**Transforming Health and Social Care Publications in Scotland**

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**Introduction**

The [Information Services Division (ISD)](http://www.isdscotland.org/) of the National Health Service Scotland produces around 200 health and social care publications each year which are designated either official or national statistics. Most publications are produced using SPSS, and published as static PDF documents with accompanying excel tables. Feedback has shown that our data can be challenging to find and digest in this format. Furthermore, production is time-consuming, involving extensive manual formatting and checking. The transforming publications programme aims to modernise how ISD produces and releases data.

**Methods**

We have been using a combination of Data Science, DevOps and user-driven design principles. We first identified our most common customer types and developed a set of personas. Customers were engaged with directly through interviews and focus groups to identify if our perceptions of customers’ needs reflected reality, and the findings were translated into features for development. Once the team had an informed understanding of customer needs, we designed a new method of publishing data, focusing on one publication as a proof of concept. The team worked iteratively, involving customers to test and provide feedback on the new platform as it underwent development.

To build this platform and make the publishing process more efficient, robust and reliable, we transferred data production from SPSS to R, using modern data wrangling code from the tidyverse suite of packages. To build the new publication platform we used a combination of RShiny dashboards and D3 charts. We used git and GitHub for version control and have [published the code](https://github.com/Health-SocialCare-Scotland/Hospital-Acute-Activity) behind the RShiny dashboard. We also developed an R Style Guide, GitHub best practice and a suite of R resources in order to facilitate learning, development and collaborative working within ISD and across the wider public sector in Scotland.

**Results**

A [prototype for statistical publications](https://www.isdscotland.org/Health-Topics/Hospital-Care/Publications/2018-06-26/Acute-Hospital-Publication/) was released in December 2017. We have encouraged continual feedback on the new publication, allowing the development of additional features which will help refine the product further. In September 2018, [a second publication](https://www.isdscotland.org/Health-Topics/Mental-Health/Publications/2018-09-25/psychiatric-inpatient-activity/) was released using this new publication format. We are now working with several teams within ISD to transform their publications into this new design. We are also developing the first Reproducible Analytical Pipeline for an official statistics publication in Scotland in order to streamline the production process further.

**Conclusions**

By co-designing a new model of presenting data, we can provide customers with the data they need in a way that they can understand. Furthermore, the new automated method of producing the publication has created time savings and reduced the risk of manual errors.