

## *Overview: a new age for health data*

Today we find ourselves at a vital crossroads for health policy. The COVID-19 pandemic has placed a spotlight on the need for real-time health data, so that researchers, scientists, and policy makers can quickly make informed decisions in response to public health crises. Queensland has access to this data in the form of a single Electronic Medical Record (EMR), currently spanning 70% of the state's public health care.

The pathways to accessing this vital, real-time health data are largely opaque. For the most part, researchers and other interested parties are unable gain access in a timely manner. Legal and regulatory guidelines are also unclear, and data custodians are thus overly cautious in granting access.

### *The complexity surrounding live data access results in 2 problems:*

Firstly, unclear current application processes create costly inefficiencies. Stakeholders trying to apply for data access are instructed by the QH website to ring an employee before commencing, which is an expensive and unnecessary function for QH. From the perspective of users, the website provides an overwhelming number of forms and options, creating problems of choice overload and sludge (unnecessary frictions). As a result, stakeholders are less likely to apply in the first place. Furthermore, application forms such as the Right To Information (RTI) cost money to fill out, further exacerbating the problem

Secondly, people are less likely to engage with the system into throughout the process and into the future. They are also unsure of what data is available to begin with, which further exacerbates data disengagement. Ultimately, vital research and policy outcomes suffer as a result, and data usage and stakeholder engagement are reduced.

We therefore suggest a two-pronged solution. Careful, behaviourally informed website design will guide stakeholders to relevant application pathways, eliminating costly and time-intensive phone calls and incorrect applications. In addition to this, a progress bar and updates system will enhance user engagement and keep stakeholders informed of ongoing data sets.

### *Strategy 1: Present interactive user guide in a clear and tailored website format.*

Our proposed strategy to address problem 1 is a simple, yet creative redesign of the current data section of the Queensland Health webpage. We aim to use an improved web page format to clearly present the pathways specific to each stakeholder, while eliminating irrelevant pathways. We propose below simple nudges which could be included in this new redesign, which would streamline and improve the stakeholder's user experience through mild behavioural tweaks. Namely we propose:

- **Default pathway:** The first step of the data access web page will redirect users to their institutional login. Once they log in, the user will be identified as a key stakeholder, whether that be researcher, policymaker, data custodian, clinician, etc. The website will then use this information to generate further questions to identify specific data needs of that stakeholder, while eliminating irrelevant information.
- **Choice preservation:** As they are taken through the process of accessing data according to their specific identity and needs, users will be presented a dialogue box. This will pop up on their screen, asking questions such as:

“We have identified you as a lawyer. Is this correct? Click [here](#) to change these preferences.”

- **Data subscription:** the stakeholder will be able to subscribe to particular data sets, including retrospective and new data, through a simple search bar; they will then receive notifications for the most recent updates to their chosen data so that they do not have to waste time searching for this again.

## Strategy 2: Tracking bar & notification system

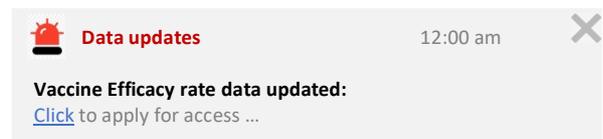
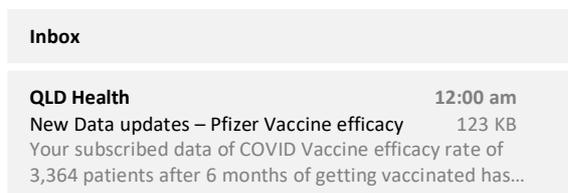
With the second strategy, we aim to promote user engagement in accessing data by visualizing task breakdown and providing ongoing alerts.

- **Tracking bar:** like an Amazon order, the coloured line on the left indicates the positions that are completed. The grey part represents future steps. In addition to this, the user's most recent application status is in bold, highlighting the progress made. "latest by dd/mm" also aims to provide users with a sense of security. The task break-down progress bar thus serves as a nudge to remedy the existing low engagement problem.



- **Interactive notification system:** via optional emails & website push notifications. We propose 2 types of alerts:
  - i) Application reminder: pre-empts potential issues users may face during the application process, such as missing deadlines.
  - ii) Data update alert: prevents users from missing out on updated data releases. Also stops users from having to continuously search for new data.

Both alerts (whether through email or website notifications) contain corresponding links that guide stakeholders through the next steps in the application process. For example, the updates on data may require further action from users. The link within the alert directs users to a page containing the legal forms needed, or the proposed guidance page in **strategy 1**.



## Behavioural Insights

Through our first strategy, we have helped our users to **map out** their course of action needed to obtain data. By further **visualizing** this in the form of a progress bar, we can also boost engagement with the process by tapping into the behavioural bias of **goal gradient effect**, where people's effort levels accelerate as they near the end of the reward.

Furthermore, there will also be a feedback system in place, in the form of email updates and website push notifications, as users move along the progress bar. This aims to pre-empt and correct expected **errors** during the application process, ensuring users do not miss important deadlines. It will also provide **personalised live** updates when new data become available. This will help boost engagement throughout the otherwise long and arduous data access process, while promptly alerting stakeholders to the latest data available.

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