



1



2

AACN Master's Essential for Quality & Safety (#3)

Recognizes that a master's-prepared nurse must be articulate in the methods, tools, performance measures, and standards related to quality, as well as prepared to apply quality principles within an organization.

3

AACN Quality & Safety Competencies (Domain 5)



**5.1 APPLY QUALITY
IMPROVEMENT PRINCIPLES
IN CARE DELIVERY.**



**5.2 CONTRIBUTE TO A
CULTURE OF PATIENT
SAFETY.**



**5.3 CONTRIBUTE TO A
CULTURE OF PROVIDER
AND WORK ENVIRONMENT
SAFETY.**

4

Course Overview

NURS 603



5

Improvement Science & Outcomes Management

- With an emphasis on the foundations of quality and safety science, the techniques and tools for analyzing organizational and clinical processes for efficacy, root cause analysis when examining medical errors, and developing or using valid and reliable metrics to measure outcomes are presented.
- The importance of building a culture of quality and safety is reinforced, along with the role of regulators and regulations to monitor safety.

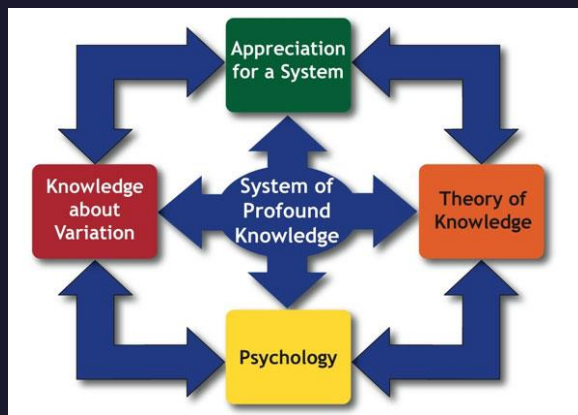
6

Course Objectives

- Relate knowledge of systems thinking and design to organizational improvement.
- Examine the nature of quality science and its relationship to change management and measurement science.
- Apply techniques and tools derived from quality science to practice applications.
- Explore the magnitude of quality and safety issues in healthcare through the eyes of patients, families, regulators, and risk managers.
- Develop or identify metrics from existing databases consistent with analyzing clinical and organizational outcomes

7

Our Guiding Framework



8

Organization of Content



Module I – Conceptual Foundations of Quality, Improvement, and safety Science



Module II – Data Science for Performance Improvement



Module III – Skills for System Thinking and Leading Sustained Change



Module IV – Skills for Building Knowledge

9

Content Delivery Approach & Methods

10 Weeks of Asynchronous Online Learning

Interactive and Multisensory

Video Presentations

Audio Discussions

Reading/Web Site Assignments

Self Reflective Learning

10

Resources Required

Access to broadband internet

Access to Netflix

Access to 2 textbooks

Access to the designated HBR Course Pack

Access to a computer with video capability

A desire to learn & good time management skills!

11

Evaluation Methods

Individual Assignments

- Oral Quizzes (20%)
- Case Studies (30%)
- Challenger Discussions (20%)
- Self-Assessments (0% & not graded)

Group Assignments

- High Tide Improvement Project (30%)
- Practice Exercises (0% & not graded)

12

Overview of Calendar

Week 1 <ul style="list-style-type: none">•Self Assessments•Project Practice Exercise 1	Week 2 <ul style="list-style-type: none">•Challenger VT 1•Culture of Safety Data Review	Week 3 <ul style="list-style-type: none">•Oral Quiz 1•Project Practice Exercise 2	Week 4 <ul style="list-style-type: none">•Challenger VT 2	Week 5 <ul style="list-style-type: none">•Data Science Case Study•Project Practice Exercise 3
Week 6 <ul style="list-style-type: none">•Challenger VT 3•Project Practice Exercise 4	Week 7 <ul style="list-style-type: none">•Oral Quiz 2•Project Practice Exercise 5	Week 8 <ul style="list-style-type: none">•Sentinel Event Case Study•Project Practice Exercise 6	Week 9 <ul style="list-style-type: none">•Challenger VT 4•Project Practice Exercise 7	Week 10 <ul style="list-style-type: none">•High Tide Improvement Project

13

Faculty Resources

ALT LAB

What is Voice Thread? How do I Use It?

Voice Thread


Making connections with students is an important aspect of creating a positive online learning experience, and helps students to become engage with learning the subject matter. A simple and effective way to connect with your students is through [simple_tooltip content=Voice Thread website which offers insightful information about the use of this tool/Voice Thread/].

Source: Pixabay

Voice Thread is a Audio/Video discussion tool that is available for free online, as well as integrated with VCU Canvas. Please watch the following video to learn more:

14

And here is how to actually operate and create a new Voice Thread:










Voice Thread can be used with your Canvas account to spark engaging conversations on whatever topic you see fit. VCU Technology Services offers support and information on Voice Thread ([VCU Tech Services](#)). Also, please note the Voice Thread [Privacy Policy](#).

While the myth of 90% of communication being non-verbal has been debunked, online critics continue to stress the loss of “in person” cues in the online environment. The intent behind Voice Thread is to offer students opportunities to come contact with the professor, as well as, other classmates which will offer opportunities for them to feel connected and inspired to learn.

Never used Voice Thread before? Don't know how to post or interact with the software? The following videos are a great reference for first time users of Voice

15

Voice Thread Options

						
VOICE ONLY	VOICE & VIDEO	MEDIA/SLIDES AND VOICE	MEDIA/SLIDES, VOICE, VIDEO	WATCH ONLY	WATCH & RESPOND (PUBLIC OR PRIVATE COMMENTS)	STUDENT-ADDED MEDIA (OPTIONAL)

16

Integration of Voice Thread

- Learning Community Introductions
- Oral Instructions for Assignments
- Oral Instructions for Practice Exercises
- Oral Quiz over Foundational Content
- Class Discussion of Challenger Episodes
- Formative Feedback on Group project

17

603 Learning Community Introductions (Slide 1 of 2) sign in CC

Welcome to the NURS 603 Learning Community

Professional Learning Communities

Diverse individuals collaborate together and combine their individual strengths to achieve more than they could alone.

