



INTERPROFESSIONAL SIMULATION-BASED TEAM TRAINING: LESSON LEARNED THE HARD WAY

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Scholar

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OUTLINE:

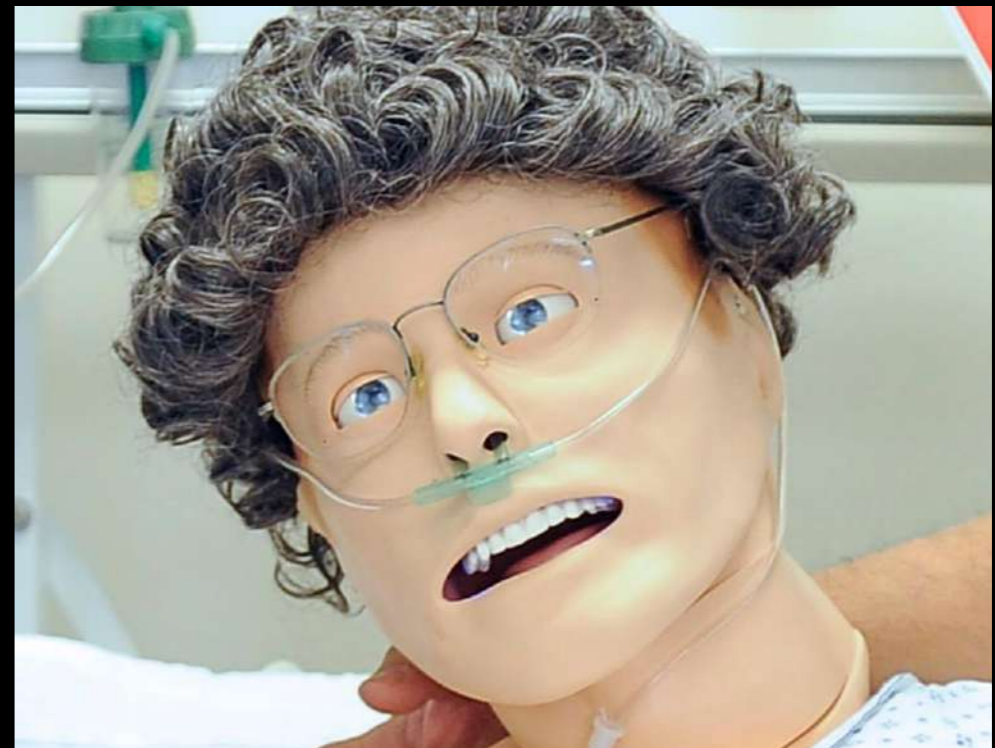
- What is simulation?
- Why simulation is important?
- Interprofessional Operating Room (OR) Team Training
- My experiences



WHAT IS SIMULATION?

