

Initial Plan – MyHealthOnline: Integrated Digital Patient-Centred Health and Care System

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Project description

This project aims to investigate how digital technologies can provide ways of delivering improved and personalised health and social care to patients, whilst also improving their access to information. A recent report on digital health and social care strategy for Wales identified the need for patients, carers and healthcare professionals to be able to make use of accurate information, safely, wherever and whenever it is needed. It has been said 'that better communication between healthcare professionals and patients can save costs, improve health outcomes and enhance the quality of experience of patients and the professionals who support them.' (Marie Curie, 2016). To be able to extend the communication services the NHS have in place it can help conquer the communication issue in more of their facilities, by doing this it could save a lot time and money.

This project will be investigating these issues on an existing application called MyHealthOnline, at the moment this application satisfies the needs of being able to book appointments and ordering prescriptions online, making the information much more accessible to the public. To start the project, I will need to consider the problem of communicating between user/patients and the medical care team that potentially interact with the patient's GP, social carers, pharmacist and hospital. I will find out the needs of the patient as a whole and research into other systems that are used for communication between the patient and medical team on the NHS. I will be analysing the MyHealthOnline application to measure the usability to be able to identify any underlying problems with it that it may already have trying to fulfil its needs. I will conduct usability and functionality tests to be able to retrieve this information.

After identifying any gaps in the usability, I will extend my research onto the public. I will conduct interviews and surveys on users of the application to find out how useful and easy it is to use. I will be able to identify the needs of communication that patients require and finding out what other features they would find helpful in this application. To find the relevant people to do my research on, I will go to my GP surgery and ask the GP's and patients to fill out my survey or asked if they can be interviewed. Further on I will be interviewing other health care professionals to help understand their needs from this application and where else it can be used in other NHS facilities. I can find the relevant people through connections of my friends working on placement at the hospital. As MyHealthOnline provides communication between the patient and GP surgery only, the results from the interview can help decide where else this type of communication is needed.

While I am conducting these tests and collecting information, I will ensure that the results I get will not be influenced by any external factors or bias. Collecting data through interviews allows people to express their true feelings on the application.

Using the results of my research I will be able to deliver one of the main tasks of the project which is a set of requirements for the application. This will influence how I

assess the application and will assist me in being able to design a new and improved version application interface that will hopefully provide better usability and more features that fulfil the needs of the public. This prototype will be evaluated by users, whose feedback will be considered in my final design. This design could start saving money for the NHS and improve the communication between the patient and many more NHS facilities.

Project aims and objectives

The core objectives for this project are:

Objective 1 – Identify and understand any problems in the application

- Carry out a heuristic evaluation to be able to go into the depth of the usability of MyHealthOnline
- Carry out research to find out if there are any gaps in the healthcare market where this application could become useful
- Research into finding out if it's fulfilling the needs of the public. An approach to use to be able to understand the needs and its dimensions is soft systems methodology
- Research into any research papers about the application already such as any reviews or guides on how to use the application
- Research into any other systems of communication the NHS provides

Objective 2 – Identify requirements of the application

- Plan and carry out primary research by conducting interviews and surveys using the right audience to gain useful information
- Conduct interviews that will find out the problems of the communication between patients and NHS staff, discover the patient's needs and the problems of MyHealthOnline
- Identify the gaps between the application and the users needs that have been established
- From this research to be able to write a list of changes and requirements needed to be made
- The output from this objective will be a Gap Analysis Report and a list of the requirements that are needed to be implemented into the application

Objective 3 – Using the research to propose a new design for the application

- This objective is designing a new design for the application showing the improvements I believe should be made, this will include all my research and analysis I have done up to this point
- This design will include all the necessary features that have been considered from the test findings
- The output of this objective will be a prototype design for MyHealthOnline

Objective 4 – Evaluating the new proposed prototype

- Carrying out user-based evaluation e.g. a cognitive walkthrough to be able to get feedback on the prototype
- Making the refinements identified from the questionnaire to the prototype
- The output of this objective will be an analysis report from the prototype design

Objective 5 – Project conclusion

- Evaluate all research and findings that have been discovered throughout this project
- Answer the project aim – does the improved design deliver improved and personalised health and social care to patients, whilst also improving their access to information?
- Review how well the project went and suggest any future improvements
- Write a final conclusion on the initial project aims