1x 0:00 / 7:23

18

603 Learning Community Introductions (Slide 2 of 2) Terry Jones CC

Tell us about yourself

My name is _____

I come from the discipline of _____

I have _____ years experience in this discipline

I am on the team to improve _____

By the end of this course, I hope to _____

I want you to know that I _____

LET'S GET ACQUAINTED

19

Assignment Overview

The Assignment Overviews listed below use a tool called VoiceThread, which is what we will be using for many class discussions. To begin listening to the Assignment Overviews, be sure the VoiceThreads are in Full-screen mode. For additional guidance, read this quick tutorial to learn how to view a VoiceThread.

- Assignment Overview: Self-Assessments
Genny Thompson
- Assignment Overview: Challenger VoiceThread/Discussion Board
Genny Thompson
- Assignment Overview: Oral Quizzes
Genny Thompson

20

603 Assignment Overview: Case Studies (Slide 1 of 5) sign in CC

Assignment Overview

Case Studies

1x 0:00 / 0:14

21

603 Assignment Overview: Case Studies (Slide 2 of 5) sign in CC

Two Case Studies – Individual Assignments

Data Science

Sentinel Event

1x 0:00 / 0:20

22

603 Assignment Overview: Case Studies (Slide 4 of 5) sign in CC

General Instructions

- Written scenarios related to course content on data science and sentinel events can be downloaded in Canvas. The scenarios include prompts for written responses related to the cases. Written responses will be uploaded in Canvas.
- Data files for analysis are provided by course faculty. No additional data collection is required.
- Some scenarios direct the student to sections of the High Tide Health System Intranet for additional information.
- Students may use non-human resources when completing the case study sets.
- Students may not consult with each other when completing the case study sets.

1x 0:00 / 0:59

23

603 Assignment Overview: Case Studies (Slide 5 of 5) sign in CC

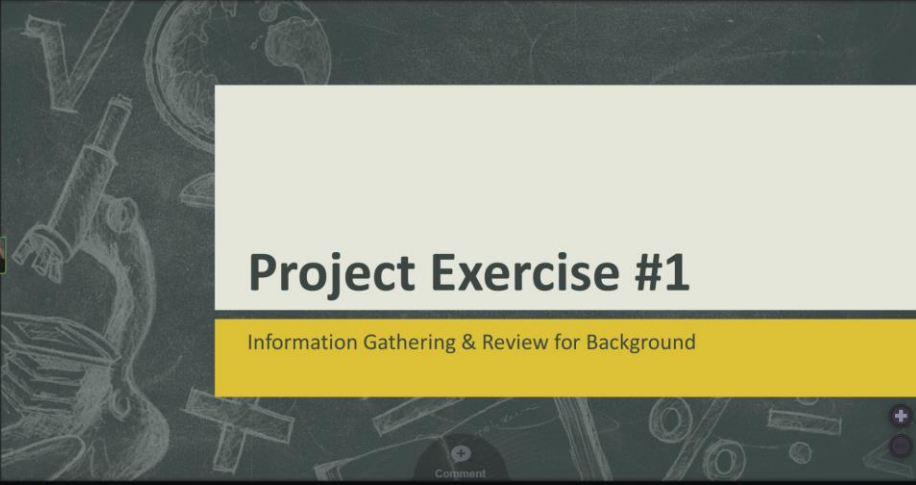
Tips for Success

- Download the case studies early in the associated modules and review the scenarios.
- Download the data files and save as working files to your computer.
- The case studies are useful in helping you focus attention when completing assigned readings and reviewing video presentations. They are interdependent- the case studies give purpose to the readings!
- Work in sections – don't try to do them all at once. Spread out the work so you don't get overloaded.

1x 0:00 / 0:47

24

603 Project Exercise #1 (Slide 1 of 21) sign in CC



Project Exercise #1

Information Gathering & Review for Background

1x 0:00 / 0:30


Comment

This is a video player interface showing the first slide of a presentation. The slide has a dark background with faint white line drawings of scientific equipment. A white box contains the title 'Project Exercise #1' and a yellow box below it contains the subtitle 'Information Gathering & Review for Background'. The video player controls at the bottom show a progress bar at 0:00 / 0:30 and a 'Comment' button.

25

603 Project Exercise #1 (Slide 2 of 21) sign in CC

Stop and Locate



- IHI Tools
 - Charter Template
 - Aim Statement Worksheet
 - Practicum Handbook

1x 0:00 / 0:41

Comment

This is a video player interface showing the second slide of a presentation. The slide has a dark background with a white box containing the title 'Stop and Locate'. Below the title is an illustration of a stick figure holding a red octagonal stop sign with the word 'STOP' written on it. To the right of the illustration is a bulleted list of 'IHI Tools' including 'Charter Template', 'Aim Statement Worksheet', and 'Practicum Handbook'. The video player controls at the bottom show a progress bar at 0:00 / 0:41 and a 'Comment' button.

26

603 Project Exercise #1 (Slide 3 of 21) sign in CC

Our Guiding Framework for Performance Improvement

```
graph TD; A[Appreciation for a System] --> B[Knowledge about Variation]; B --> C[Theory of Knowledge]; C --> D[Psychology]; D --> A; A <--> E[System of Profound Knowledge]; B <--> E; C <--> E; D <--> E; I[ ] --> A; J[ ] --> B;
```

1x 0:00 / 0:30

27

603 Project Exercise #1 (Slide 5 of 21) sign in CC

Objective

- The purpose of this exercise is to gather information about the problem of focus and potential change concepts for the improvement project.

