Technology in Pharmacy Education

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Vice President of Professional Development
American Association of Colleges of Pharmacy

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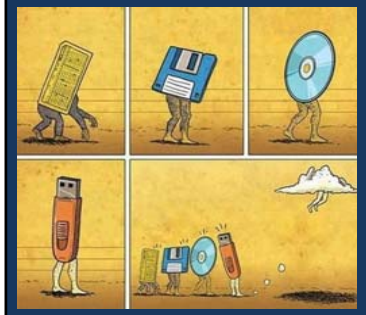
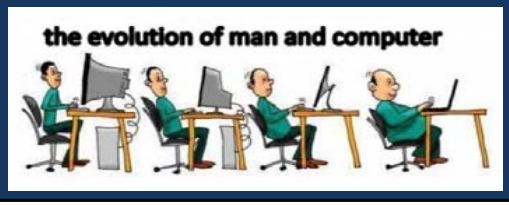

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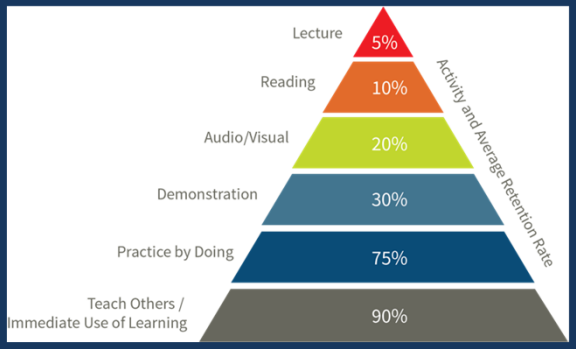
Student Retention



https://meteoreducation.com/

3

Active Assessment and Collaborative Learning Techniques

Classroom Assessment:

- Double Entry Journal
- Muddiest Point
- What's the Principle

Collaborative Learning:

- Fishbowl
- Jigsaw
- Send-a-Problem
- Think-Pair-Share
- Team-Based Learning

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Active Assessment and Collaborative Learning Techniques

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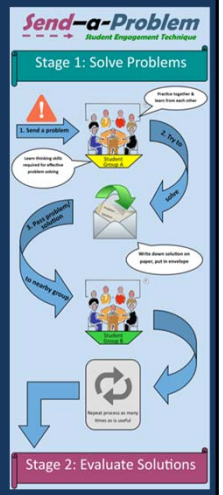
Activity: Send-a-Problem

- Break into groups
- Brainstorm a problem/question and try to answer your own question
- Share your card with another group
- Spend 3–4 minutes to add and revise the answer to the question
- Repeat



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Technology in Pharmacy Education

- Classroom
  - Technology to enhance lecture style (100%)
    - Powerpoint, Prezi, Flipped Classroom, Game Show, Escape Room, Pecha Kucha
  - Course management (100%)*
    - Blackboard, Moodle, Canvas, D2L
  - Lecture capture (70%)*
    - Panopto, Camstasia, Tegrity
  - Audience Response Systems (89%)
    - TurningPoint, iClicker, Poll Everywhere, Nearpod
  - Electronic Testing (80%)
    - ExamSoft, Respondus, Blackboard, D2L
  - Web conferencing (75%)
    - Zoom, Adobe Connect, WebEx, GoToMeeting, Skype
  - Blogging/Microblogging (60%)
    - Blogger, WordPress, Twitter, Yammer
  - Document Collaboration (67%)
    - Google Docs, SharePoint, Microsoft Live

*Digital Accessibility

AJPE 2011;75(5): Article 87

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Prezi

https://prezi.com/kffvwkwbqq39/?utm_campaign=share&utm_medium=copy

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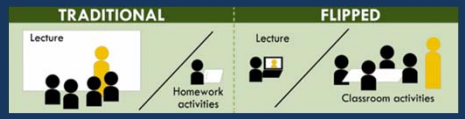
Activity: Flipped Classroom



AJPE 2019;83(8): Article 7044

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Game Show – Pharmacotherapy Jeopardy

