Simulation-Based Mock-Up Evaluation of a Universal Operating Room

EBD Journal Club

April 30, 2020

© 2020 The Center for Health Design





Today's Host

Deborah Wingler, PhD, MDS-HHE, EDAC

Vice President & Healthcare Research Lead HKS, Inc.





View Options

Gallery View



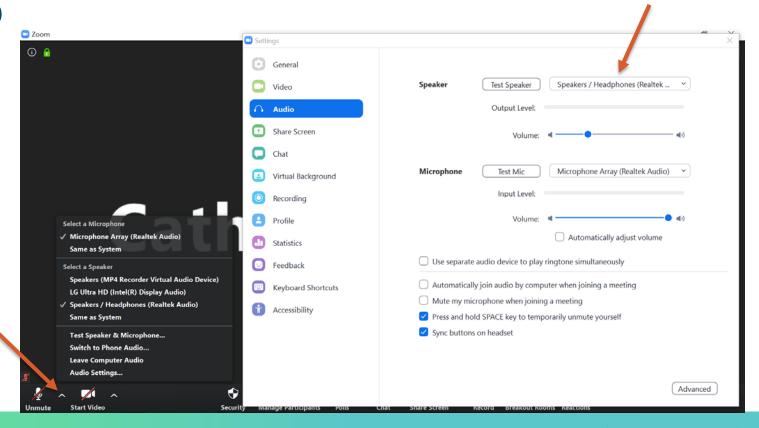




Active Speaker



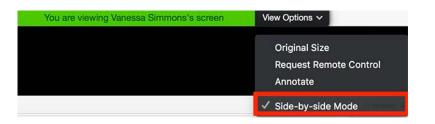
Audio







Side-by-side



During screen share



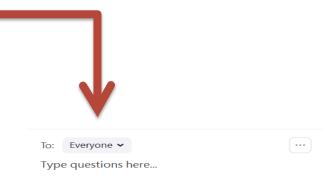




 To ask content questions, click on the Chat icon on your toolbar.



- Chat to "Everyone" (default).
- If you are having technical difficulty, send a private chat to "The Center for Health Design" only.



Zoom Group Chat

03:16 PM

From Me to Everyone:

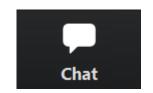
How is everyone doing today?





EDAC & AIA CEUs Available

Download additional information from the "Chat" icon on the bottom of your toolbar or go to https://tinyurl.com/ebdjc430



- **EDAC CEU** complete the Verification Form and retain it for your records.
 - You will need to submit the form to Castle Worldwide at the time of your renewal.
- **AIA CEU** complete the Verification Form and Quiz.
 - Once complete, email it to The Center for Health Design (email address included on the form).





24hr Webinar Pass

\$65,00









Thank you

Thank you to the HERD Journal for donating access to the articles.







Thank you

Thank you to our EBD Journal Club Sponsor

patcraft®



The purpose of the **EBD Journal Club** is to broaden the healthcare community's knowledge, understanding and application of built environment research.



Today's Authors

Jonas Shultz, MSc, EDAC

Human Factors Specialist
Health Quality Council of Alberta
-and-

Adjunct Lecturer, Department of Anesthesiology University of Calgary





Today's Authors

Shelly Fleck, MBA

Director Strategic Initiatives, VA; Operations Director, Surgical Services, VA & VGH Simulation Center





A Quick Overview of the Study

© 2020 The Center for Health Design





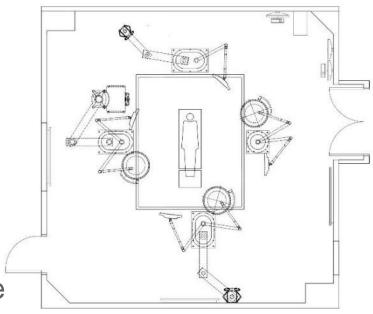
Objectives and Aims

- Design a "universal OR" (any case, any room)
- 7 Flows of Medicine
- Patient and Staff safety paramount
- Design needs to work for all team members
- Opportunity to create new design, new habits, new flows vs "just make it work"