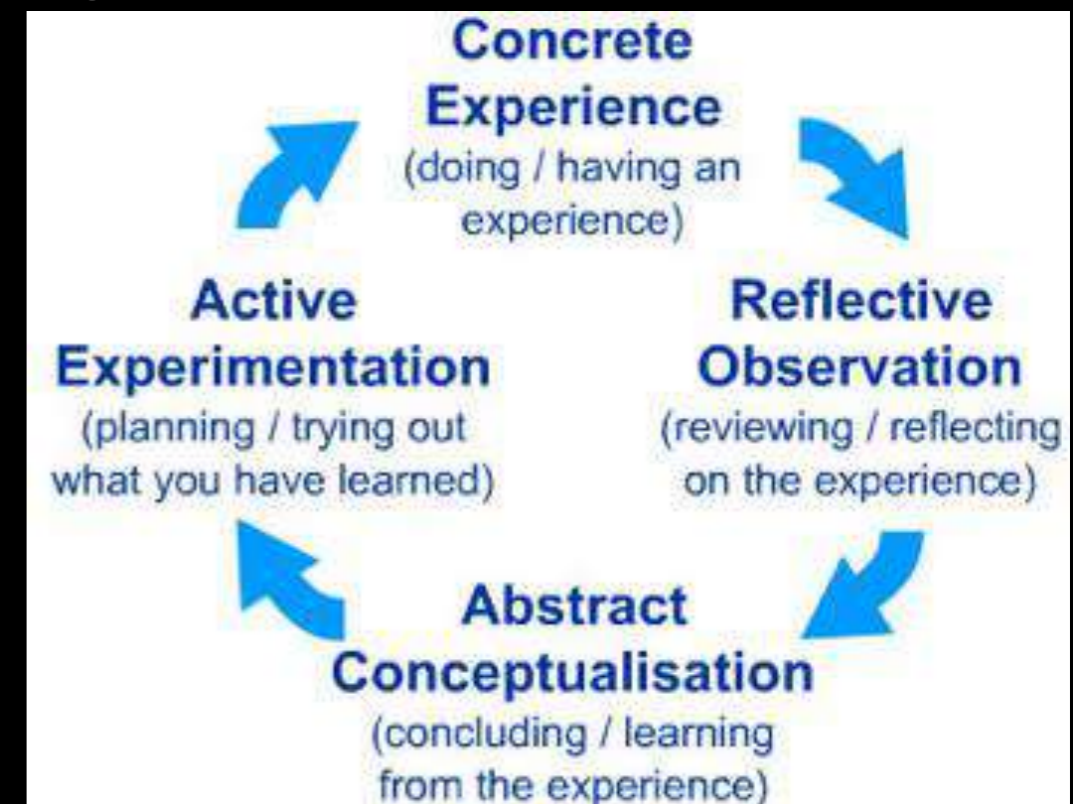
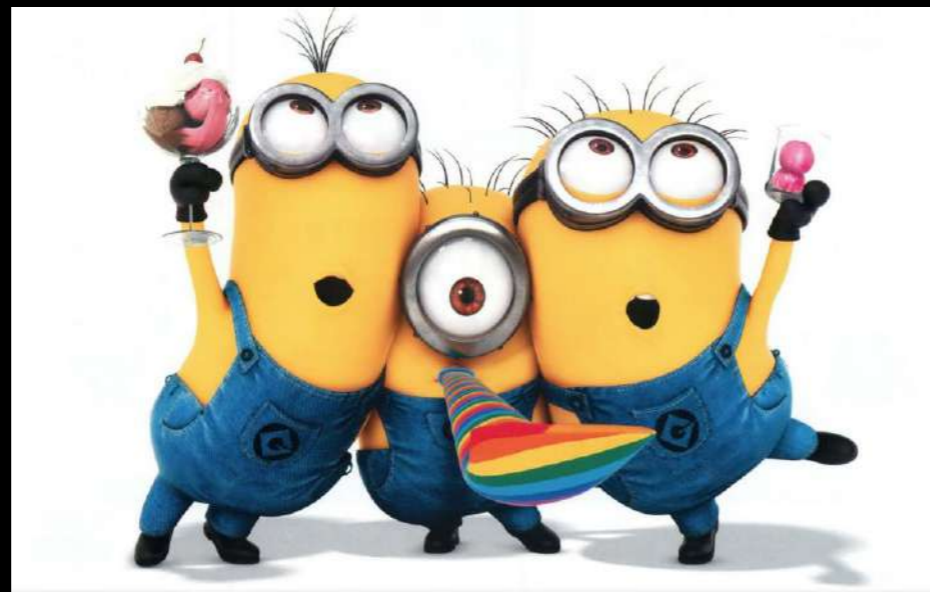
"**Simulation** is a technique to replace or amplify real-patient experiences with guided educational experiences that evoke or replicate aspect of the real world."

Society for Simulation in Healthcare. What is simulation? 2009 May



WHY SIM?