1x 0:00 / 0:12

28

603 Project Exercise #1 (Slide 7 of 21) sign in CC

Questions to Answer

- Has this problem been reported in the literature and/or in the organization?
- What is the significance of the problem?
- Who is affected by the problem?
- How does the problem impact the quadruple aim?
- How does the problem impact High Tide Mission, Vision, Goals?
- Are evidence-based practices to address this problem reported in the literature?

1x 0:00 / 1:04

29

603 Project Exercise #1 (Slide 10 of 21) sign in CC

Suggested Resources to Explore

- VCU Library Search Engines
- The Joint Commission Website
- CMS Website
- AHRQ Website
- National Quality Forum
- Institute for Healthcare Improvement
- High Tide Web Site

1x 0:00 / 1:10

30

603 Project Exercise #1 (Slide 18 of 21) sign in CC

Draft the Problem and Reason Sections for the Improvement Project

- Describe what is known about the problem nationally and /or locally.
- Why should anyone care about this problem and project?
- Why should the organization approve this project?
- Use statistics when available and indicated to describe the significance of the problem.

1x 0:00 / 1:15

31

603 Project Exercise #1 (Slide 20 of 21) sign in CC

Post Requests for Formative Feedback on this Voice Thread

WHEN THE CHEF TASTES THE SOUP

WHEN THE GUESTS TASTE THE SOUP

FORMATIVE SUMMATIVE

FROM STEVE WHEELER'S BLOG "THE REAL TRUTH ABOUT ASSESSMENT"

1x 0:00 / 11:41

32

Oral Quiz 1 (Slide 1 of 13) Terry Jones

Oral Quiz 1

NURS 603

1x 0:00 / 0:14

Type here to search 48° Sunny 3:16 PM

33

Oral Quiz 1 (Slide 2 of 13) Terry Jones

Instructions

- Open Book – No Human resources
- Short Answers - Time Limited Responses
- 10 Questions
- Answer in Any Sequence Preferred
- Don't Submit Until All 10 Questions are Answered

1x 0:00 / 1:45

Type here to search 48° Sunny 3:17 PM

34

Oral Quiz 1 (Slide 3 of 13) Terry Jones

Question #1

What did the classic IOM Report, To Err is Human reveal about the US healthcare system?

Brief take-away!

Mentioned in some of the videos

1x 0:00 / 20:58 48° Sunny 3:18 PM 11/16/2022

35

Oral Quiz 1 (Slide 6 of 13) Terry Jones

Question #4

- Avedis Donabedian was known as one of the grandfathers of the quality movement in healthcare. He suggested that quality could not be measured directly. Rather, quality can only be inferred based on assessment of structures, processes, and outcomes of care.
- Identify a patient population and propose at least one measure from each category that you might use to evaluate quality in this population.
- Keep in mind what Donabedian and Hammermeister et al said about the importance of SPO linkages.

A classic approach to developing measures

S + P = O

Structure + Process = Outcomes

Source: Donabedian, A. Approaches to Quality Assessment and Monitoring. Institute for the Study of Health Care Organization and Delivery. The Center for Health Systems Research, 1988.


1x 0:00 / 35:00 48° Sunny 3:18 PM 11/16/2022

36

Oral Quiz 1 (Slide 12 of 13) Terry Jones

Question 10

After reviewing the High Tide Safety Culture Survey Results, what do you see as the strengths and weaknesses of the culture at High Tide?



6:00 / 20:51

37

vcu.edu

Introduction to High Tide

Virginia Commonwealth University

vcu.edu

IMPROV SCI & OUTCOMES MGMT > Pages > Introduction to High Tide Health System


6/3 Student View

Summer 2022

View All Pages

Published

Introduction to High Tide Health System



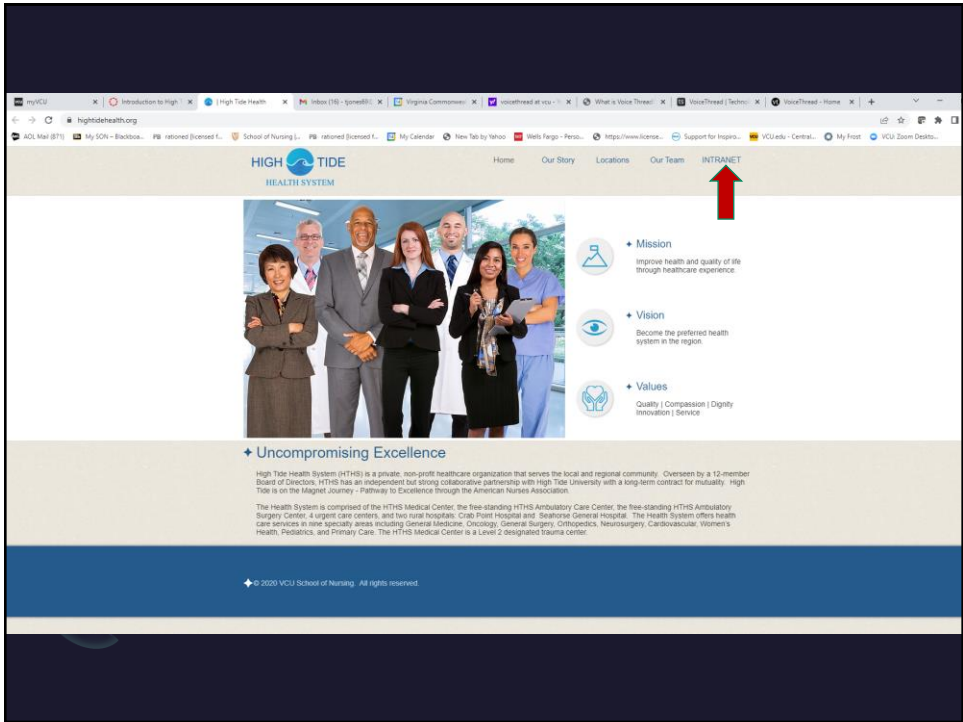
In this course, you'll participate in scenarios as a nurse at High Tide Health System. Take this opportunity to get acquainted with High Tide by exploring its website (password: ceomast).

