

Survey of public health analysts shows few share data & code, citing significant barriers

Use of reproducible research practices improves the quality of science and the speed of scientific development. Research is reproducible when data are accessible and data management and analysis instructions are clear and complete. In this study, the authors surveyed public health analysts to understand their use of reproducible research practices and associated barriers and facilitators.

```
76 - # CAP
77
78 #subset for cap policy
79 caps <- stordens[stordens$pol=="cap",]
80 text(c(5,21,37),45,r2$lab)
81
82 #choose locations
83 cap1loc <- basloc
84 - for (i in 1:4) { cap1loc[[i]]<- basloc[[i]]
85               cap1loc[[i]][,1] <-
86               }
87 - for (i in 1:4){
88   points(cap1loc[[i]], pch=16, col=mycol)
89 }
90
91 cap2loc <- cap1loc
92 - for (i in 1:4) { cap2loc[[i]]<- cap2loc[[i]]
```

The authors found that just 14.4% of participants had shared code, data, or both. Many participants reported their data and code would be difficult for colleagues to find if they left their institution.

KEY TAKEAWAYS FROM THE RESEARCH

Of all public health analysts surveyed, only

14.4%

of participants had shared code, data or both



TOP 3 BARRIERS

to using reproducible practices

- Data privacy concerns **50%***
- Lack of time **42%**
- Intellectual property concerns **33%**



TOP 3 FACILITATORS

to using reproducible practices

- More training **51%**
- Journal requirements **44%**
- Funder requirements **40%**

**percentages represent proportion of survey respondents who identified each barrier or facilitator*

Increasing the use of reproducible research practices is important for public health and requires action from researchers, training programs, funders, and journals.

Journals requiring statistical source code and enough data collection detail to allow users to obtain relevant data could increase the use of reproducible research practices.

The authors also built a toolkit for public health researchers to learn how to make their research reproducible: <https://coding2share.github.io/ReproducibilityToolkit/>

Source: Harris JK, Johnson KJ, Carothers BJ, Combs TB, Luke DA, Wang X (2018) Use of reproducible research practices in public health: A survey of public health analysts. PLoS ONE 13(9): e0202447. <https://doi.org/10.1371/journal.pone.0202447>
 The authors received funding from the Robert Wood Johnson Foundation (RWJF) Increasing Openness and Transparency in Research program (74421).