OUTCOME CENTERED DESIGN

Storyboarding for scenario development
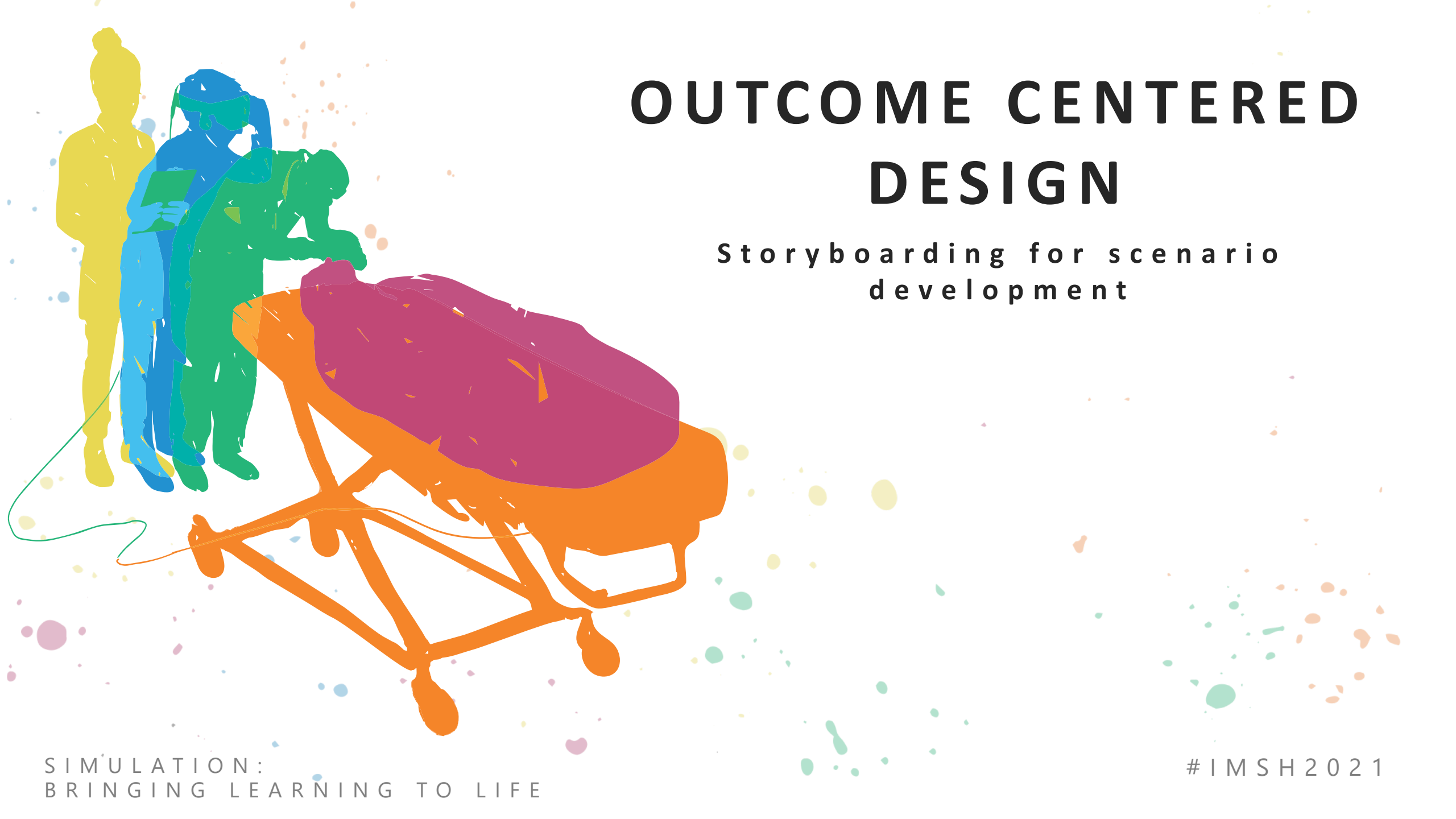
WELCOME

