

NHS-R community: Supporting users and publishing open source in UK health and social care.

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What is NHS-R?

- ▶ Analysts and data scientists in health and social care
- ▶ Using open source tools (mainly R!)
- ▶ We share code (everything defaults to OPEN)
- ▶ Cooperate across organisational boundaries
- ▶ We cooperate across international boundaries
- ▶ We love beginners
- ▶ We make mistakes and learn together

Why does NHS-R exist?

- ▶ Training
- ▶ Community
- ▶ Policy/ good practice
- ▶ Building tools for everyone to use- WAGOLL
- ▶ Lead by example- share, be inclusive, and be attractive to beginners

Open source

- ▶ Natural to assume that the NHS is a collaborative enterprise
- ▶ Until recently there were no mechanisms to help us cooperate at all
- ▶ Everything is done over and over again, duplicatively, on proprietary DBs
- ▶ In the recent past:
 - ▶ No incentive to share
 - ▶ Many barriers to sharing

Who does share?

- ▶ Facebook
- ▶ Microsoft
- ▶ IBM
- ▶ Samsung

Let's talk about Prophet

- ▶ What is Prophet?
- ▶ Why did Facebook give away Prophet (MIT licence)?
- ▶ I really have no idea, but let's speculate anyway
 - ▶ Developers like to work in the open so it helps with recruitment and retention
 - ▶ They want people to use it so they can get better suggestions about how to improve it
 - ▶ They want people to improve it by submitting pull requests (several at the time of writing)
 - ▶ They don't want the hassle of selling it!

Why would we share?

- ▶ The four freedoms
 - ▶ Use
 - ▶ Study
 - ▶ Share
 - ▶ Improve

How are we doing?

- ▶ Some orgs are still fighting about use!
- ▶ Many fighting tooth and nail over learning and transparency
 - ▶ Why?
- ▶ Building? Largely a pipe dream
 - ▶ Why?
- ▶ Contributing? Imagine the headlines!
 - ▶ Why?

What can NHS-R do about this?

- ▶ Permission
- ▶ Visibility and community
- ▶ Skills
 - ▶ Basic- git, GitHub, issues, pull requests...
 - ▶ Advanced- building reusable stuff is hard
 - ▶ Advanced advanced- building reusable stuff *together* is really hard!

Building tools

- ▶ Two tools today
- ▶ One for every provider trust in the country- simple, RAP compliant, useful
- ▶ One to show the potential for open source data science

NHSRplotthedots

- ▶ SPCs and Making Data Count
- ▶ Done up and down the country with Excel templates
 - ▶ Not RAP compliant
 - ▶ ... what is RAP?
- ▶ We discussed the idea of an R implementation of this for a long time
- ▶ In the end someone just got on with it
- ▶ Someone from the community shared code they'd already written
- ▶ Group effort to expand and improve
- ▶ Now on CRAN with >1500 downloads

Community roles

- ▶ Methodology
- ▶ Documentation
- ▶ User requirements and testing
- ▶ Code and repo management
- ▶ Wider community engagement

Why it succeeded

► Real