Background

- Vancouver General Hospital
- Mock Scenarios:
 - Iterative
 - 650 sqft, square
 - Real OR equipment where possible
 - +++ stakeholder engagement
 - 18 in total (multiple services, all team members represented)
 - Changes made after every 3rd mock







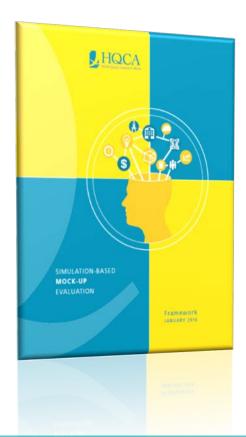
Methods

- Simulation-based mock-up evaluation framework
 - Document available from:https://www.hqca.ca/humanfactors













Methods







Methods - Scenarios

Total Abdominal Hysterectomy



Laparoscopic Cholecystectomy



Thyroidectomy

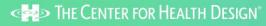


Scoliosis
Spinal Fusion



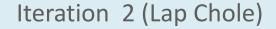
Iteration 1 (Oct 2017)

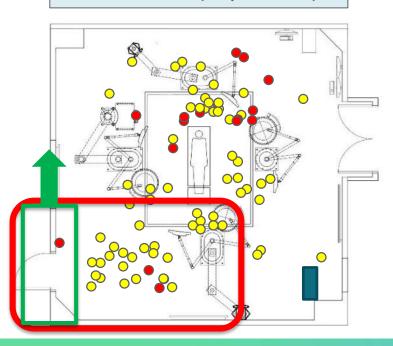
Iteration 2 (Jan 2018)

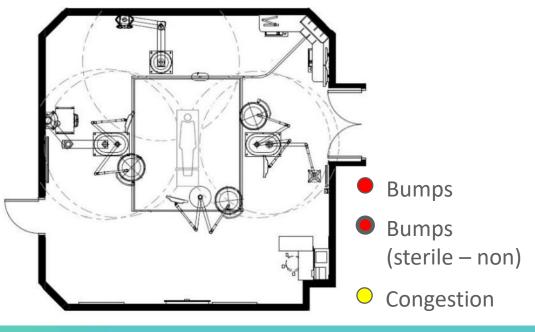




Iteration 1 (Lap Chole)



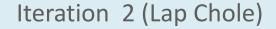


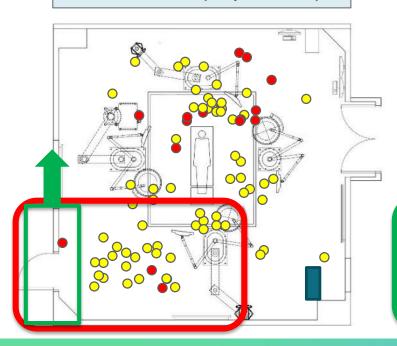


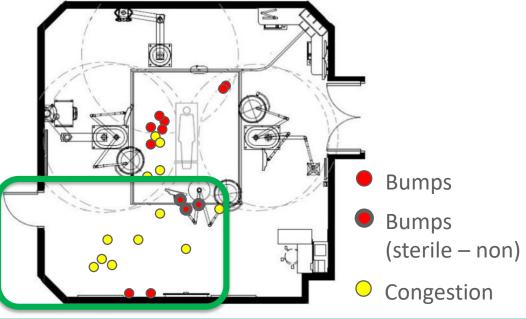




Iteration 1 (Lap Chole)



