

## Online Education in Safety and Quality

### Using a new online methodology called Spaced Education

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## Aim of Workshop

- Identify key limitations and advantages to online learning
- Introduce why PHMI has started down this path
- Discuss different approaches to online learning
- Review new online methodology called Spaced Education

## The challenge with patient safety education



- How do we get it out there?
- How do we get people to do it (and enjoy doing it)?
- How do we get the education to stick?
- How do we make it relevant to clinician's practice?

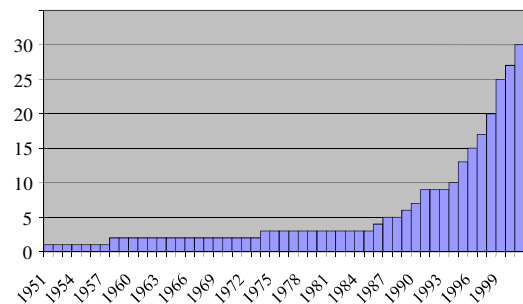
## Warm up

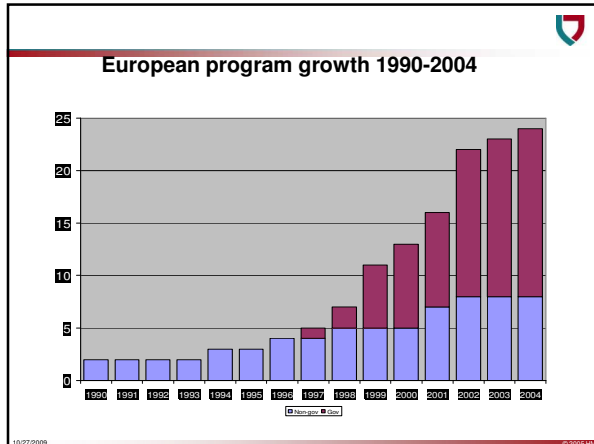
- Turn to your neighbor and spend a few minutes talking about a recent encounter you may have had with online learning in any context – did it 'work'? Was it fun? Was it boring?

## Spaced Education

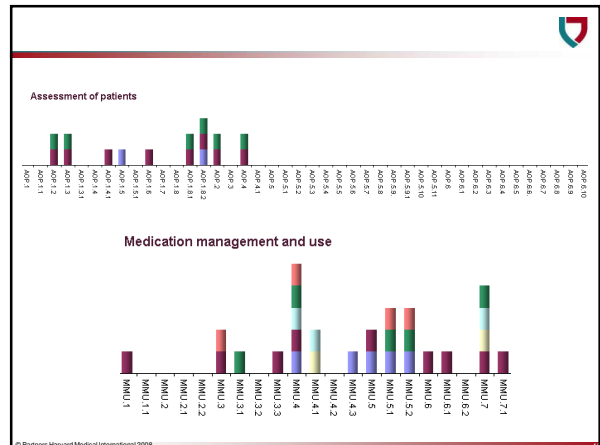
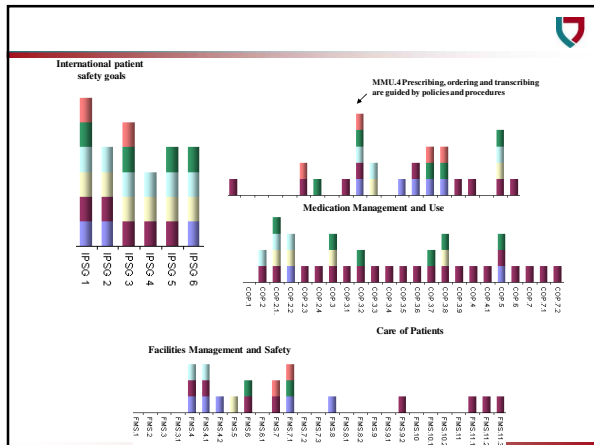
### Issue: How to Effectively Educate Care Givers about Quality and Safety

Dr. John F. Helfrick  
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### Standards Compliance Problems –PHMI and JCI Surveys



### DUBAI HEALTHCARE CITY (DHCC)

### QUALITY OVERSIGHT: OFFICE AND CLINICS






**Process:**

Office surveys at six months and every two years.

- Consultation
- Education


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**Standards that were found difficult to meet by DHCC Outpatient Clinics – 2008:**

- Use of accepted / appropriate sterilization processes
- Documentation/completeness of record
- Medication storage and management
- Use of medical error information for quality improvement purposes
- Compliance with fire safety codes

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**Challenge:**

How to Educate Staff?

- 20% R.N. Turnover
- Time Consuming
- Labor Intensive

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**Solution:**

"We'll give the information through an electronic course."

**Really?**


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**Small group exercise (5-10 minutes)**

- In small groups consider 3 key limitations and 3 key advantages to online learning

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**Small group exercise**

- Report back

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### What are the key advantages to online learning?

