Heuristic Evaluation of Ola Diabetes

1. Problem

Ola is a mobile application design specifically for patients of diabetes to enable them to live normal lives by providing them with real-time, context-aware data and reminders about their health.

Ola Diabetes Care helps patients with diabetes better manage their condition by organizing their glucose and insulin information, assessing the best course of action given their history and current food intake, and establishing a direct line of communication with their respective doctors.

2. Violations Found

1. *[H2-1. Visibility of system status][Severity 3][Found by A+C+ D]*
· *I was unaware that I could click the pie chart on the main page to see a different chart. This is something that can easily be overlooked because the app has no indication that clicking the pie chart will bring you a different chart.*

2. *[H2-4. Consistency and standards][Severity 2][Found by A+C]*
· *The first and the second chart mentioned above is not labeled well. The first pie chart doesn't indication the meaning of the percentage, while the second bar chart does not label the y-axis. There are numbers incrementing by 6, but they do not correspond with numbers on the pie chart so I'm not sure what they mean. Also, the bar chart does not have title while the pie chart does.*

3. *[H2-5. Error prevention]/[H2-10. Help and documentation][Severity 3][Found by A]*
· *Under the "Food" section, after confirming the amount of carbs I am currently consuming, it says "Based on your history data, your recommended insulin level is…" not sure what kind of time frame this is working with. This ambiguity may cause problems for someone who interprets it the wrong way. There is also no documentation to help with this issue.*

4. *[H2-10 Help and Documentation] [H2-1. Visibility of system status][Severity 3][Found by A+C]*
· *Under the food section I have the option of choosing "Standard", "Short Extended", and "Dual". This is probably something a diabetic would know, but if they don't, for some reason, there is nowhere to check what that is or what the best delivery method is.*

5. *[H2-4. Consistency and standards][Severity 2][Found by A + B]*
· *Poor English that either doesn't flow well or doesn't properly explain the function of a page. "Doctor Communications" might be better as "Communications with Doctor" or something along those lines. The following was not on the app but it was in the report document: "We would calculate your carbs for you". "We can calculate your carbs" or "We will calculate your carbs for you" sounds better.*

6. *[H2-1. Visibility of system status][Severity 2][Found by A]*

· *"Insulin Delivery Success" does this mean the app has given me my dose of insulin? It seems like that is what it means, but it could be more explicit, ie "Your insulin has now been given through the delivery system".*

7. [H2-7. Flexibility and efficiency of use]/ [H2-4. Consistency and standards][Severity 4][Found by A + B+ D]
· *Replying to doctors takes you off the App and into your email. To make this app very useful, it would be convenient to get all the information under one room. Having your incoming messages go to the app and your replying messages go somewhere else is inefficient and lacks consistency. Having the ability to reply to a doctor's note on the app will make things much easier.*

8. [H2-7. Flexibility and efficiency of use]/ [H2-4. Consistency and standards][Severity 4][Found by A]
· *No way to add a note to your doctor. This is a function that many users will want to use. This also comes back to the idea of having everything under one roof; being able to fully communicate with your doctor through this app will bring a lot of value to it. Having a system that splits your communication into two different platforms defeats the purpose of this app.*

9. [H2-7. Flexibility and efficiency of use][Severity 3][Found by A]
· *Can't search under "Doctor Communications". It is very frustrating to manually filter through many messages. Adding search functionality would make things much easier for the user.*

10. [H2-7. Flexibility and efficiency of use][Severity 4][Found by A + B+ D]
· *The calculation of carbs via picture seems very inaccurate. Being able to manually enter carbs is a good thing, but taking a picture of your meal probably won't give you the best results (this would take quite a bit of machine learning and would most likely end up being the main focus within development). I suggest having some sort of search functionality where a user can enter what they are eating and the portion size. The returned output will be the carbs associated with that piece of food.*

11. [H2-7. Flexibility and efficiency of use]/[H2-4. Consistency and standards][Severity 3][Found by A+ D]
· *The only way to add multiple pieces of food (ie Banana and Milk mentioned in the report) is by taking separate pictures. You cannot input multiple amounts of carbs. This is a simple fix that would make the carb counting functionality a bit easier to use and more consistent.*

12. [H2-4. Consistency and standards][Severity 2][Found by A + B+ D]
· *When you click one of the notes on the Homepage you are brought to a note. When you click the back button, you are brought back to the "Doctor Communications" page. I'd expect to be brought back to the Home page.*

13. [H2-1. Visibility of system status][Severity 2][Found by C]

The blue arrow and the grey arrow take the users to the same page. This may confuse users. Suggestion: Remove the blue arrow

14. [H2-4. Consistency and standards][Severity 2][Found by B+C+ D]

The other doctoral notes do not have approve, but this have. User may not sure what does approve do to him or her.

Suggestion: Be consistent.