Previous

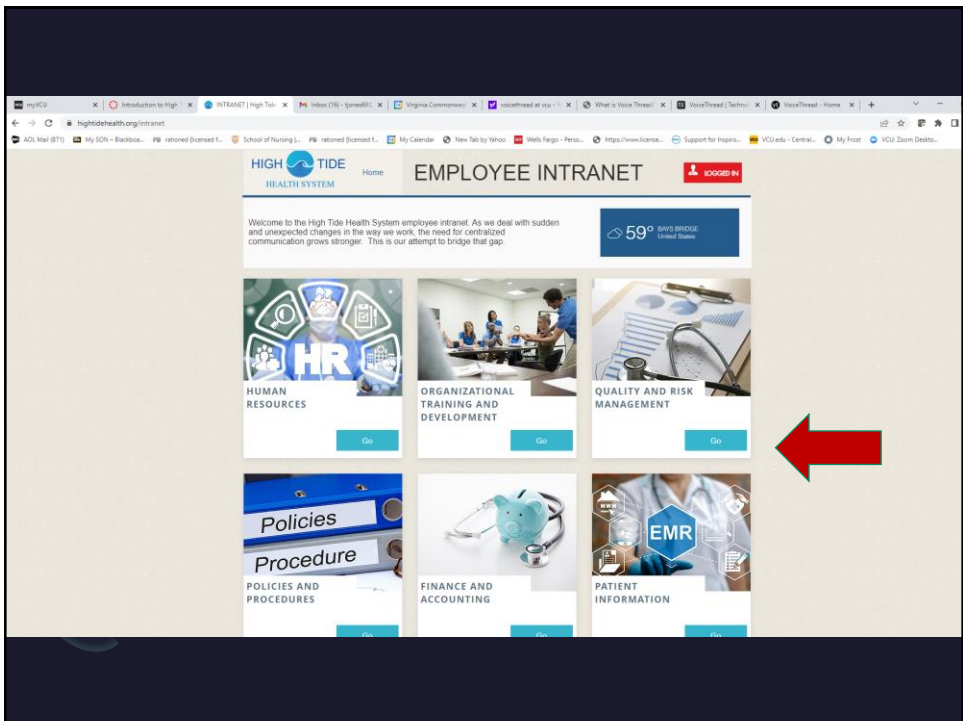
Next

- Home
- Announcements
- Syllabus
- Assignments
- Modules
- Discussions
- Grades
- People
- Media Gallery
- My Media
- Zoom - HEPAA
- SCORM
- BigBlueButton
- Quizzes
- Pages
- Files
- Outcomes
- Rubrics
- Collaborations
- Settings