- Broad dissemination of material
- Great flexibility
- Allows interaction between participants that would not be possible via face-to-face
- Provides New opportunities for assessment
- Allows for standardization of materials and potential equity of access
- ?saves money

### What are some of the key challenges?

- Can be very boring
- Cost and complexity of program builds
- Managing participation
- Lack of evidence re practice change
- Often seen as a cheap way to disseminate lots of content
- **Getting people to participate**
- **Making programs relevant to practice**

### What are the dimensions of online learning?

Includes:

- Static dissemination of material (eg lectures, notes etc)
- Active learning where learners explore information on their own
- Highly interactive and facilitated programs where communities generate knowledge

Can also:

- Be either synchronous or asynchronous
- Substitute a face-to-face program or supplement an existing face to face program

### Does online learning work?

- Generally yes, may even be better than face to face and blended perhaps works best of all\*
- Unclear how different variables effect learning but promoting self reflection, building communities and blending work and practice seem to have a positive effect\*
- \*U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies, Washington, D.C., 2009.
- Have personally found structure and case-based approach most effective
- Real question remaining is does online learning change *practice*?

### How are people using online learning in S and Q

- Starting to be widely used
- Often as a static disseminator of information
- More people looking to use more dynamic Web 2 type technologies (eg Paul Levy's BI blog)

### Using a new approach to online learning

- Spaced Education and Partners Harvard Medical International

### What is different about Spaced Education?

- Evidence-based (developed at HMS)
- Impressive published results (12 RCA's)
- Well received by clinicians
- Takes little time to complete
- Can reach large numbers at low cost

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### How is Spaced Education received?

*"I have to tell you this is one of the best Continuing Medical Education programs I have EVER taken. Thank you for inviting me to do it. Keep up the excellent work"*

*"I just wanted to let you know that I think this is a fantastic way of learning – how to get someone in a busy private practice back up to speed on the details..."*

*"I found it suited my style of learning well and inspired me to review the course material and read additional literature...wish I didn't need that push but it really helped."*

*"Thank you. This is a wonderful program"*

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### What is Spaced Education?

- Grounded in the spacing and testing effect
- Short, case-based questions are emailed to participants in a repeating pattern over the period of the program
- Participants are required to re-take questions by answering them correctly twice
- Participants are provided with succinct feedback and links

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### Does it work?

#### Increases knowledge & retention

- Medical Education, 2007; 41:23-31 --- UGME
- Journal of General Internal Medicine, 2008; 23(7):973-8 --- UGME
- Journal of Urology, 2007; 177, 1481-1487 --- GME
- Journal of Urology 2009; 181, 2671-2673. --- GME
- Annals of Surgery, 2009; 249: 744-749. --- CME

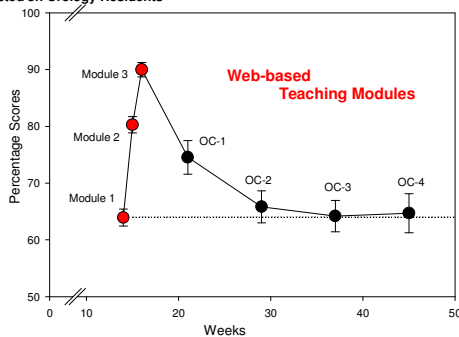
#### Changes behavior

- American Journal of Surgery 2009; 197(2), 252-257.
- Annals of Internal Medicine, *manuscript submitted*

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### Does it work?

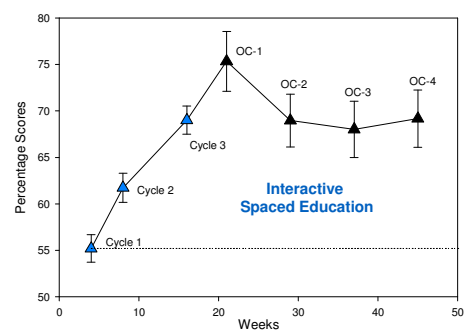
Spaced Ed on GU Pathology Tested on Urology Residents



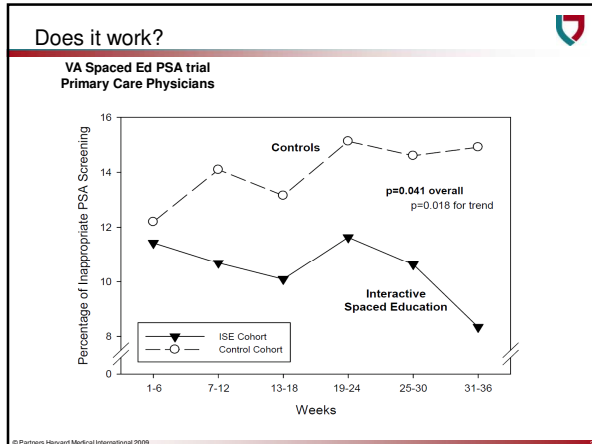
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### Does it work?

