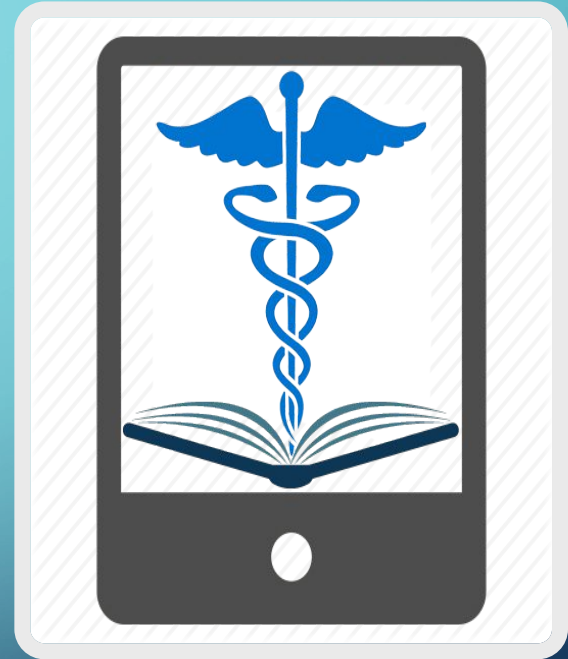


RESOURCE MANAGEMENT SYSTEM (RMS)

DECEMBER 10, 2014

Candice Bowes
Kimberlie Fair
Vi Huynh

Kara Pantalena
Dina Saffouri
Nathan Walby



OUR CLIENT

Advanced Surgical Technology and Education Center (ASTECC)

- Surgical Simulation Education and Training Center
- INOVA Fairfax Medical Campus (Fairfax, VA)
- Opened in June 2014

OUR USER

Meet our Dr. Jane.



OUR USER

General Surgery Residents

- Completed medical degree
- Residency Program (PGY1-PGY5)
- Working toward board certification



CLIENT FOCUSED AND USER CENTRIC

End Goal: Board Certification



Client

User

- Up-to-date resources
- A calendar to track instructional events as well as correlate resources with those events
- Provide feedback to ASTEC

CLIENT FOCUSED AND USER CENTRIC



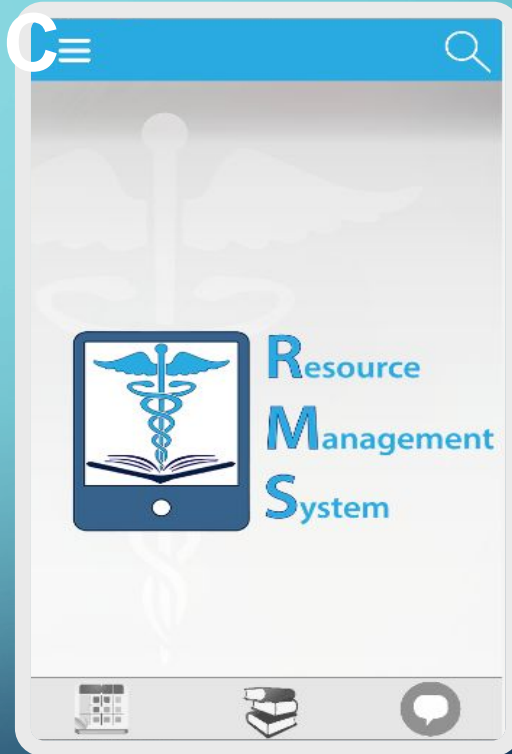
Resource Management System

Login

Password

Enter

This image shows a mobile application login screen. The background is a solid blue color. At the top left, there is a white square containing a blue caduceus symbol (a staff with two snakes and wings) above an open book. To the right of this icon, the text "Resource Management System" is displayed in white, with "Resource" on the first line, "Management" on the second, and "System" on the third. Below the icon and text, there are two white input fields. The first is labeled "Login" and contains the text "guest". The second is labeled "Password" and contains seven asterisks "*****". At the bottom center, there is a white rectangular button with the text "Enter".



CLIENT FOCUSED AND USER

Calendar

Inova Fairfax General
Residency Academic

December 2014

Sun	Mon	Tue	Wed	Thu
	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	23	24	25
28	29	30	31	

Daily Planner

Wednesday December 10, 2014

- 8:00a ● [FLS Practice in ASTEC](#)
- 9:00a _____
- 10:00a _____
- 11:00a ● [Patient Rounds](#)
- 12:00p _____
- 1:00p _____
- 2:00p _____
- 3:00p ● [Soft Tissue Neoplasms](#)
- 4:00p [Bone Fixations](#)
- 5:00p _____
- 6:00p _____

CENTRE

My Resources

Instructor Resources

- Bone Fixations >
- FLS Practice >

Feedback

ASTEC Education and Training Assessment

Session Title: Thoracentesis and Chest tubes
 Session Date: 12/10/2014
 Session Faculty/Presenter: Ng
 Department: Surgery

[Submit](#)

PRE-SESSION EVALUATION

Skill/Task	No Confidence (I can't do it)					Somewhat					Completely Confident (no problem)				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Identify the indications for needle thoracentesis and chest tube placement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate the ability to place a decompressive needle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate the ability to place a chest tube	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the possible complications of thoracentesis and chest tube placement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the principles and set up of chest drainage systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

POST-SESSION EVALUATION

Skill/Task	No Confidence					Somewhat					Completely Confident				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Identify the indications for needle thoracentesis and chest tube placement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate the ability to place a decompressive needle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate the ability to place a chest tube	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the possible complications of thoracentesis and chest tube placement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the principles and set up of chest drainage systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DESIGN PROCESS

Contextual Inquiry and Analysis

Environment **Communication** **Technology** **Instruction** **Assessment** **Other**

Mobile Resources
75 Sometimes residents use...