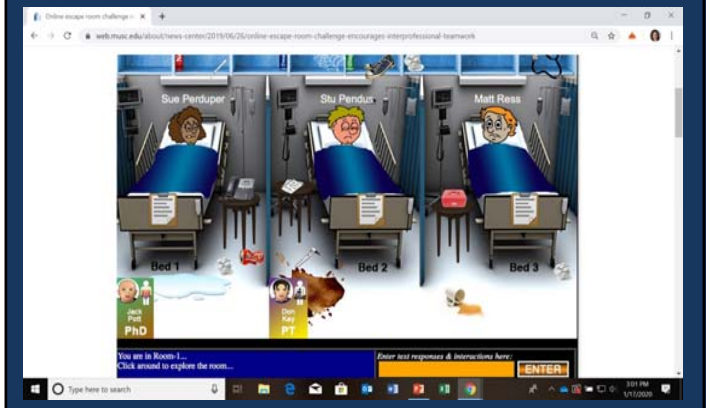
SINGLE JEOPARDY

I've Got What???	Boning Up	Hormone Shmormone	Prophylactics	Knocked Up	Miscellaneous
100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

https://library.elearningbrothers.com

10

Escape Room



https://palmettoinnovations.com/SloppyMountain/

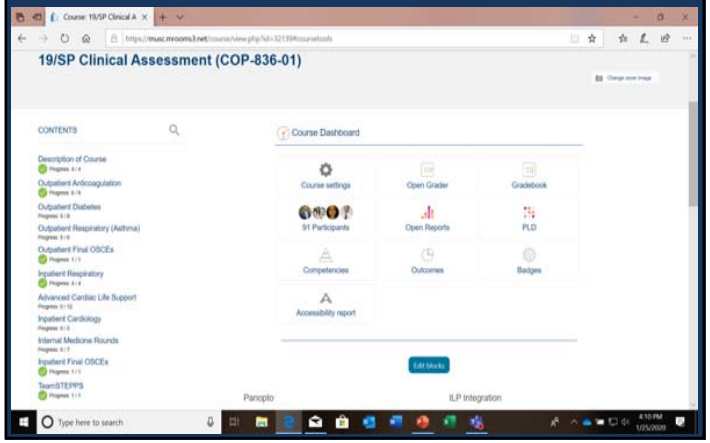
11

Pecha Kucha

- https://www.pechakucha.com/presentations/leading-with-your-strengths-passions-and-values-to-live-life-to-the-fullest

12

LMS - Moodle



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Digital Accessibility

- **Section 508 of the Rehabilitation Act of 1973: All information technology must be accessible to people with disabilities including employees & public**
  - Section 508 Standards originally published in 2000
  - Section 508 updated in 2017
    - Web Content Accessibility Guidelines 2.0: Level A & AA
    - Structured provisions for functionality of information communication technology (ICT)
    - Addressed access for people with cognitive, language, and learning disabilities

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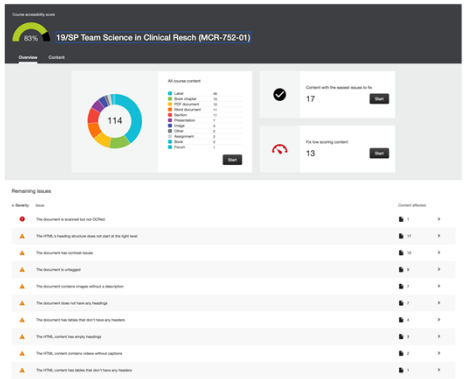
Digital Accessibility



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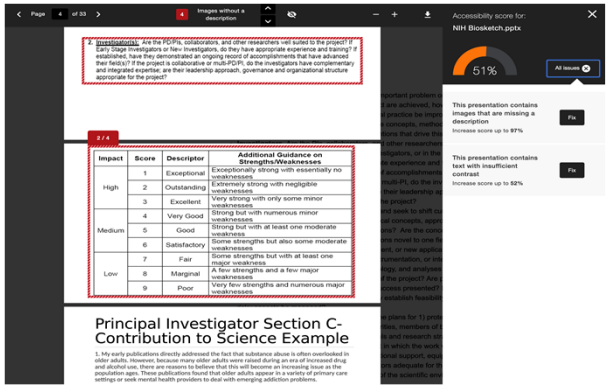
Digital Accessibility



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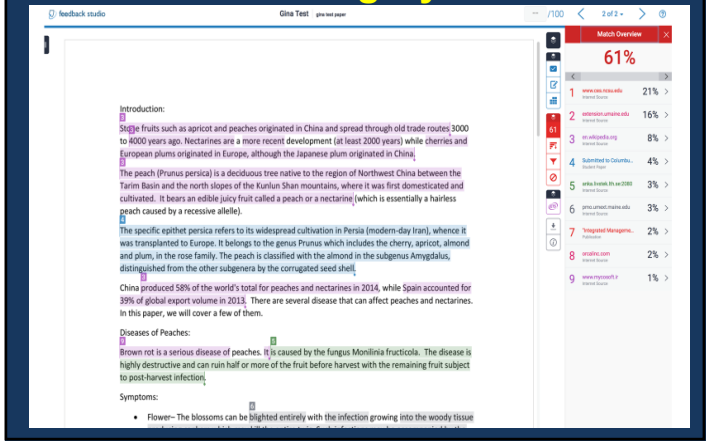
Academic Integrity - Turnitin