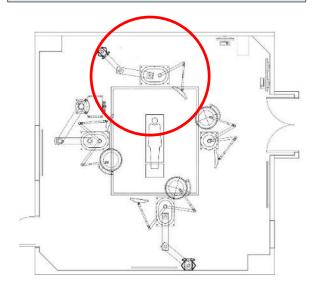


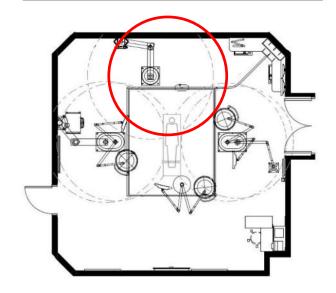


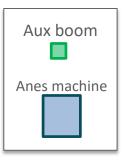




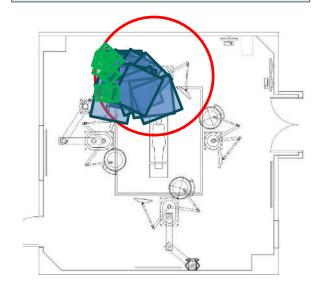
Iteration 1

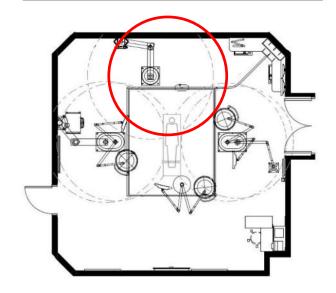


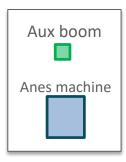




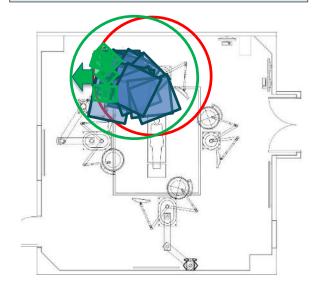
Iteration 1

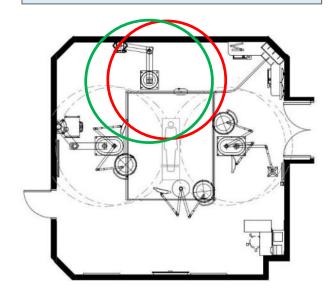


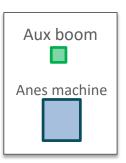




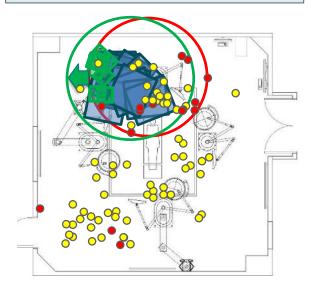
Iteration 1

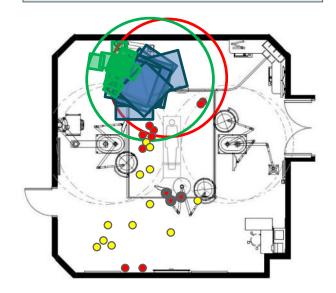


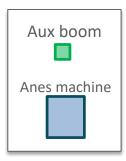




Iteration 1







The design changes resulted in:

- Better room utilization
- Fewer constraints with equipment mobility
- Decreased congestions
- Positive debriefing feedback









- Extend boom arm for anesthesia
- Relocated power / data outlets
- Redesigned the nursing shelf
- FMO temperature monitor moved
- STAFF OWNED THE ROOM!



Discussion

© 2020 The Center for Health Design









Feel free to type in any questions you may have in the Chat box.

Type your questions here (Default = Everyone).









Thank you

Thank you to the HERD Journal for donating access to the articles.





Thank you

Thank you to our EBD Journal Club Sponsor

patcraft®



Virtual
Workshop
MAY
14/21/28









PEDIATRICS

Philadelphia SEPT 16



BEHAVIORAL HEALTH

Baltimore SEPT 23



AGING

Baltimore SEPT 24





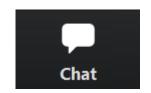






EDAC & AIA CEUs Available

Download additional information from the "Chat" icon on the bottom of your toolbar or go to: https://tinyurl.com/ebdjc430



- EDAC CEU complete the Verification
 Form and retain it for your records.
 - You will need to submit the form to Castle Worldwide at the time of your renewal.
- AIA CEU complete the Verification Form and Quiz.
 - Once complete, email it to The Center for Health Design (email address included on the form).

EVENTS & WEBINARS



24hr Webinar Pass

\$65.00



CEU Management Fee

\$12.00