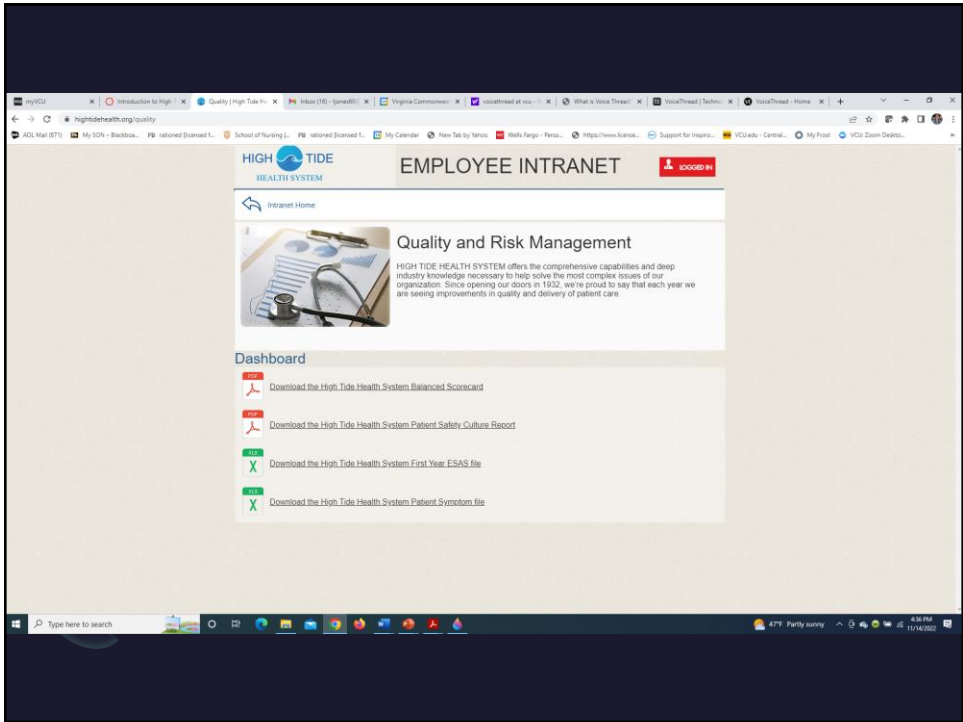
38



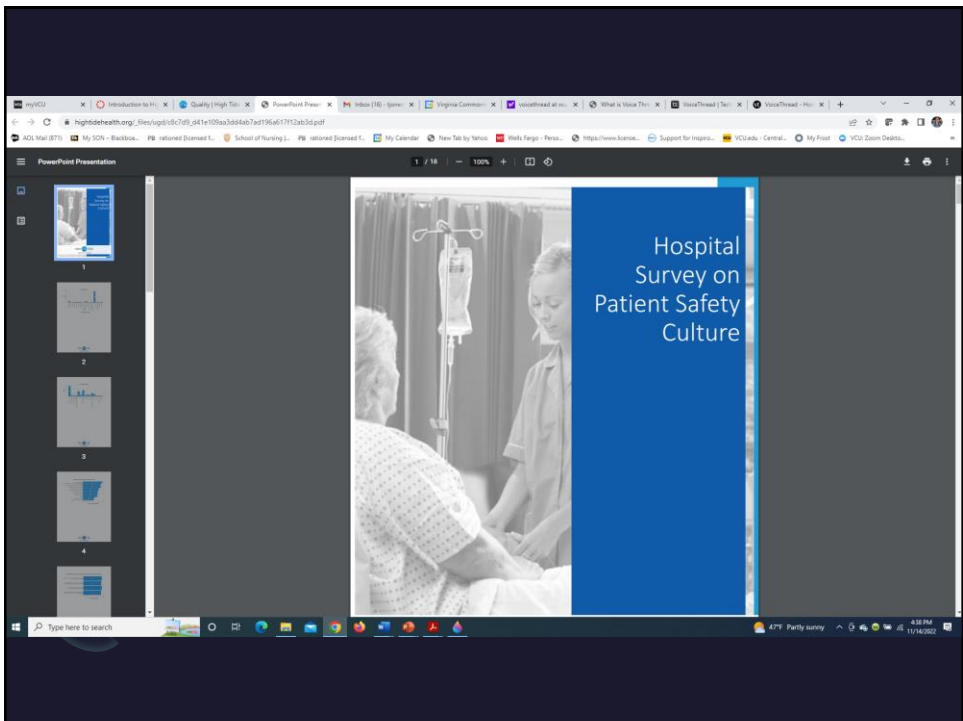
39



40



41



42

Microsoft Excel spreadsheet showing symptom scores for various patients. The spreadsheet is titled "HIGH TIDE HEALTH SYSTEM" and contains a table with columns for PatientID, Fatigue, Nausea, Depresso, Anxiety, Emotion, Shortness, Sleep, Prof, Loss, Age, Pain, Sensation, and Wellbeing.

PatientID	Fatigue	Nausea	Depresso	Anxiety	Emotion	Shortness	Sleep	Prof	Loss	Age	Pain	Sensation	Wellbeing
12-051132	4	0	0	0	2	0	0	0	0	0	0	0	1
17-127004	7	0	0	1	0	0	0	0	0	0	0	0	0
13-144827	8	0	0	2	0	0	0	0	0	0	0	0	0
14-268947	9	6	0	3	0	0	0	0	0	0	0	0	0
19-040393	2	0	0	3	0	0	0	0	0	0	0	0	0
10-907787	0	0	0	0	4	0	0	0	0	0	0	0	0
18-746580	6	0	0	1	0	1	0	0	0	0	0	0	0
09-667627	2	0	3	3	0	1	0	0	0	0	0	0	0
10-222063	7	0	0	1	0	1	0	0	0	0	0	0	0
81-228767	2	0	0	0	0	1	0	0	0	0	0	0	0
12-409583	0	0	0	0	0	2	0	0	0	0	0	0	0
16-905044	4	0	0	2	0	2	0	0	0	0	0	0	0
41-897050	2	0	3	3	0	2	0	0	0	0	0	0	0
18-793793	10	0	0	3	3	2	0	0	0	0	0	0	0
16-965488	0	0	0	0	3	0	0	0	0	0	0	0	0
13-491374	0	0	0	0	4	0	0	0	0	0	0	0	0
13-284916	1	0	0	0	0	4	0	0	0	0	0	0	0
10-573783	1	0	0	0	0	4	0	0	0	0	0	0	0
13-189813	1	0	0	0	0	4	0	0	0	0	0	0	0
02-793737	6	0	0	1	0	4	0	0	0	0	0	0	0
79-395506	2	0	0	0	0	4	0	0	0	0	0	0	0
17-660208	5	0	2	2	3	4	0	0	0	0	0	0	0
10-193002	7	0	0	1	0	4	0	0	0	0	0	0	0
17-175573	9	0	0	2	0	5	0	0	0	0	0	0	0
17-646351	2	0	4	5	0	5	0	0	0	0	0	0	0
18-904939	6	0	0	1	0	6	0	0	0	0	0	0	0
05-408279	1	0	0	0	0	5	1	0	0	0	0	0	0
10-430392	3	0	0	0	0	5	1	0	0	0	0	0	0
13-308879	1	1	0	0	0	6	1	0	0	0	0	0	0
14-499818	2	0	0	0	0	6	1	0	0	0	0	0	0
10-111545	3	0	0	0	0	6	1	0	0	0	0	0	0
16-172024	5	0	0	1	0	6	1	0	0	0	0	0	0

43

Web browser screenshot showing a course page for "Challenger: The Final Flight". The page includes a navigation menu on the left, a main heading, a description of the course, and a video player for the official trailer.