Jamie M. Robertson, PhD, CHSE-A
Director of Innovation in Surgical Education
Brigham and Women's Hospital
Instructor in Surgery
Harvard Medical School

David Meguerdichian, MD
Attending Emergency Medicine Physician
Brigham and Women's Hospital
Instructor in Emergency Medicine
Harvard Medical School

No Disclosures

Objectives

1. Describe the three steps in Wiggins and McTighe's Backward Design Process

2. Describe how storyboarding can help simulationists create scenarios that achieve the learning objectives

3. Develop a storyboard for a clinical scenario that describes the important clinical, behavioral and operational aspects of each key stage in the scenario

Backward Design Theory

- Introduced by Grant Wiggins and Jay McTighe

    "Teaching is a means to an end. Having a clear goal helps us educators to focus our planning and guide purposeful action toward the intended results."

- Can't start planning the _how_ until you know the _what_

- Select learning outcomes and goals first, then plan how to meet them

Wiggins, G., & McTighe, J. (1998). _Understanding by design_ .Alexandria, VA: Association for Supervision and Curriculum Development.

Backward Design

Activity	Evidence	Desired Results

- What activity best fits the outcomes?

- Does it provide opportunities to demonstrate outcomes?

- How will learners demonstrate results?

- What type of assessment will you use?

- What level of proof will you accept?

- What will learners gain by the end?

- What are the goals of the curriculum?

- What are the big picture items?

Goals

- Questions to answer:
  - What is the purpose of the course?
  - Why would someone want to attend?

- Examples:
  - Participants will develop the necessary technical and non-technical skills to serve as a member of the code team.
  - Participants will learn how to manage acute perioperative events of various etiologies utilizing the resource management framework.

Learning Outcomes

- **Three Components**
  - Action Component
    - What do I want learners to be able to **<u>do</u>** as a result of this activity?
  - Subject Component
    - What do I want learners to **<u>learn</u>** as a result of this activity?
  - Measurement Component
    - How will learner **<u>measure</u>** his/her success in the activity?

Society for Simulation in Healthcare. *Writing Effective Learning Objectives.* *http://www.ssih.org/Portals/48/IMSH%202016/Abstracts/Resource_LearningObjectives.pdf*

Goals and Learning Outcomes

Goals	Learning Outcomes
Broad, generalized statements about what is to be learned	Narrow, specific statements about what is to be learned
General intentions	Precise intentions
Intangible	Tangible
Abstract	Concrete
Written before objectives	Prepared before instruction is designed

Adapted from Northern Illinois University, Faculty Development and Instructional Design Center

Example Learning Outcome

Action	Subject	Measurement

Insert an **IJ central line** on a manikin task trainer **in 30 minutes or less**

Write Your Own

Know how to use the defibrillator

Write Your Own

~~Know how to use the defibrillator~~

Demonstrate proper use of the defibrillator during a code

Write Your Own

Use crisis resource management principles

Write Your Own

~~Use crisis resource management~~

Demonstrate key crisis resource management skills during a simulated code

Setting the Stage

Questions to Ask Yourself

- Who?
  - Name
  - Age
  - Sex
  - Basic medical history
- What?
  - What happened to them? (or is about to happen)
- Where?
  - Clinical setting
- When?
  - Time of day

Write Your Own

Name: Mark Smith

Age: 68-year-old male

Allergies: Sulfa (rash)

