Market Research

# Introduction

This document aims to detail the types of applications that are already available to patients and carers. The document will look at a subset of applications in further detail and comment on the following:

1. Compatibility
2. Design
3. Functionality
4. Ease of Use
5. Speed
6. Reliability

Security is another aspect that will we also be considering with great care and attention when producing our application however, this is something that we are not going to directly look at when carrying out market research. We will be using best practices that conform to UK data protection and privacy laws as a baseline and feel it would be inappropriate to look at the security of other applications in order to determine a baseline for our application. Therefore, this will not be discussed in this document.

# Healthcare Applications

There are a whole range of mobile applications and websites that are available within the pharmaceutical and healthcare industries. Generally, the web applications are more sophisticated and advanced whereas the mobile applications are somewhat less sophisticated and developed within this market.

There are some very well-known web applications within the UK such as, NHS Direct website and mobile application. However, there are also many mobile applications that are less well known; some of these are produced by government organisations, some by healthcare companies such are the pharmaceutical giant GlaxoSmithKline and others are produced by charities.

The majority of these applications are geared towards patients or the general public and contain information about certain conditions, the symptoms that a sufferer may experience and some advice about what to do if you believe you may have the condition/illness.

In recent years there have been so many of these applications developed that both Apple and Google have entire sections of the app stores that are dedicated to apps categorised under ‘Medical’. A report in 2013 showed that Apple’s App Store has approximately 20,000 medical apps whereas Google’s Android Play store lists 8,000 (Aungst, 2013).

There are also applications that are used internally within the NHS to support nurses and carers in treating patients as well as recording health information about them such as heart rate, blood pressure and medication.

# SystmOne

SystmOne is a clinical software that is produced by a company names TPP, it was first released in 1999 and is adopted by the NHS as a part of the National Programme for IT and their vision for a ‘one patient, one record’ model of healthcare (TPP SystmOne, 2011).

# Analysis of consumer based applications

This section looks at some of the consumer applications that are produced by healthcare and pharmaceutical companies and added to the Android and Apple app stores. Below, the following applications will be reviewed and compared:

1. **Piri Pollen Application, GlaxoSmithKline**

This application is designed for hay fever sufferers; it gives a pollen forecast and allows the user to set medication reminders. Specifically, targeted at consumers of Piriteze, the application allows you to find your nearest store to buy the product or order online. This application was taken off of the app store in June 2014 due to technical difficulties with updating the pollen count readings based on postcode.

1. **MediSafe Meds & Pills Reminder, MediSafe Project**

MediSafe is a medication reminder app, it allows you to add the medication that you are due to take and will remind you when you should be taking the pills. If you don’t mark the action as complete the app will alert your selected MediSafe buddy. Also, the app facilitates a reporting feature showing if and when medication has been taken and when prescriptions need to be renewed.

## Compatibility

The MediSafe application is available on android as well as iOS, although it does not have a front end web interface; this is something that we thought would be particularly beneficial as a website would not restrict the user based on what device they own, as this will be accessible from any device whether it be a smartphone, tablet or PC. The Piri Pollen application is only available on iOS and although it does have a website that is able to tell you the pollen count for your local area as well as order the Piriteze drug, it does not facilitate the use of the medication reminder functionality.

Furthermore, the MediSafe application is adapted for larger screens, such as the use of tablets as well as smart phones which tend to have smaller screens. This is very useful and again makes the application accessible to people that have either android smartphones or tablets. On the other hand, the Piri Pollen app is only available on the iPhone and not on the iPad which limits the user base of the application. Although, for the JustHealth project both smartphone and tablet compatibility are crucial, smartphone compatibility should be prioritised higher than the tablet as these device have a larger user base.

The MediSafe application is compatible with android versions 2.3 and higher. This is important to ensure that users are not able to access the application if they are not on the latest version of android. We should also consider the security requirements of the application and ensure that versions that have potentially catastrophic security vulnerabilities are either mitigated by the coding of the application and/or not supported by the application.

## Design

Design is extremely important within any mobile application to ensure that they are easy to use and are also appealing so that users are encouraged to firstly download the application and subsequently use it. Often design heavily influences the ease of use of an application and if to complex can impact the performance too. This will be something that we will be required to manage throughout the development life cycle of our application to ensure that we strike the correct balance.

### Interface Design

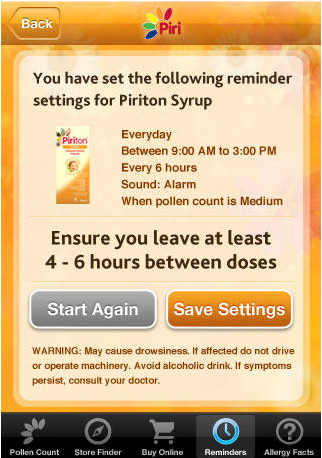
**Piri Pollen Application**



*The application logo is always displayed at the top of the application which helps to build the brand and gives a consistent feel and identity to the application.*

*The bar at the bottom is viewable from all windows which again enforces a consistent feel to the application. This also makes the application easy to navigate.*

*The applications colour schemes make it look somewhat outdated and unappealing to the eye.*



*This is a duplicate button of the ‘start again’ button. This may be confusing to a user.*

*Customary, automated inputs from the application. This is a nice feature although, may not be applicable for people with chronic health conditions.*

*The buttons are clear and the colour contrast between the buttons makes it clear which is to proceed and which is to go back a step.*

*Checks that the user is happy with the decision that they have made. This adds a step in to the process that some users may find frustrating and time consuming although, this should be done to check that the reminder is as expected/needed otherwise it may have serious consequences if the patient is to miss a dose.*

*This warning is displayed to ensure that the user is aware of the possible side effects. This demonstrates a corporate social responsibility which users may find reassuring and build their trust and confidence in the application.*

Ultimately, the Peri Pollen application has both good and bad features in its user interface design. IU feel like the application looks quite dated and this is largely down to the colour scheme. I can see that this colour scheme has been adopted because this is the same colour scheme as the Piriteze medication box although, in the application I don’t feel that this works. As discussed previously, the website for the Peri Pollen application doesn’t have the same functionality as the mobile application and it also has a very different look and feel. Also, the branding is not consistent; the website shows the GSK logo as well as the Piriteze logo. This gives the application an unprofessional feel and that is something that the JustHealth application should aim to avoid. Having said this, the application is reasonably easy to navigate with large buttons that are suitable for the touchscreen interface.