Challenger: The Final Flight

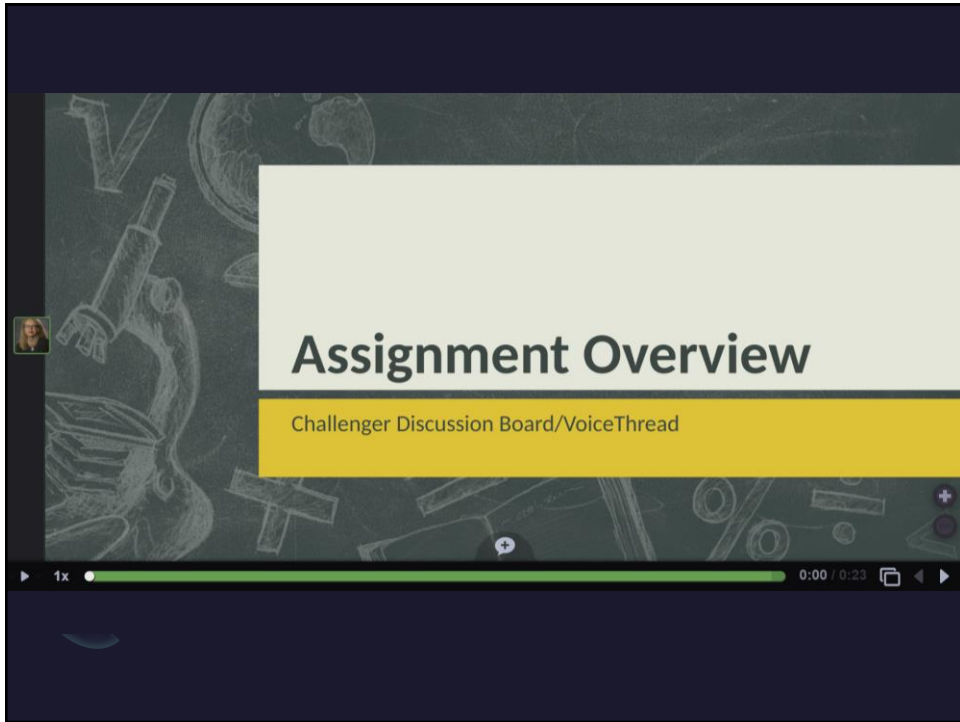
This course uses the 1986 Space Shuttle Challenger as a case study.

If you are not already a Netflix subscriber, plan to subscribe in order to watch the four-part Netflix docuseries: [Challenger: The Final Flight](#). Throughout this course you will be asked to relate ideas from this film to course content as part of regular discussions.

OFFICIAL TRAILER

Watch on YouTube

44

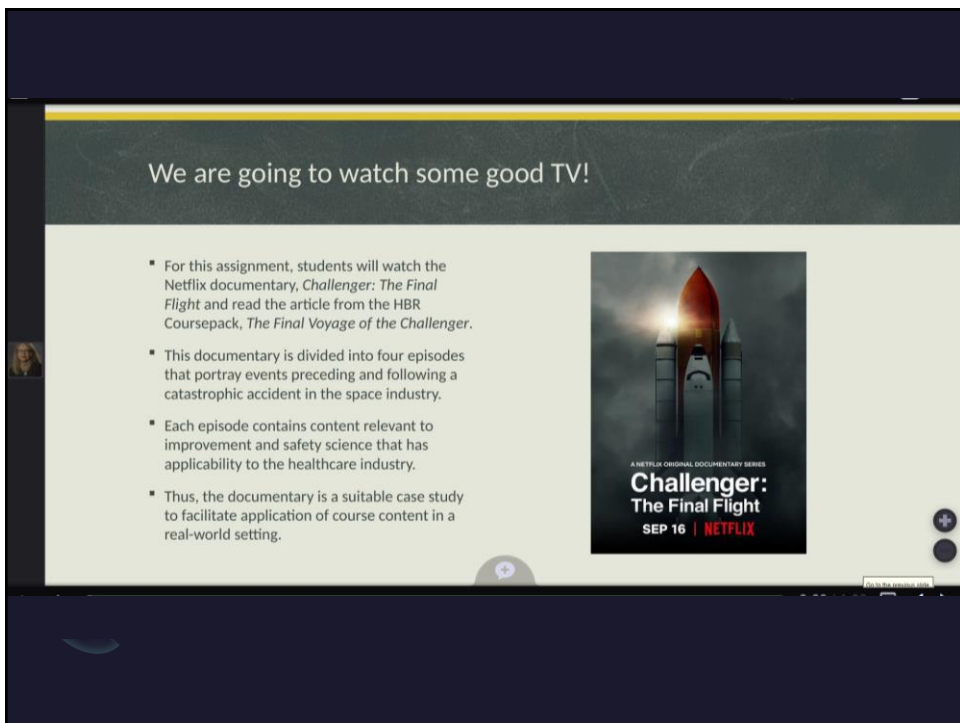


The video player shows a slide with a dark background and technical drawings. A white box contains the text 'Assignment Overview' in a large, bold, sans-serif font. Below it, a yellow bar contains the text 'Challenger Discussion Board/VoiceThread' in a smaller, sans-serif font. The video player controls at the bottom show a progress bar at 0:00 / 0:23, a play button, and a volume icon.

Assignment Overview

Challenger Discussion Board/VoiceThread


45



The video player shows a slide with a dark background and technical drawings. The text 'We are going to watch some good TV!' is centered at the top. Below it, a white box contains a bulleted list of four points. To the right of the list is a poster for the Netflix documentary 'Challenger: The Final Flight', featuring a rocket launch and the text 'A NETFLIX ORIGINAL DOCUMENTARY SERIES', 'Challenger: The Final Flight', and 'SEP 16 | NETFLIX'.

We are going to watch some good TV!

- For this assignment, students will watch the Netflix documentary, *Challenger: The Final Flight* and read the article from the HBR Coursepack, *The Final Voyage of the Challenger*.
- This documentary is divided into four episodes that portray events preceding and following a catastrophic accident in the space industry.
- Each episode contains content relevant to improvement and safety science that has applicability to the healthcare industry.
- Thus, the documentary is a suitable case study to facilitate application of course content in a real-world setting.



A NETFLIX ORIGINAL DOCUMENTARY SERIES
**Challenger:
The Final Flight**
SEP 16 | NETFLIX

46

We are going to engage in reflective learning!