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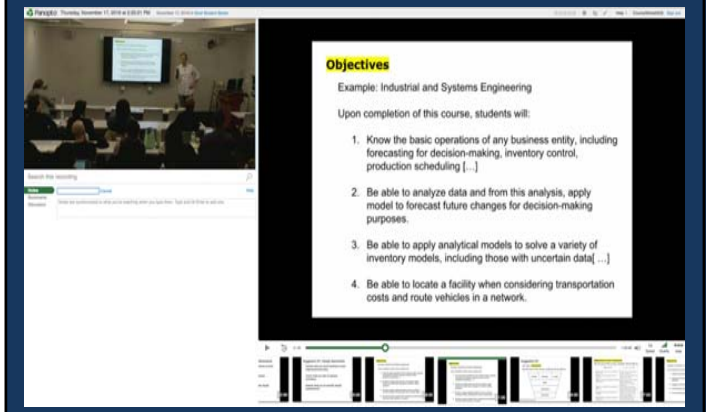
Lecture Capture - Panopto



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Audience Response Systems

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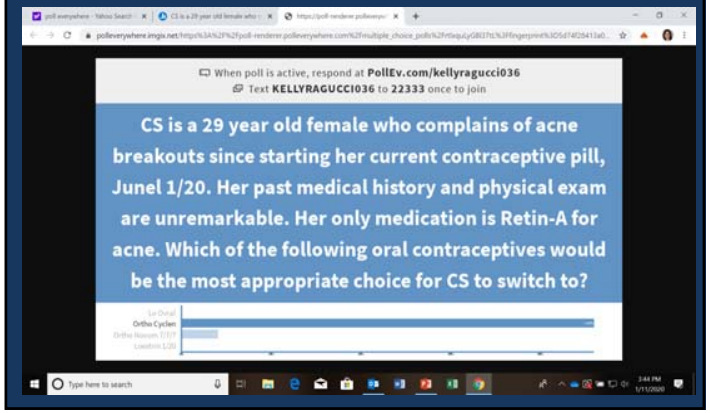
Poll Everywhere



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Poll Everywhere

- https://www.polleverywhere.com/multiple_choice_polls/WUfledKL79oM9sYLIHVEF

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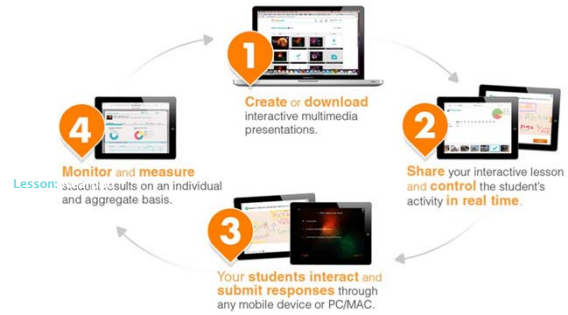
What's the Nearpod process?



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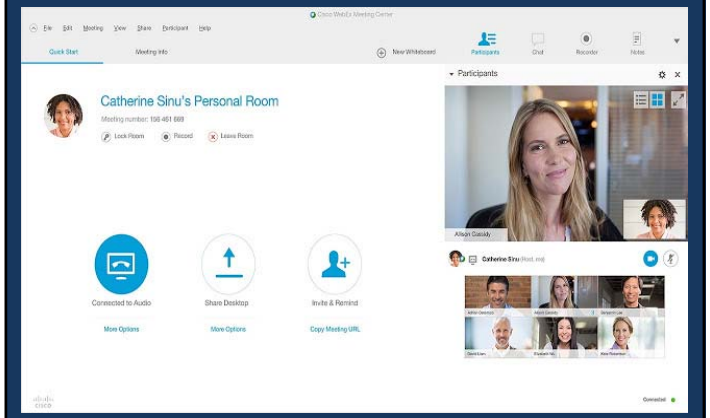
Web Conferencing - WebEx