Work plan

Term week	Activities
1 (29 th of Jan)	<ul style="list-style-type: none">● Produce the Initial plan Milestone: Initial plan due 5th February 2018
2 (5 th of Feb)	<ul style="list-style-type: none">● Carry out background research of the application and any relevant reviews of the application● Write interviews for the relevant health care professionals to find out their needs and where they could find better communication useful to them● Write interviews for the appropriate users of the application to find out how they find the MyHealthOnline application● Carry out the Soft Systems Methodology approach and conceptual model to identify and understand where the problem lies, it will help me identify what tasks need doing and will assist me with my interviews. Milestone: Conceptual model

3 (12 th of Feb)	<ul style="list-style-type: none"> ● Conduct the interviews for users ● Conduct the interviews on healthcare professionals to see if the application can be used anywhere else ● Write up the interviews ● Provide feedback and solutions on the interviews ● Carry on working on the conceptual model
4 (19 th of Feb)	<ul style="list-style-type: none"> ● Continue conducting the relevant interviews that are left ● Carry out Nielsen's heuristics evaluation by using his 10 Usability Heuristics for User Interface Design to evaluate the application (Nielsen, 1994) ● Start the gap analysis report ● Choosing which testing methods to use and create the written user tests ● Carry on working on the conceptual model ● Review meeting with supervisor on the research I have carried out so far to assist me on how to take it further <p>Milestone: Gap analysis report</p>
5 (26 th of Feb)	<ul style="list-style-type: none"> ● Carry out the user testing e.g. a cognitive walkthrough with a group of people to see how easy they find it to use the system ● Need to review my SSM model to make sure I have been finding out the right information to help with the problem identified
6 (5 th of Mar)	<ul style="list-style-type: none"> ● Analysis of results and identify any trends ● Defining requirements for the application from using the research as this will give me a guide on the new design ● Review meeting with supervisor on how I am getting on analysing my results and get advice on how to interpret them to make sure I'm heading in the right direction

7 (12 th of Mar)	<ul style="list-style-type: none"> • Create prototype designs to fix any common problems and be able to expand the application <p>Milestone: Prototype designs</p>
8 (19 th of Mar)	<ul style="list-style-type: none"> • Interview users to get feedback on the prototypes
Easter	
9 (16 th of Apr)	<ul style="list-style-type: none"> • Evaluate the prototypes with users and identify problems • Review meeting with supervisor to evaluate my progress on the prototype and the feedback I have had on them, to make sure I am hitting my objectives
10 (23 rd of Apr)	<ul style="list-style-type: none"> • Amend the prototypes to fix the known problems <p>Milestone: Improved prototype designs</p>
11 (30 th of Apr)	<ul style="list-style-type: none"> • Evaluate success of the project and the finished design fulfils the needs of the users and health care professionals
12 (7 th of May)	<ul style="list-style-type: none"> • Proof read report • Plan the Project Viva <p>Milestone: Final Report due 11th May 2018</p>

Gantt chart

The Gantt chart below shows the work plan graphically, and the time it will take to complete each task. The milestones for the project are represented by the green circles.



Risk plan

This risk plan shows the risks that could happen throughout the project.

Risk	Risk level (Low, Medium and High)	Likelihood of event (Certainty, Likely, Somewhat Likely and Unlikely)	Solution
Illness	Low	Somewhat Likely	The work plan has ensured I have spread the workload so if a few days are missed in the week I would be able to make up the time.
Data loss	High	Unlikely	Make sure there are backups of the project on different medias and update them to the newest version regularly.
Can't interview people in the specified week above	High	Likely	If the appropriate people can't meet in the week specified ensure that you can do it the week after and if possible start the following week's tasks earlier.
Difficult finding appropriate users and health care professionals to interview	High	Somewhat Likely	Start looking early for appropriate users and ask around a lot to find any useful connections
Falling behind on the work plan	Medium	Somewhat Likely	Make sure to start the week's tasks straight away to ensure you get the full week to complete it and if it can't be finished find a bit of time the following week to make sure it is.

Ethical consideration

My project will not need to consider any ethical issues because in my research I will not be collecting any personal data. While conducting my interviews and user-based evaluations I will be able to anonymise the participant information.

References

Marie Curie. (2016). *Poor communication in the NHS wastes public funds*. [online] Available at: <https://www.mariecurie.org.uk/media/press-releases/poor-communication-in-the-nhs-wastes-public-funds-and-damages-patient-care/103176> [Accessed 2 Feb. 2018].

Nielson, J., 1994. 10 Usability Heuristics for User Interface Design. [Online] Available at: <http://www.designprinciplesftw.com/collections/10-usability-heuristics-for-user-interfacedesign> [Accessed 2 Feb. 2018].