- Students will view each episode and engage in reflective learning to identify how they might apply principles of improvement and safety science in their role as leader/manager.
 - Challenger Content
 - Course Content
 - Current Practice



47

We are going to have great discussion!

Discussion Board

Voice Thread

Terry Jones

48

Faculty Directed Prompts & Student Responses

Episode 1 – Module 1 <ul style="list-style-type: none">• 3 prompts• 3 initial responses• 2 peer responses	Episode 2 – Module 2 <ul style="list-style-type: none">• 3 prompts• 3 initial responses• 2 peer responses
Episode 3 – Module 3 <ul style="list-style-type: none">• 3 prompts• 3 initial responses• 2 peer responses	Episode 4 – Module 4 <ul style="list-style-type: none">• 3 prompts• 3 initial responses• 2 peer responses

1x 0:00 / 1:14

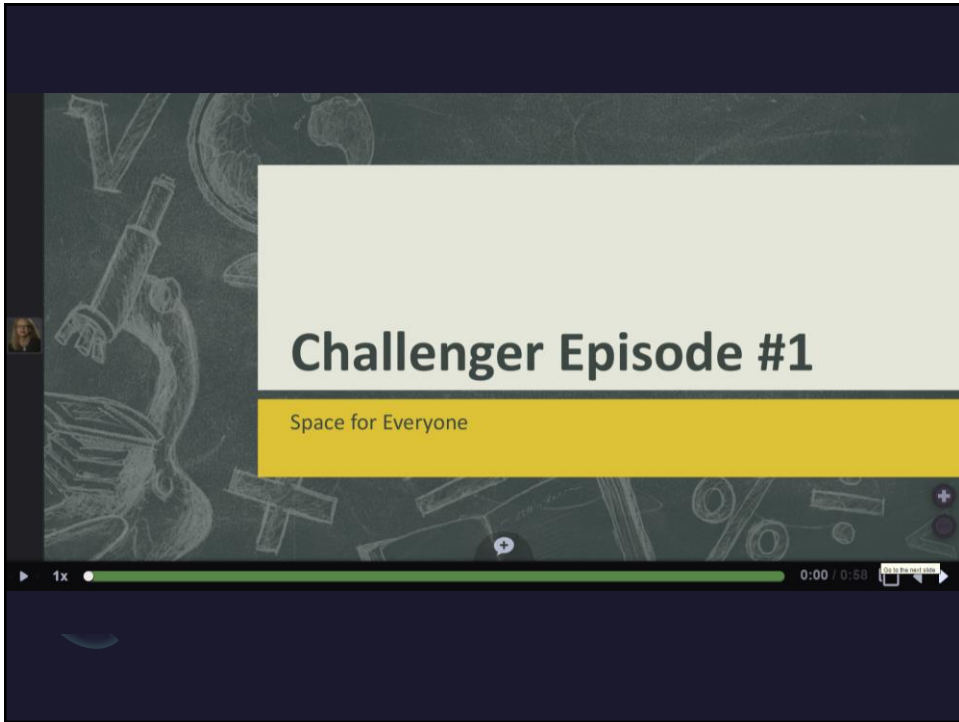
49

NURS 603 Challenger 1 VoiceThread (Slide 1 of 7: Challenger One) Terry Jones CC

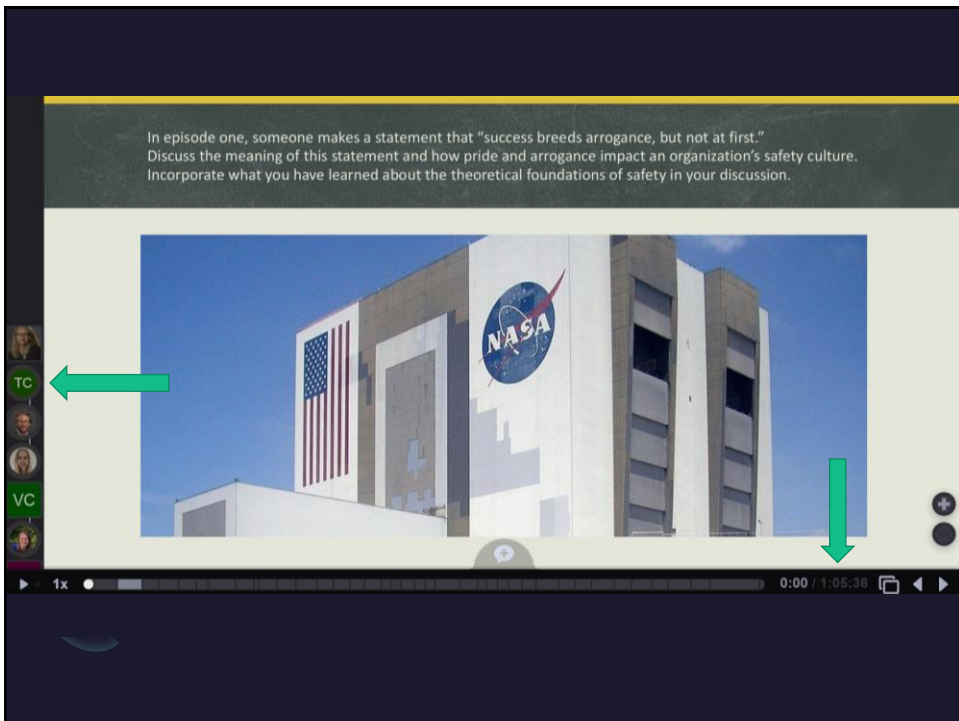
Challenger: The Final Flight

Terry Jones

50



51




52

In episode one, we learn about the complexity of the shuttle design and a bit about the complexity of the space industry.

Compare and contrast these complexities with the health care system and discuss the implications for safety in both industries.