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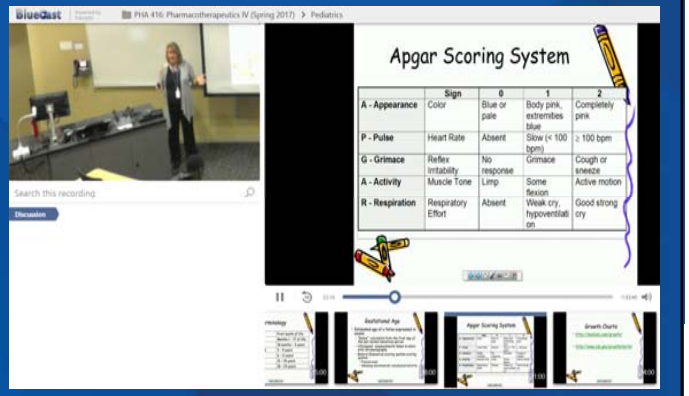
Distance Education Pathway



Creighton UNIVERSITY

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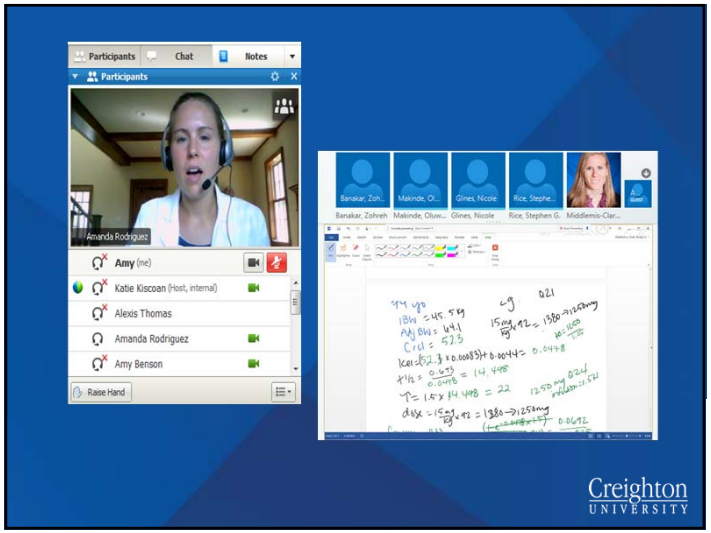

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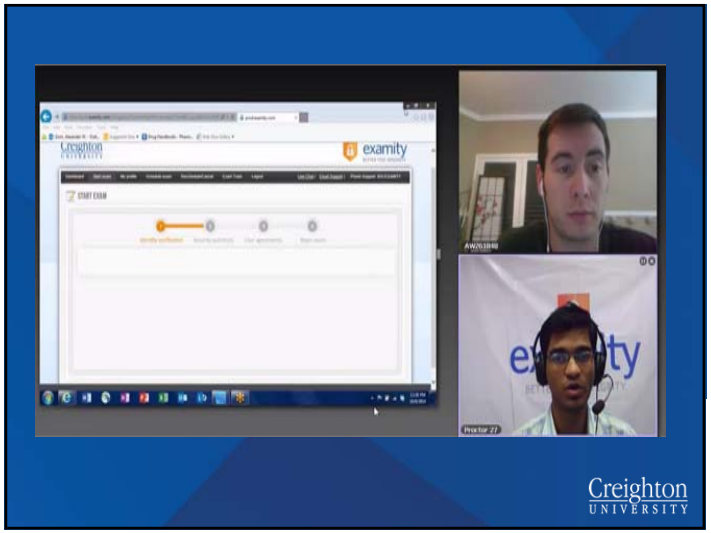

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Technology in Pharmacy Education

- Laboratory
  - Simulations
  - PioneerRx/QS1/NiaRx/EHR Go

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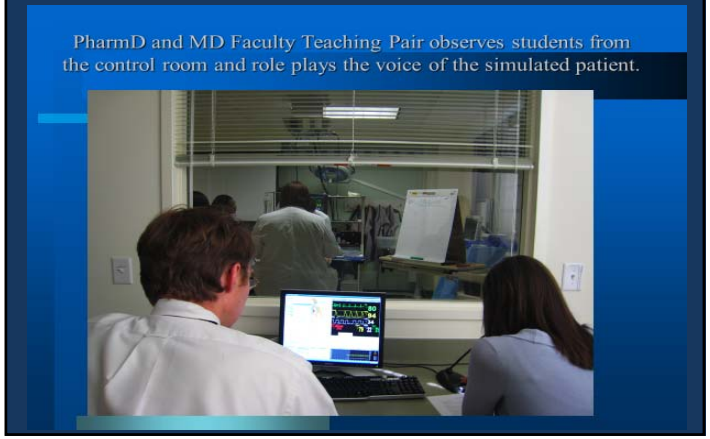
Simulations



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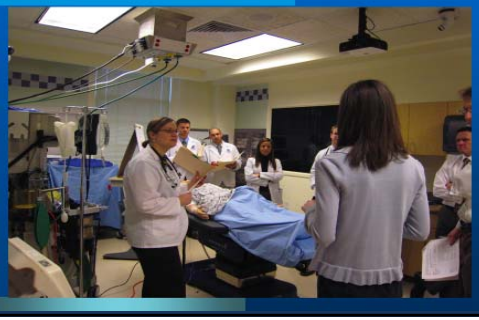
Simulations

At the conclusion of the simulation, faculty debriefed the team and facilitated discussion of the learning objectives and the team performance.



