding that debriefing is
the
"heart and soul"
of the simulation experience.
(Rall, Manser & Howard
2000)

A healthcare professional, likely a nurse or doctor, is standing by the side of a hospital bed. They are wearing full personal protective equipment (PPE), including a blue surgical cap, a face shield, a blue surgical mask, and blue gloves. They are holding a white plastic bottle, possibly for irrigation or medication. A patient is lying in the bed, wearing a white hospital gown and a nasal cannula. The patient has dark hair and is wearing glasses. The background shows a typical hospital room with a sink and a blue curtain.

SBS is a valuable learning method for HAI prevention education, because feeling, seeing and doing help students to debrief actions in the situation. Such a reflective discussion provides instructors and students with a structured process for evaluating performance, encouraging self-evaluation, and building knowledge.

We think that **this kind of learning intensifies learning and connects it into reality (transfer) and will produce long-lasting learning.**