- Patient Safety
- Safe zone to learn
- Well-matched with adult learning theories
- Repeatable and Controllable
- Fun



KOLB'S EXPERIENTIAL
LEARNING CYCLE



MASSACHUSETTS GENERAL HOSPITAL



INTERPROFESSIONAL SIMULATION OR TEAM TRAINING FOR RESIDENTS



INTERPROFESSIONAL OR TEAM TRAINING

- Six simulation scenarios were developed by a multidisciplinary team in order to promote inter-professional skills
 - Intraoperative arrhythmia
 - Intraoperative ST-elevated myocardial infarction (STEMI)
 - Operating room fire
 - Malignant hyperthermia
 - Difficult airway
 - Massive haemorrhage



INTERPROFESSIONAL OR TEAM TRAINING

- Weekly simulation sessions from 2013 to 2015.
- Conducted in the **in-situ simulation operating room set up** with general surgery supplies, anesthesia equipment, and a SimMan® patient simulator



Multidisciplinary OR Team

Surgical residents

Surgical Technologists

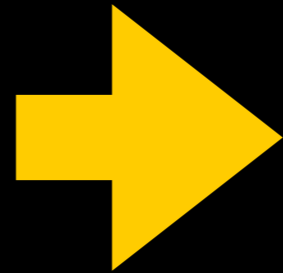


Nurses

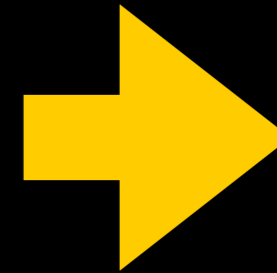
Anesthesiology residents

Each session was approximately 60 minutes

Orientation
(10 mins)



Case scenario
(20 mins)



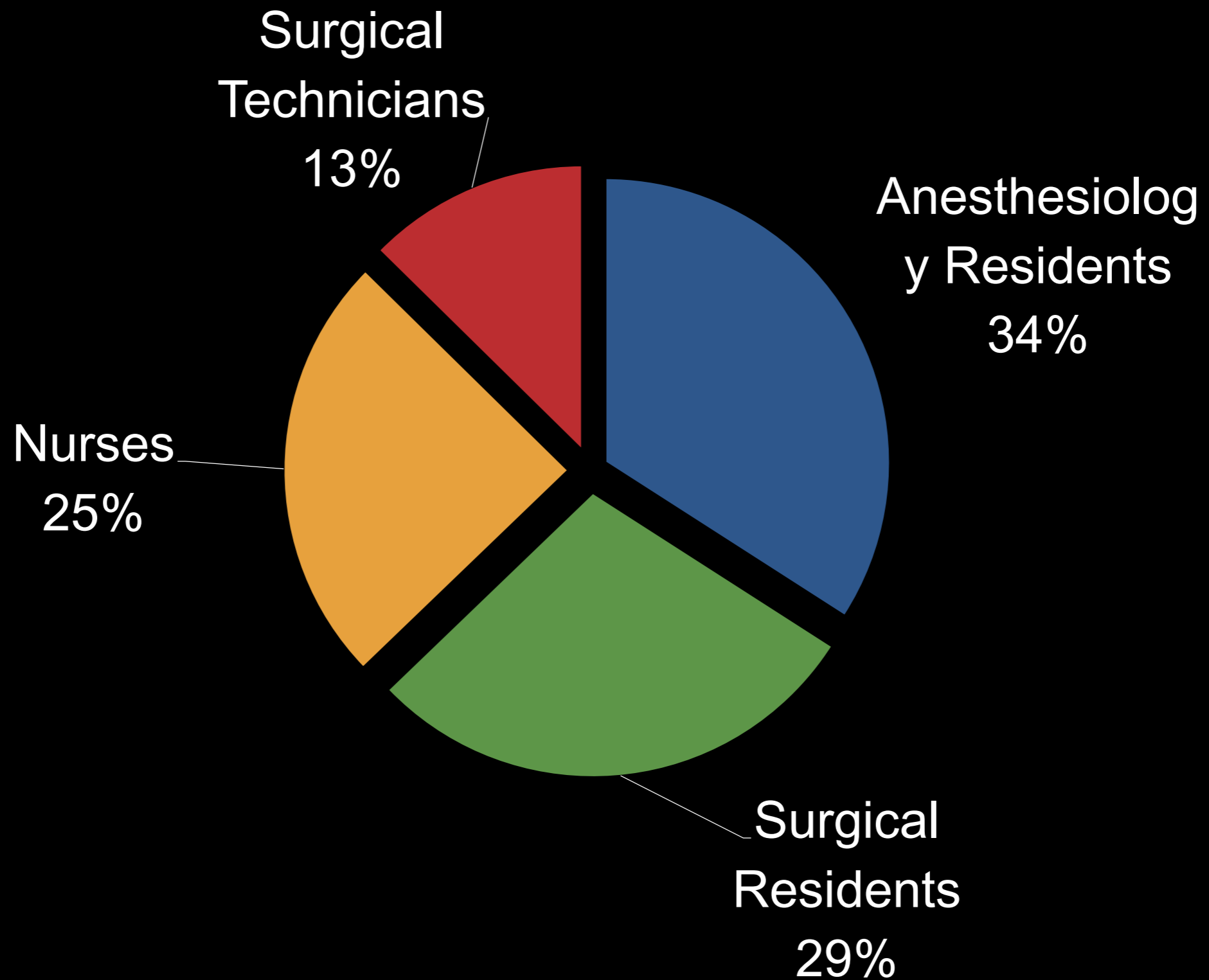
Debriefing
(30 mins)