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Interprofessional Video

http://vimeo.com/carc1/review/38582448/5b8ca942ac

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PioneerRx

- Pharmacy Management System: suite of software, mobile, and web applications that streamline community pharmacy workflows for increased efficiency and optimized patient outcomes
  - Clinical - Pharmacist eCare Plans, med sync, immunization and PMP integrations
  - Operations - dispensing, adherence packaging/robotics, flexible reporting
  - Patient Engagement - patient messaging, patient portals
- 2019 Survey
  - 100% of colleges/schools of pharmacy stated interest in using some sort of software in practice labs
  - What do you use currently: None (51%), PioneerRx (22%), QS1 (19%), NiaRx (5%), EHR Go (3%)

https://www.pioneerrx.com/web/

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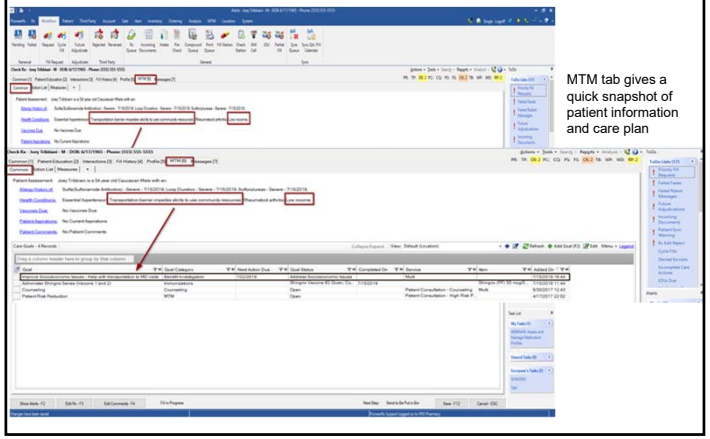
Ease of Clinical Assessment Within Workflow



MTM tab gives a quick snapshot of patient information and care plan

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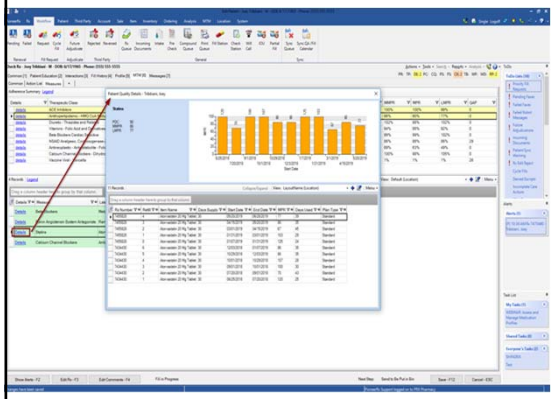
Ease of Clinical Assessment within Workflow



Adherence indicator data like PDC and MPR are accessible for pharmacists to use for clinical decision making

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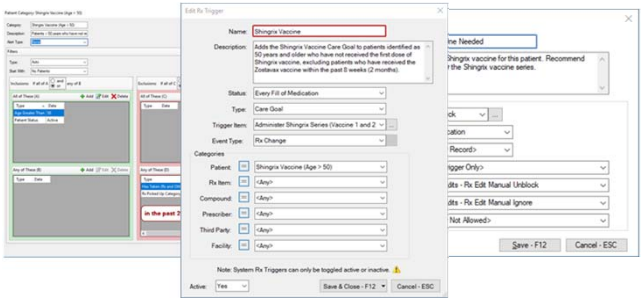
Create Clinical Decisions



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Technology in Pharmacy Education

- Experiential
  - Smart Phone, iPad
    - mHealth and Mobile Technology
  - Telehealth
  - Virtual learning
  - Site technology
  - Documentation software
    - Evalue, RXpreceptor

