Simulate time saved nationally by a simplified ethics/SSA system

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We model the national number of low and negligible risk ethics applications and estimate: 1) the time spent currently and, 2) how much time could be saved in a streamlined system.

# Time spent in the current system

We start with the total number of ethics proposals from an NHMRC report. This was 18,039 in 2016.

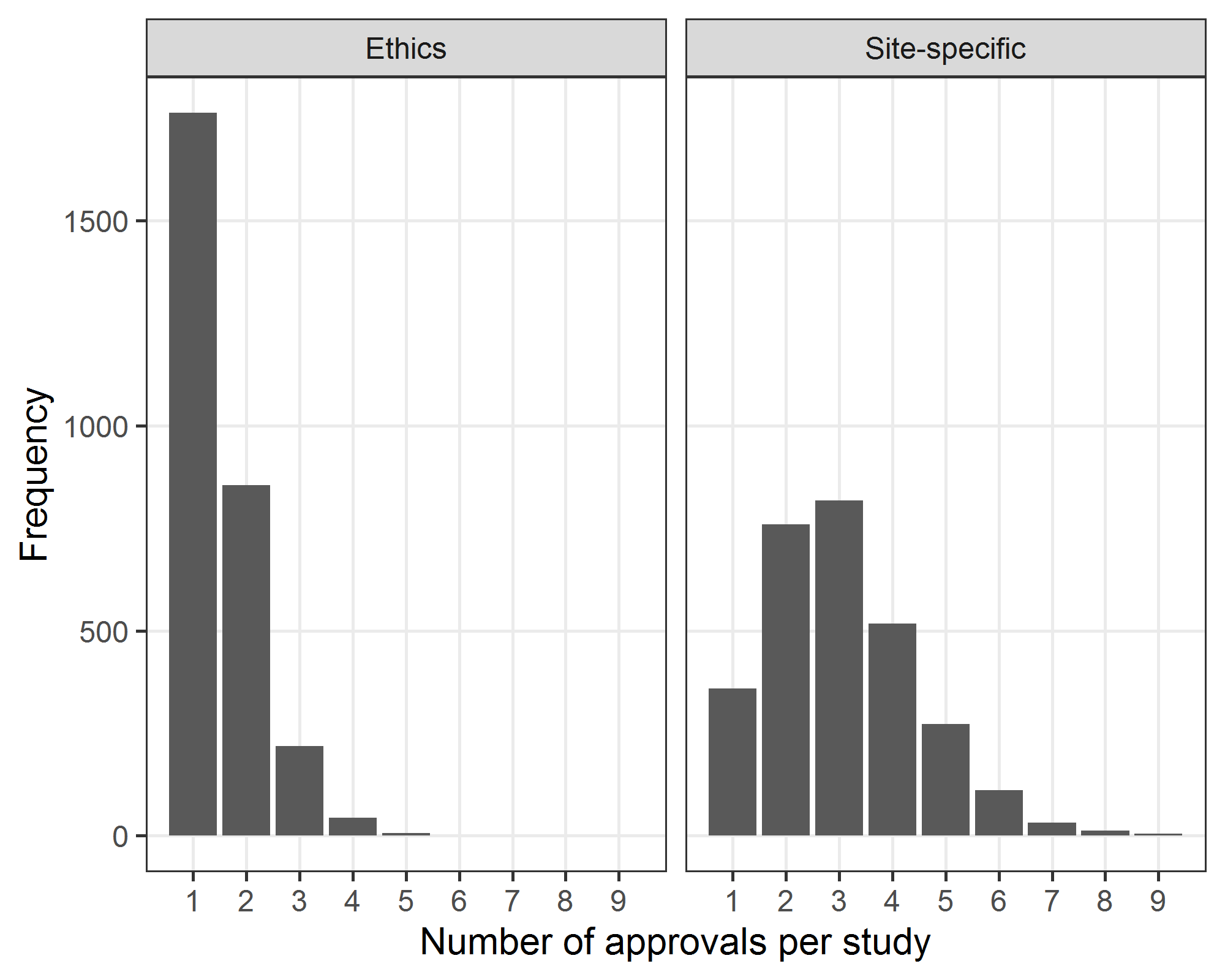
The proportion of low and negligible risk applications was not given in the report, hence we estimate it to be 0.4 (*IMPROVE*).

We also want to consider applications that need an SSA, so those would include healthcare facilities. We estimate that this proportion would be 0.4 (*IMPROVE*), and this is the proportion of all low and negligible risk applications.

This means the overall proportion of low and negligible risk applications is 0.16 and the total number of applications we consider is 2,886 per year.