Evaluation form was done after simulation session.



TOTAL NUMBER OF 578 PARTICIPANTS



Question	Strongly agree (%)	Agree (%)	Somewhat agree (%)	Neutral (%)	Somewhat disagree (%)	Disagree (%)	Strongly Disagree (%)
The simulation was realistic enough for me to engage in learning?	44	42	9	2	1	0	2
The simulation exercise helped me improve my teamwork skill?	36	47	12	4	0	0	1
The simulation exercise was clinically applicable to my practice.	65	30	3	1	0	0	1
I will change my practice because of this simulation exercise.	32	42	14	10	0	2	0
Working in mixed team was important to my learning for this simulation exercise.	64	30	3	3	0	0	0

The **instructors** also learned by working as multidisciplinary team to **create case scenarios, troubleshoot the problems, and improve teaching skills** as simulation educators.



LIMITATION

- Hard to find the time to do the multidisciplinary team training.
- Clinical assessment has not been done in this study.



FUTURE RESEARCH

- Formal assessment of teamwork
- Effect on patient care
- Improved integration into daily work.



IMPLEMENTATION IN THAILAND

- Important to develop inter-professional skills and effective teamwork
- May ultimately improve patient care and outcomes



CONCLUSION

- Simulation is an effective method to learn and improve intra-operative teamwork.
- The implementation of inter-professional simulation-based team training may improve overall patient care and outcomes.
- More research is required to determine how to streamline integration into daily practice.