Incorporate what you have learned about the theoretical foundations of safety in your discussion.




TC
TL
VC

1x 0:00 / 1:04:09

53

- Reflect on how the principle of redundancy was applied in the design of the solid rocket boosters and discuss the implications of a failure in redundancy.
- Reflect on the data collection processes used by the engineers to evaluate performance of the solid rocket boosters.
- Based on what they learned in the near miss of the Discovery launch in 1985, what was identified as a possible contributing factor in the O Ring redundancy failure?
- Discuss and critique data collection procedures used in a near miss encountered at your facility. What recommendations do you have for improvement?



TC
TL
TL

1x 0:00 / 1:15:53

54

A screenshot of a video player interface. On the left side, there is a vertical list of participant icons with initials: TC, SS, and JB. The main content area is a slide with a dark green background. On the left of the slide is a video frame showing a man with glasses in a suit speaking. On the right of the slide is a list of three bullet points. At the bottom of the slide, there is a video player control bar showing '1x' zoom, a progress bar, and a timestamp of '0:00 / 1:06:05'.

- Discuss the NASA environment leading up to the Challenger launch.
- What factors influenced managerial decision making?
- Discuss whether decisions by healthcare managers are influenced by these types of factors.

55

A screenshot of a video player interface. On the left side, there is a vertical list of participant icons with initials: TC, MR, EJ, and BC. The main content area is a slide with a dark green background. On the left of the slide is a text block with three paragraphs. On the right of the slide is a video frame showing a man and a woman smiling. At the bottom of the slide, there is a video player control bar showing '1x' zoom, a progress bar, and a timestamp of '0:00 / 1:13:20'.

In episode three, we learn that Commander Dick Scobe asked his wife if he should tell the civilians training for the flight about the risks involved. His wife affirms his inclination, and he discloses the risks.

The engineers at Thiokol perceive an increased risk during the launch due to the unresolved O Ring problem.

Should they have disclosed this risk to the astronauts?


Do you think we adequately inform patients of the risks involved in healthcare today? Explain.

56

Discuss the root causes of the Challenger Explosion in the context of Reason's Swiss Cheese Model and Resident Pathogen Metaphor.

Support your conclusions with evidence.

Based on these root causes, what recommendations would you make in a follow up action plan and why?




TC
WT
EJ

1x 0:00 / 1:11:14

57

Describe NASA's initial response to the Challenger explosion in the context of what you learned about high reliability organizations, safety culture, learning organizations, and disclosure of error.

Comment on whether your facility has a policy on disclosure of error and whether you have ever been involved in a disclosure.




TC
SS
AA
TC

1x 0:00 / 1:13:00

58

■ Discuss the processes and conclusions of the Presidents Commission in the context of what you have learned about the concepts of blame and accountability.

■ Do you agree or disagree with their findings? Explain.




1x 0:00 / 1:15:07

59

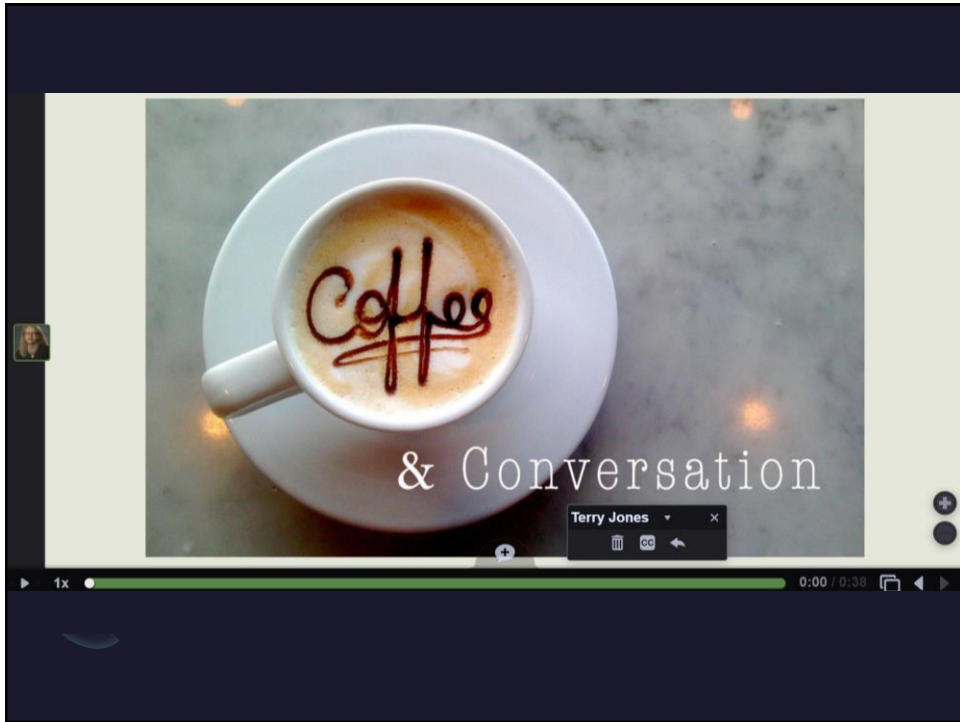
What was the most impactful aspect of episode four?

How did the content in episode four validate and/or change your perspective about quality and safety in healthcare?



1x 0:00 / 1:10:00

60



61



Summary & Conclusions

- Effective interactive strategies for teaching quality & safety to graduate students in the online asynchronous environment
 - Voice Thread Technology
 - Building the Community
 - Explaining Assignments
 - Formative Assessment & Feedback
 - Summative Assessment of Learning
 - Conversations About Reflective Learning
 - Case Studies
 - Entertainment Media Related to Course Content
 - Simulation of Institutional Data Access & Interpretation

62



Many Thanks!