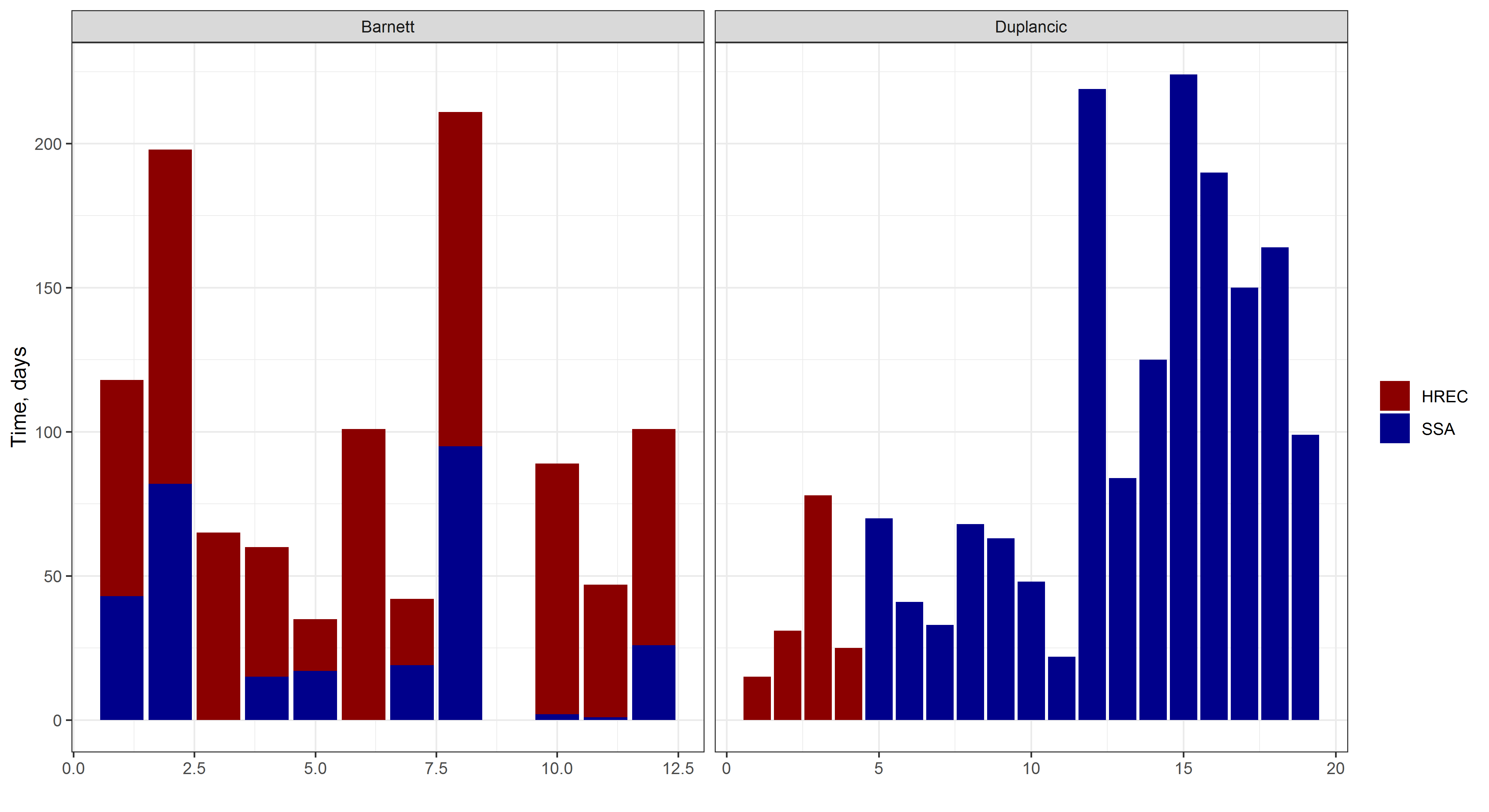
# Simulated number of ethics committees per proposal

We simulate the number of ethics committees and site-specific approvals needed per study using Poisson distributions, with a minimum of one ethics and one SSA approval.