Past medical history: high blood pressure, former smoker, 1-2 drinks/day

Mr. Smith is a visitor to his sister's room in the hospital after her gallbladder removal. While waiting for her to return from radiology, he develops chest pain and difficulty breathing.
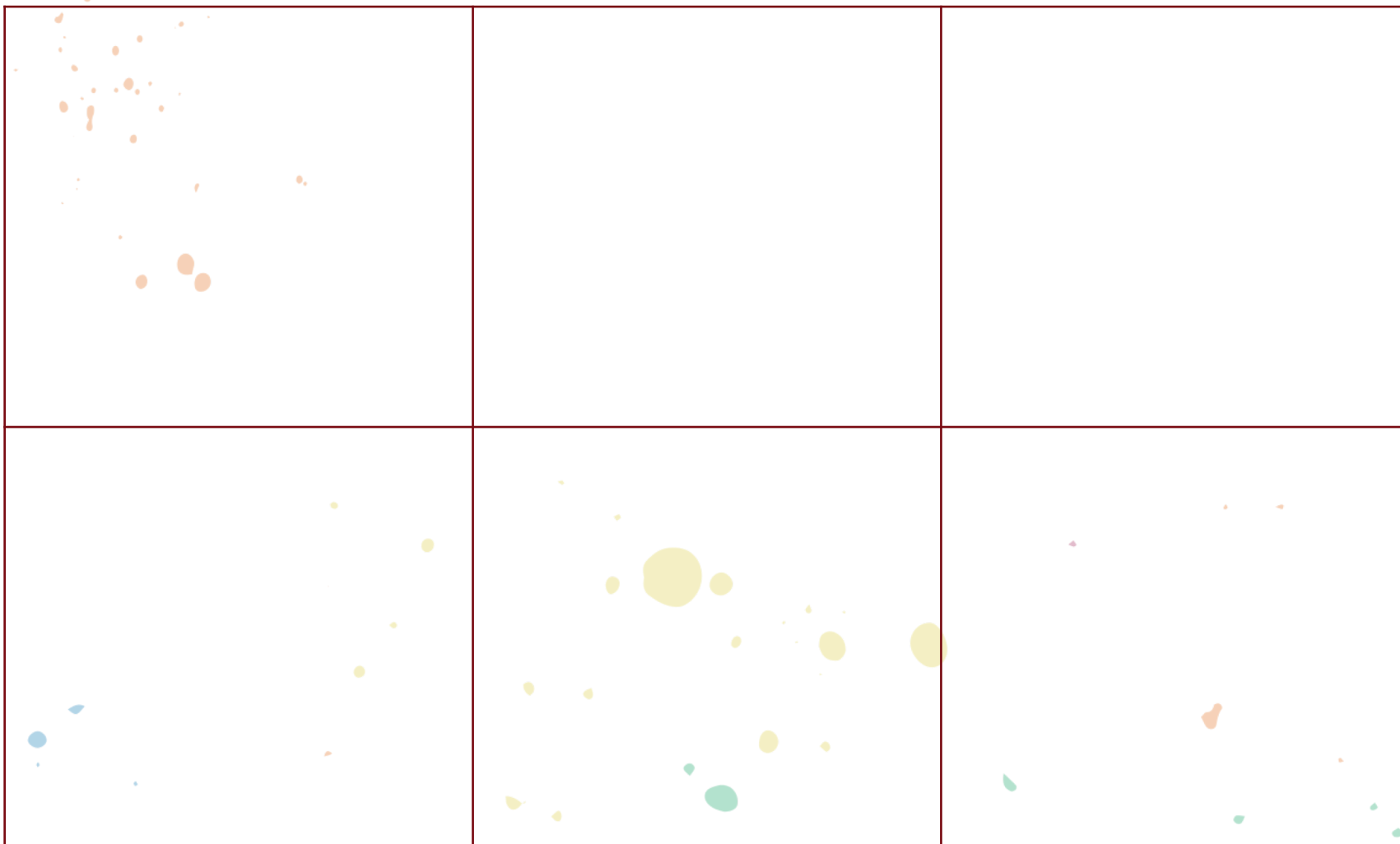
Storyboarding

- Sketch out the key components of the scenario

- Lay out the desired actions the learners should take

- Show plausible alternative paths for the scenario

Rapunzel by Gabrielle Meguerdichian

Tips and Tricks

Thank you!

Jamie Robertson: jamiemdrobertson@gmail.com

David Meguerdichian: dmeguerdichian@bwh.harvard.edu