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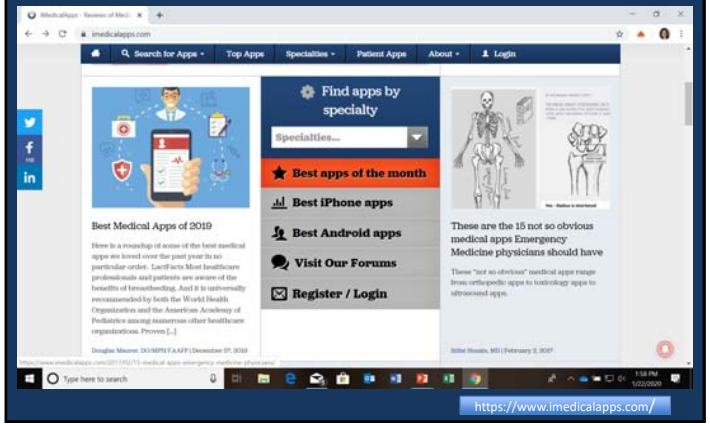
Mobile Technology



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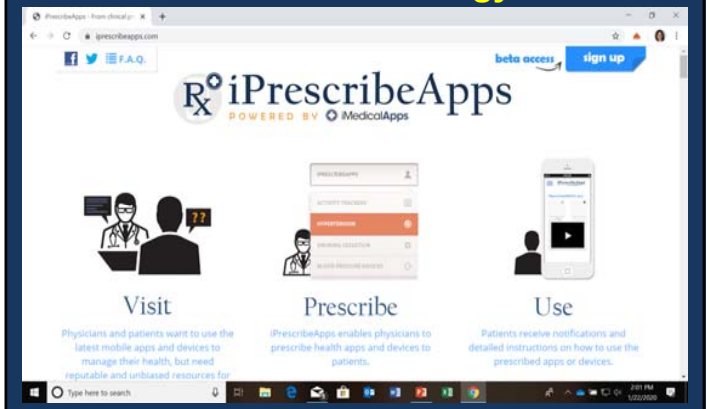
Mobile Technology



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Telehealth

https://urldefense.proofpoint.com/v2/url?u=https-3A__www.scetv.org_stories_telehealth_2019_innovation-2Dpharmacy-2Dschool-2Dtransforming-2Drural-2Dcare&d=DwIFAg&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=2VZjNgTdknp1cjRAsohmjwtMWtOFnVcbn4BV8ojsW4c&m=trXZeoO4uitKoS748Aq8kJI_BGoh-fy9hQsG0p8giOo&s=N7-34ory2jT0-Qne3UXWjG4mBKoMgrOwA30tM4MYQ58&e=

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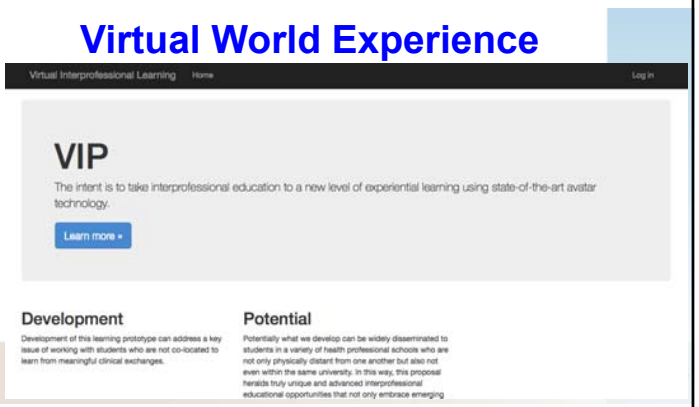
Virtual World Experience



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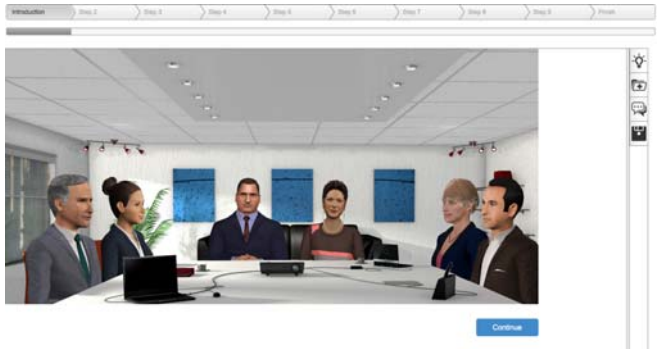