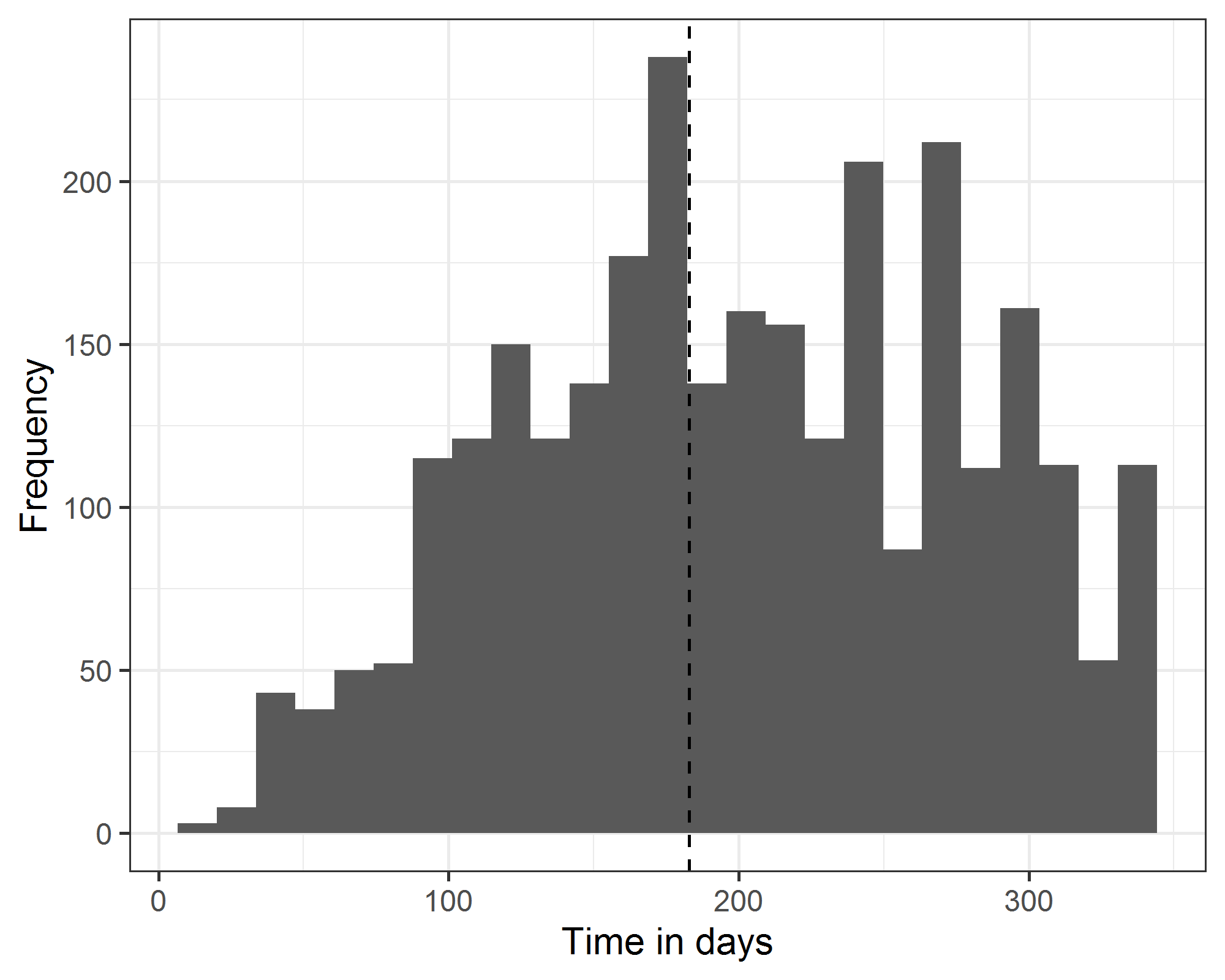
# Time spent per approval

For the times per approval, we use data from Barnett et al (2016) and Duplancic et al (2019) from their low and negligible risk studies. We simulate times from these studies using an empirical distribution. The observed times for ethics and SSA are shown below.



# Simulated times

The plot below shows the simulated times in days for studies to get ethics and SSA approval. The dotted vertical line is at six months. The approval times are calculated using the longest HREC and longest SSA per study.



# Total time and potential time saved

In the simplified system we assume all applications take no longer than six months, which is based on the system proposed by Clay-Williams et al (2019).

The estimated total time spent in the current system is 1,580 years. The estimated total time spent in the streamlined system is 323 years. The number of years that could be saved is 1,257 years.

If we apply a full-time researchers offers time at an annual salary of $56,000, then we have a salary cost of $70 million per year.

# References

* Duplancic, C. , Crough, T. and Bell, S. C (2019) Multi‐centre ethics and research governance review can impede non‐interventional clinical research. *Intern Med J*, **49**: 722-728. <doi:10.1111/imj.14158>
* Robyn Clay-Williams, Natalie Taylor and Jeffrey Braithwaite (2019) Potential solutions to improve the governance of multicentre health services research. *Med J Aust* **208** (4). <doi:10.5694/mja16.01268>
* National Health and Medical Research Council. Report on the Activity of Human Research Ethics Committees and Certified Institutions for the period: 1 January 2016 to 31 December 2016
* Adrian G. Barnett, Megan J. Campbell, Carla Shield, Alison Farrington, Lisa Hall, Katie Page, Anne Gardner, Brett G. Mitchell & Nicholas Graves (2016) The high costs of getting ethical and site-specific approvals for multi-centre research. *Research Integrity and Peer Review* **1** 16