Spaced Ed on GU Pathology



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- ### How have we built our program?
- Used real adverse events
  - Created cases that put the resident in the scenario
  - Used language familiar to the resident
  - Used the cases to highlight the National Patient Safety Goals
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### Example case

#### Helping out

You have just finished an OR case and are walking through the preoperative holding area. A resident colleague of yours approaches you and asks whether you could do him a big favor as he has an emergency and start the arterial-line on his next patient in OR 4. As your friend begins to leave he tells you that the site is prepped and draped with all the necessary supplies open and waiting for you. What should you do next (more than one answer may be correct)?

- Decline to place the arterial line
- Go ahead and start the line
- Ask your friend for a formal hand-off on the patient
- Verify the patient ID
- Verify the correct procedure site

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### Example case

#### Take home message

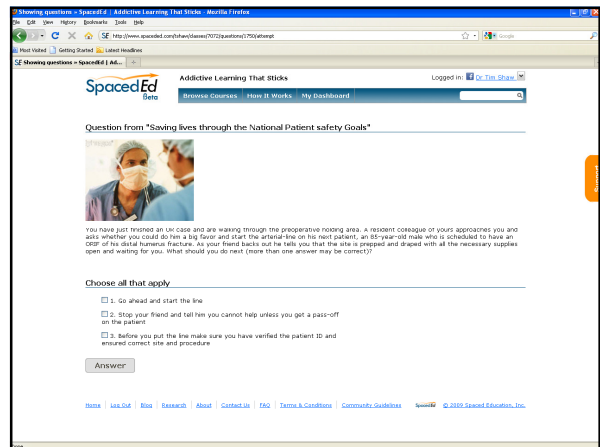
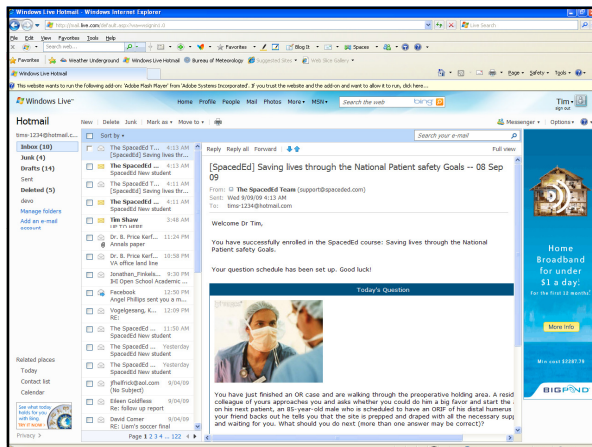
- Regardless of the situation, it is always vital to do a proper hand-off and personally ensure you are performing the correct procedure on the right patient in the right site

#### What actually happened?

- In this real life scenario, the resident did just insert the arterial line, when he removed the sterile drapes he realized that the surgery was going to be taking place on the same side. Since the surgeon was going to be using a tourniquet during the procedure, a new arterial line had to be put in on the other side. While this was not a major adverse event it was still a wrong site procedure which could easily have been prevented.


#### What the Standards Say?

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Shimizu multi\_choice\_questions - SpaceEd / Additive Learning Test Skills - Module 1/Intro

Question (from Saving Lives through the National Patient Safety Goals)



You have just finished an OR case and are walking through the preoperative holding area. A resident colleague of yours approaches you and asks whether you could do him a big favor and start the arterial line on his next patient, an 80-year-old male who is scheduled to have an ORIF of his distal humerus fracture. As your friend backs out he tells you that the site is prepped and draped with all the necessary supplies open and waiting for you. What should you do next? (More than one answer may be correct)

Choices

1. Go ahead and start the line

2. Stop your friend and tell him you cannot help unless you get a pass-off on the patient

3. Before you put the line make sure you have verified the patient ID and ensured correct site and procedure

Explanation

In this real life scenario, the resident did just insert the arterial line, when he removed the sterile drape he realized that the surgery was going to be taking place on the same side. Since the surgeon was going to be using a tourniquet during the procedure, a new arterial line had to be put in on the other side, while this was not a major adverse event, it was still a wrong site procedure which could easily have been prevented.

As a doctor you are constantly being put in pressure situations where the easiest thing to do is not always the safest thing to do. It is vital to always do a proper pass-off in a situation such as this and personally ensure you are performing the correct procedure on the right patient in the right site.

Shimizu multi\_choice\_questions - SpaceEd / Additive Learning Test Skills - Module 1/Intro

You	Answer	Number of Responses	Percentage of Responses
	✓	1	100%
	X	0	0%
Total		1	100%

Progress

Questions attempted: 1 out of 1 (100%)

Questions retired: 0 out of 1 (0%)

No more questions for today

Answer Blog

Contribute to this question

### Our program

- Have 20 cases aligned with National Patient Safety Goals
- Developing a pilot for dissemination across Partners in January 2010 for all new residents
- Evaluate acceptability of program as a delivery methodology amongst residents
- Validate program through selected use of existing simulation sessions

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Thank you

Questions/Discussion?