Web Resources
19 Healthstream is the...

Power of ASTEC

- 10 ASTEC uses B-Line software to record the simulations and residents.
- 11 There are approximately 17 cameras in the ASTEC facility.
- 5 Residents have badge access to ASTEC so they can practice any time they are available.
- 8 Participants are advised that in a simulation, anything that would damage the technology would probably damage the patient.
- 15 Classroom has two wall-mounted LCD TVs.
- 12 The OR is relatively new. It is used sometimes 10-12 hours a day. Multiple departments use it so it varies.
- 13 In TechOP's Room, a technician can enter in annotations to change a simulation directed by attending.
- 9 ASTEC can create emergencies using the mannequin (Trauma man), such as airway fires, to allow the resident to diagnose.
- 21 Residents work in pairs on the laparoscopic machines to practice procedures such as ties, suturing, inserting chest tubes, and setting up instruments.

Expressed Needs

- 1 Residents want everything electronically.
- 20 ASTEC is without a learning management system of their own.

Underutilized

- 18 Lecture sessions and Labs are currently not recorded.

Operation: Confidence Work Activity Affinity Diagram

ENTER

GROUP E

- Candice Bowes
- Kimberlie Fair
- Vi Huynh
- Kara Pantalena
- Dina Saffouri
- Nathan Walby

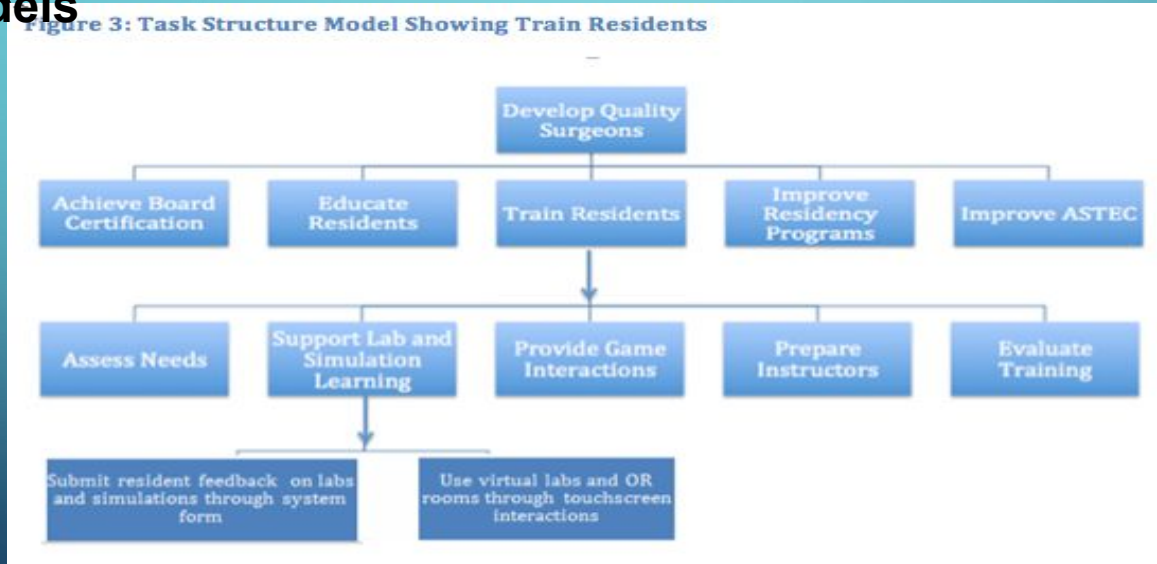
Client: Advanced Surgical
Technology Education Center (ASTEC)
EDIT 732 section 201470.77366
Fall 2014
October 15, 2014

DESIGN PROCESS

‘Essentially, all models are wrong, but some are useful.’

George E.

System Requirements and
Box Models



DESIGN PROCESS

Process

- Painstaking, Rapid, and Agile
- Perfection not the goal

User is the Fundamental Asset

- Interviews and site visits
- Conversations and e-mails
- Interactions

GETTING TO KNOW OUR USER



DR. JANE IS 33 YEARS OLD
WANTS TO SPECIALIZE IN PLASTIC SURGERY
SHE'S A 1ST YEAR RESIDENT (PGY-1)



Navigation arrows: < >

EMOTIONAL IMPACT

- Reduce stress and help with time management
- User ownership of data
- User defined optimization of search results
- User activity remembered
- User defined calendar functions

PROTOTYPE TESTING

- Independent testing by project team members
- Face to Face Observation of User Testing
 - High Fidelity with specific user tasks
- Project team discussion on findings

THE PROTOTYPE



 Resource
Management
System

Login

Password

RECOMMENDATIONS FOR NEXT

ITERATION

- Complete the task process as thoroughly as possible.
- Possibly changing the “back button”
- Change icon for calendar and resource
- Changing the “Back” button
- Adding a tutorial portion to allow residents to know how to use app
- Adding a “Share” button for residents to share their information, findings, etc.
- Changing “Instructor Resources” to “Assigned Resources”
- Adding a chat feature for residents to chat with one another
- Adding an FAQ page
- Adding a “Notes” feature and a picture capture feature
- Adding a place holder screen once users click the “Submit” button in the Calendar and Resource screen in order to show what it may look like.

The background is a dark blue gradient with a white circuit board pattern consisting of lines and circles, primarily visible in the corners.

THANK YOU!

**“PUT A FORK IN IT. WE'RE
DONE!”**

*SEE YOU NEXT SEMESTER!
GROUP E*