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6.813
HW2

EZ-ICU Heuristic Evaluation
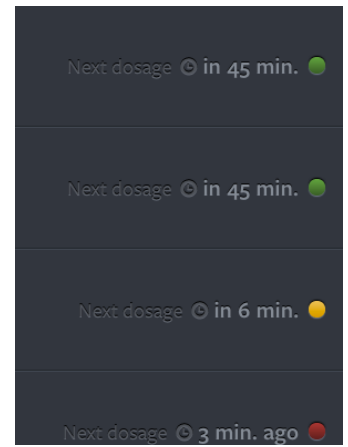
Collaboration Statement: I did not discuss this assignment with anyone.

1. **Patients do not sort by next dosage**
   a. **Type:** Efficiency
   b. **Severity:** Minor
   c. **Recommendation:** Allow an option to sort by next dosage.

2. **Color indicators suggest confusing calls to action**
   a. **Type:** Efficiency / External Consistency
   b. **Severity:** Minor
   c. **Comment:** Right now the color indicators call for action before *and after* giving a patient their dosage. It seems like a red indicator implies that the patient needs immediate service, but on further inspection they have already been served. (Next dosage **3 min ago**)
   d. **Recommendation:** Either change the green/yellow/red indicators to time tiers leading up to serving a patient (30+ mins, 5-30 mins, <5 mins) or get rid of the red indicator altogether and just focus on the next dosage, even if it is in 4 hours.
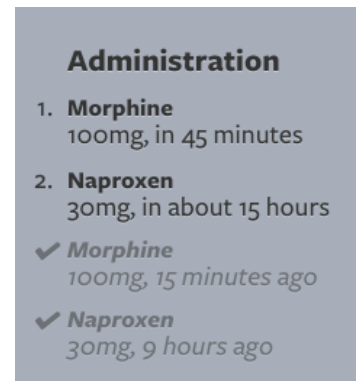
3. **Bed number is not immediately obvious even after sorting by bed**
   a. **Type:** Efficiency
   b. **Severity:** Cosmetic
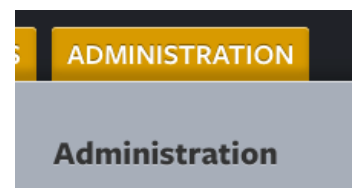   c. **Recommendation:** Move the bed number in front of the image.

4. **No (color) indicator for administration of next dosage in the Overview > Administration panel**
   a. **Type:** Internal Consistency
   b. **Severity:** Minor
   c. **Recommendation:** Add color indicators for upcoming dosages that are consistent with the ones in the patient overview. Make sure to emphasize dosages that are overdue!

5. **Administration wording is confusing**
   a. **Type:** Learnability
   b. **Severity:** Minor
   c. **Recommendation:** I know administration is a common word used in medicine but it is not immediately obvious that all the info under the administration header/panel is about administering dosages. Change the wording of "Next dosage in …" to "Administer next dosage in …"

6. **No easy way to sort prescriptions**
   a. **Type:** Efficiency
   b. **Severity:** Minor
   c. **Recommendation:** Add feature to sort by medication, dosage, frequency, start and end

Medication	Dosage	Frequency	Start	End	
Morphine	100mg	Every 2 hours *Q2H*	15 minutes ago *1 dosage given*	in 3 hours, 45 minutes *4 dosages remaining*	✏ ✖
Naproxen	30mg	Every 24 hours *Q1D*	9 hours ago *1 dosage given*	in 6 days, 15 hours *7 dosages remaining*	✏ ✖

7. **No autocomplete for medication**
   a. **Type:** Efficiency and Safety
   b. **Severity**: Major
   c. **Recommendation:** Add an autocomplete feature with a list of prescription medications.

asdf	Dosage mg	Every hour
		Add presc

8. **No autocomplete or dropdown for dosage**
   a. **Type:** Efficiency and Safety
   b. **Severity:** Minor
   c. **Recommendation:** Add a dropdown after a medication is selected with all the possible dosages the medication is produced in.

9. **No easy way to sort administration of dosages**
   a. **Type:** Efficiency
   b. **Severity:** Minor
   c. **Recommendation:** Add feature to sort by medication and completion.

Medication	Dosage	Scheduled Time	
Morphine	100mg	in 45 minutes	Done
Naproxen	30mg	in about 15 hours	Done
Morphine	100mg	15 minutes ago	Undo
Naproxen	30mg	9 hours ago	Done

10. **No way to compare patients, view multiple at the same time, or drag and drop patients in a specific order**
    a. **Type:** Efficiency
    b. **Severity:** Catastrophic
    c. **Recommendation:** Add a way to view multiple patients and organize them so a doctor or nurse can keep track of multiple people without jumping back and forth.

11. **No way to add or edit allergies, visit information, patient history or demographics**
    a. **Type:** Efficiency
    b. **Severity:** Catastrophic
    c. **Recommendation:** Add ways to add this information in the side panel or in a greater user profile page.
    d. **Comments:** I totally understand that this wasn't completely necessary to implement in this prototype but I just wanted to add it as a reminder. I'd also suggest adding a field in "Visit Information" where you can write in who is adding more information – I'd like to see which nurse or doctor is noticing continued chest pains in case another nurse or doctor would like more info later.

Allergies
No known allergies to medication
Patient allergic to pollen

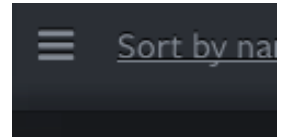**Other Medications**
Daily aspirin
100mg/day

Visit Information
Admitted with chest pain
2 days ago

In ICU after suspected cardiac arrest
14 hours ago

12. **Overall readable interface, strong use of typography and color**
    a. **Type**: Graphic Design/Usability
    b. **Severity:** Good!
    c. **Comments:** The colors are neutral but provide enough contrast to be read fairly easily. There is a lot of padding within each element that is very helpful but you could almost do with less. The only color issue I see so far is the indicators for next dosage may be unhelpful for someone with red/green colorblindness.

13. **Unused menu icon**
    a. **Type:** Learnability
    b. **Severity:** Cosmetic
    c. **Comments:** Not sure what this icon will be used for. If it will be used, I would love to see more visual cues to help explain what it will show.

14. **Confusing wording between doctor display and nurse display**
    a. **Type:** Learnability
    b. **Severity:** Major
    c. **Comments:** Reading your GR4 writeup, you said you would have different views for a doctor and a nurse. Under each patient the doctor would see Overview/Prescriptions/Administration while the nurse would only see Overview/Give Medication. I would like to know what happens if a nurse or someone licensed to prescribe things needs to prescribe medicine but can't add it through the Prescriptions panel. I'd also like to know the difference between "Administration" and "Give Medication" – both seem like the only option is to press "Done" (or "Undo"). Again I know not everything is fully implemented for this prototype so I just wanted to point it out so you can remember it for the next iteration. ☺

15. **The site is not fully responsive (but mostly responsive!) and can begin to get cramped despite all the padding**
    a. Type: Usability
    b. Severity: Minor
    c. Comments: Some panels with a lot of information begin to get a little squished as the browser is smaller. Medication, dosage and frequency begin to get very cozy! I know this site is designed for the desktop and not mobile (I tried!) and is very responsive until the browser gets very small. The cramping is just something to consider when structuring all the information.

Overall I think your site looks like it is headed in a great direction. I know not everything is implemented, so I can't wait to see what it looks like when all the pieces come together. I have questions about how different panels will interact (where will "add a patient" fit in the current layout, what will the doctor or nurse profile look like, etc.) but I think they will be answered in your next prototype. Good job!