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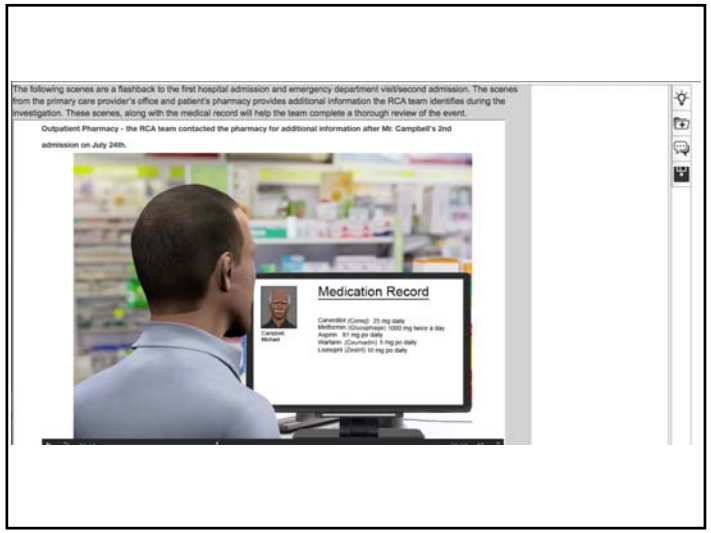
The following scenes are a flashback to the first hospital admission and emergency department visit/second admission. The scenes from the primary care provider's office and patient's pharmacy provides additional information the RCA team identifies during the investigation. These scenes, along with the medical record will help the team complete a thorough review of the event.
Outpatient Pharmacy - the RCA team contacted the pharmacy for additional information after Mr. Campbell's 2nd admission on July 24th.
Medication Record

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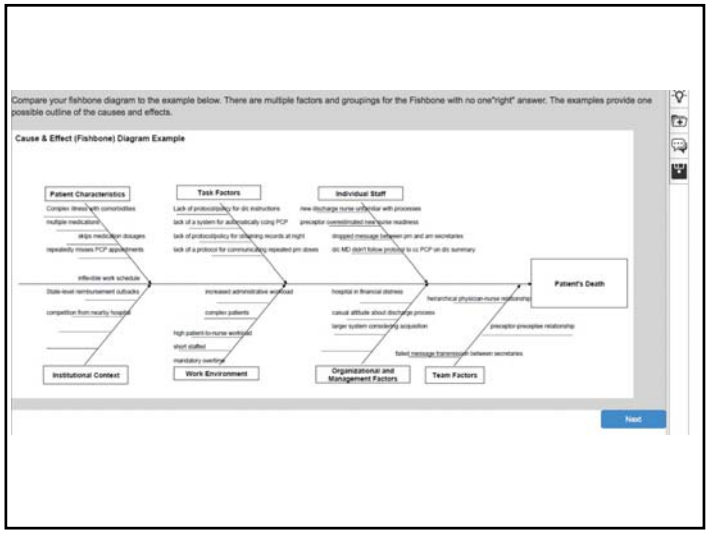
Compare your fishbone diagram to the example below. There are multiple factors and groupings for the Fishbone with no one"right" answer. The examples provide one possible outline of the causes and effects.
Cause & Effect (Fishbone) Diagram Example
Patient Characteristics
Task Factors
Individual Staff
Patient's Death
Institutional Context
Work Environment
Organizational and Management Factors
Team Factors
Next

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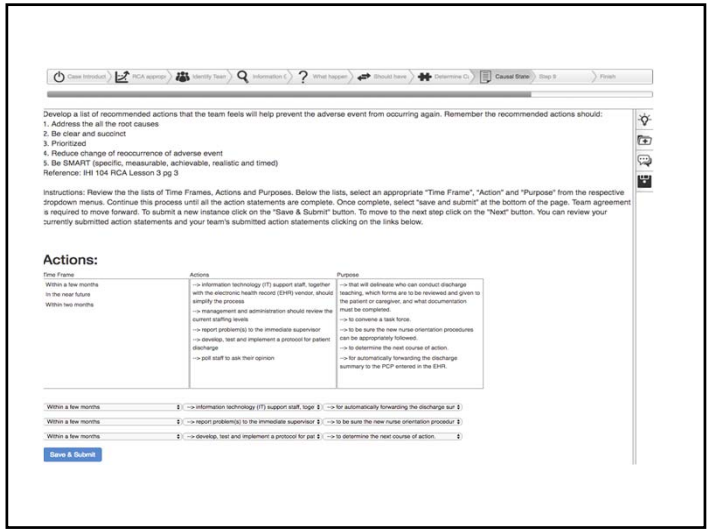
Develop a list of recommended actions that the team feels will help prevent the adverse event from occurring again. Remember the recommended actions should:
1. Address the all the root causes
2. Be clear and succinct
3. Prioritized
4. Reduce change of reoccurrence of adverse event
5. Be SMART (specific, measurable, achievable, realistic and timed)
Reference: IHI 104 RCA Lesson 3 pg 3
Instructions: Review the the lists of Time Frames, Actions and Purposes. Below the lists, select an appropriate "Time Frame", "Action" and "Purpose" from the respective dropdown menus. Continue this process until all the action statements are complete. Once complete, select "save and submit" at the bottom of the page. Team agreement is required to move forward. To submit a new instance click on the "Save & Submit" button. To move to the next step click on the "Next" button. You can review your currently submitted action statements and your team's submitted action statements clicking on the links below.
Actions:
Time Frame
Actions
Purpose
Within a few months
In the near future
Within two months
Save & Submit