MORE EXPERIENCES



MGH Surgical Education
Research Team



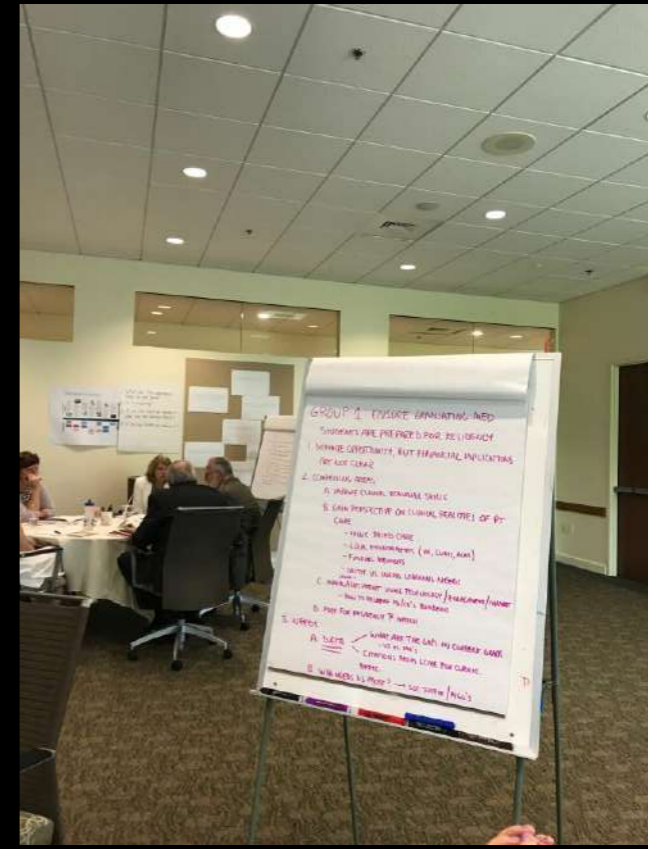
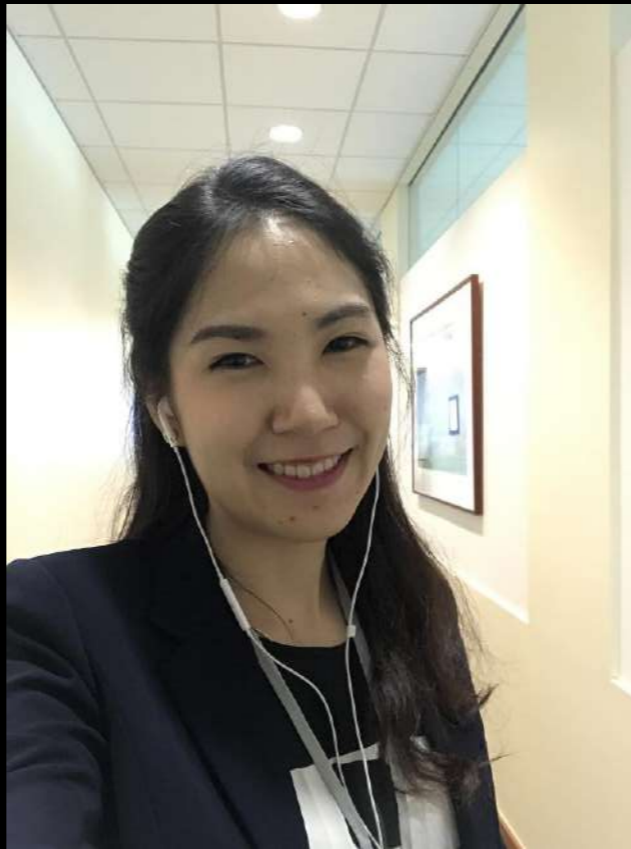
NEJM Educational
Research Team

MORE EXPERIENCES



- Teaching Technical skills for Harvard medical students
- Observing Surgery Clerkship OSCE and Intern Bootcamp

MEDICAL EDUCATION OPPORTUNITIES



NEJM Group Educational Strategy Workshop:
Learning at the Crossroads

MEDICAL EDUCATION OPPORTUNITIES



Harvard Macy Institute: Health Care Education 2.0
Transforming your teaching for the digital age

MEDICAL EDUCATION OPPORTUNITIES



OR Team Instructor Course
at Centre of Medical Simulation



Lab resident
as a teacher workshop

CONFERENCES



Surgical Education Week
in San Diego, CA, USA

AMEE 2017
in Helsinki, Finland





ACS Clinical Congress in San Diego, CA, USA

IMSH 2018 in LA, CA, USA





MEDICAL EDUCATION RESEARCH
CERTIFICATE (MERC)
FROM ASSOCIATION OF AMERICAN
MEDICAL COLLEGES (AAMC)



International Mentor

Associate Professor Roy Phitayakorn, MD, MHPE(Med), FACS

General and endocrine surgery and Director of Medical Student Education and Surgery Education Research, Department of General Surgery, Massachusetts General Hospital, Harvard Medical School,
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Thai Mentor

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- Mr. Wayne Stathapoulos
- Mr. Suresh Venkatan