15.[H2-8: Minimalist Design] [Severity 2][Found by C]

This sentence may be too long for experienced users. "Based on your history data" is not necessary to show every time when the user go to this screen
Suggestion: "Recommended insulin level" is enough

16. [H2-1: Visibility of Status] [Severity 3][Found by D]

There is no responsive indication of where the user is in the app. Ola works to segment the app into logical sections (insulin, home, food, etc.) but does not give the user either a pipeline or highlighted tab to help them get a sense of where they are within the application. I found this most disorienting when in the 'Dr. Communications' section, when the forward/backward buttons take you to an inbox rather than home. I immediately searched to figure out where I was but was left confused.

17. [H2-10:Help and documentation] [Severity 2] [Found by B]

On the foods page where the instructions for how to take the photo are given, I fear that the instructions are little too simple and might cause users to take the pictures incorrectly (e.g. wrong lighting, wrong angle, etc.) leading to a recognition error.

18. [H2-5: Error prevention] [Severity 3] [Found by B]

When looking at an individual note from a doctor (a "Doctor Communication"), the user has two options: to either Reply to the note or to Implement the recommendation. However, the placement of the "Implement" button is placed where the most intuitive next step button would be. Further, if that button is clicked, there is no way to undo that action.

19. [H2-8: Minimalist Design] [Severity 3] [Found by B+ D]

I feel that both of these pieces of information are highly relevant to users, but do both need to coexist on the same page? They didn't feel intrinsically relevant to each other. I feel both pieces of information would be better served if they had their own dedicated pages that users could devote their attention to without having to decide their focus. By doing this, each page could also build up a more detailed page with relevant data to the pie chart and/or email communications.

20. [H2-7:Flexibility and efficiency of use] [Severity 3] [Found by B+ D]

Again, on the foods page, I realize that there are TWO options of how to enter your carb intake. However, I don't think the way the page is laid out makes it obvious that the user can choose ONE of the TWO methods. Instead, it seems a little like the user has to use both features on the page to get to the next step.

21. [H2-5:Error prevention] [Severity 2] [Found by B]

After users confirm their insulin delivery system, the confirmation page doesn't acknowledge what kind of delivery they confirmed. In other words, if they accidentally reported the wrong delivery method on the app than what they did in practice, they will not really know or have an immediate way to correct that error.

3. *Summary of Violations*

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
[H2-1: Visibility of Status]	0	0	2	3	0	**5**
[H2-2: Match Sys & World]	0	0	0	0	0	**0**
[H2-3: User Control]	0	0	0	0	0	**0**
[H2-4: Consistency]	0	1	4	1	2	**8**
[H2-5: Error Prevention]	0	0	1	2	0	**3**
[H2-6: Recognition not Recall]	0	0	0	0	0	**0**
[H2-7: Efficiency of Use]	0	0		3	3	**6**
[H2-8: Minimalist Design]	0	0	1	1	0	**2**
[H2-9: Help Users with Errors]	0	0	0	0	0	**0**
[H2-10: Documentation]	0	0	1	1	0	**2**
Total Violations by Severity	**0**	**1**	**9**	**11**	**5**	**26**
Note: check your answer for the green box by making sure the sum of the last column is equal to the sum of the last row (not including the green box)						*Check!*

4 Evaluation Statistics

severity\evaluator		evaluator A	evaluator B	evaluator C	evaluator D
level 0		0	0	0	0
level 1		0	0	0	0
level 2		4	4	4	2
level 3		5	4	2	4
level 4		3	0	0	2
total (levels 3 & 4)		8	4	2	6
total (all levels)		12	8	6	8

evaluator # Ex. C	# problems found Ex. 7	# problems remaining & problem IDs Ex: 5 (1, 7, 11, 13, 17)
A	12	12 (1-12)
B	8	6 (12, 17, 18, 19, 20, 21)
C	6	3 (13 14 15)
D	9	0
Total	35	21

Right right-click on the chart and select "Edit Data..."

Severity Ratings

1 - *don't agree that this is a usability problem*
2 - *cosmetic problem*
3 - *minor usability problem*
4 - *major usability problem; important to fix*
5 - *usability catastrophe; imperative to fix*

Heuristics

[H2-1: Visibility of System Status]
- *keep users informed about what is going on*

[H2-2: Match Between System & Real World]
- *speak the users' language*
- *follow real world conventions*

[H2-3: User Control & Freedom]
- *"exits" for mistaken choices, undo, redo*
- *don't force down fixed paths*

[H2-4: Consistency & Standards]

[H2-5: Error Prevention]

[H2-6: Recognition Rather Than Recall]
- *make objects, actions, options, & directions visible or easily retrievable*

[H2-7: Flexibility & Efficiency of Use]
- *accelerators for experts (e.g., gestures, kb shortcuts)*
- *allow users to tailor frequent actions (e.g., macros)*

[H2-8: Aesthetic & Minimalist Design]
- *no irrelevant information in dialogues*

[H2-9: Help Users Recognize, Diagnose, & Recover from Errors]
- *error messages in plain language*
- *precisely indicate the problem*
- *constructively suggest a solution*

[H2-10: Help & Documentation]
- *easy to search*
- *focused on the user's task*
- *list concrete steps to carry out*
- *not too large*