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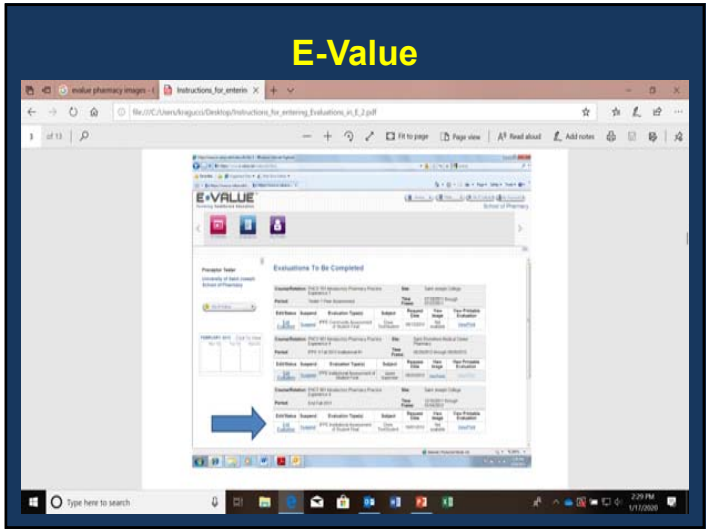
E-Value
E-VALUE
Evaluations To Be Completed

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What Employers Want

Entry-Level Competency

- Clinical and problem solving skills
- Communication skills
- Leadership skills
- Drug information skills
- Formulary system
- Medication dispensing, workflow, distribution
- Medication safety and use of appropriate guidelines
- MTM
- PCC and advocacy
- Pharmacy management
- Professionalism
- Quality management
- Compounding
- Health care delivery systems
- Pharmacoeconomics
- Pharmacy law and policies
- Specialty pharmaceuticals and immunizations
- Computer skills

AJPE 2013;77(3) Article 47

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What Employers Want

- Common themes:
  - Board certification, BLS, immunization certification
  - Residency training or equivalent experience for many clinical positions
  - Value practitioners who have gained practice management/leadership skills beyond robust clinical proficiency
  - Those whose training prepared them to work well in a team
  - Those individuals who are adaptable/flexible
  - Professional maturity
  - Excellent written and verbal communication skills
  - Strong interprofessional skills and work ethic
  - Able to manage a busy practice; multi-task
  - Understanding of need for continuous professional development

AACP Academic Affairs Committee 2019-2020

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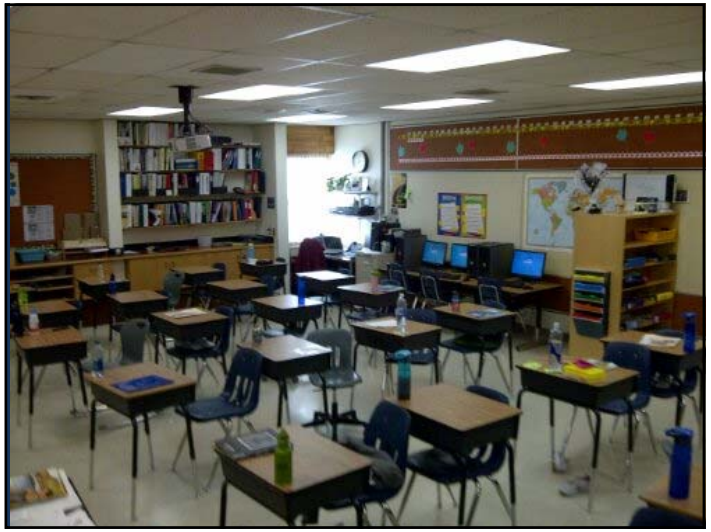

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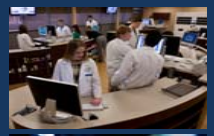

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