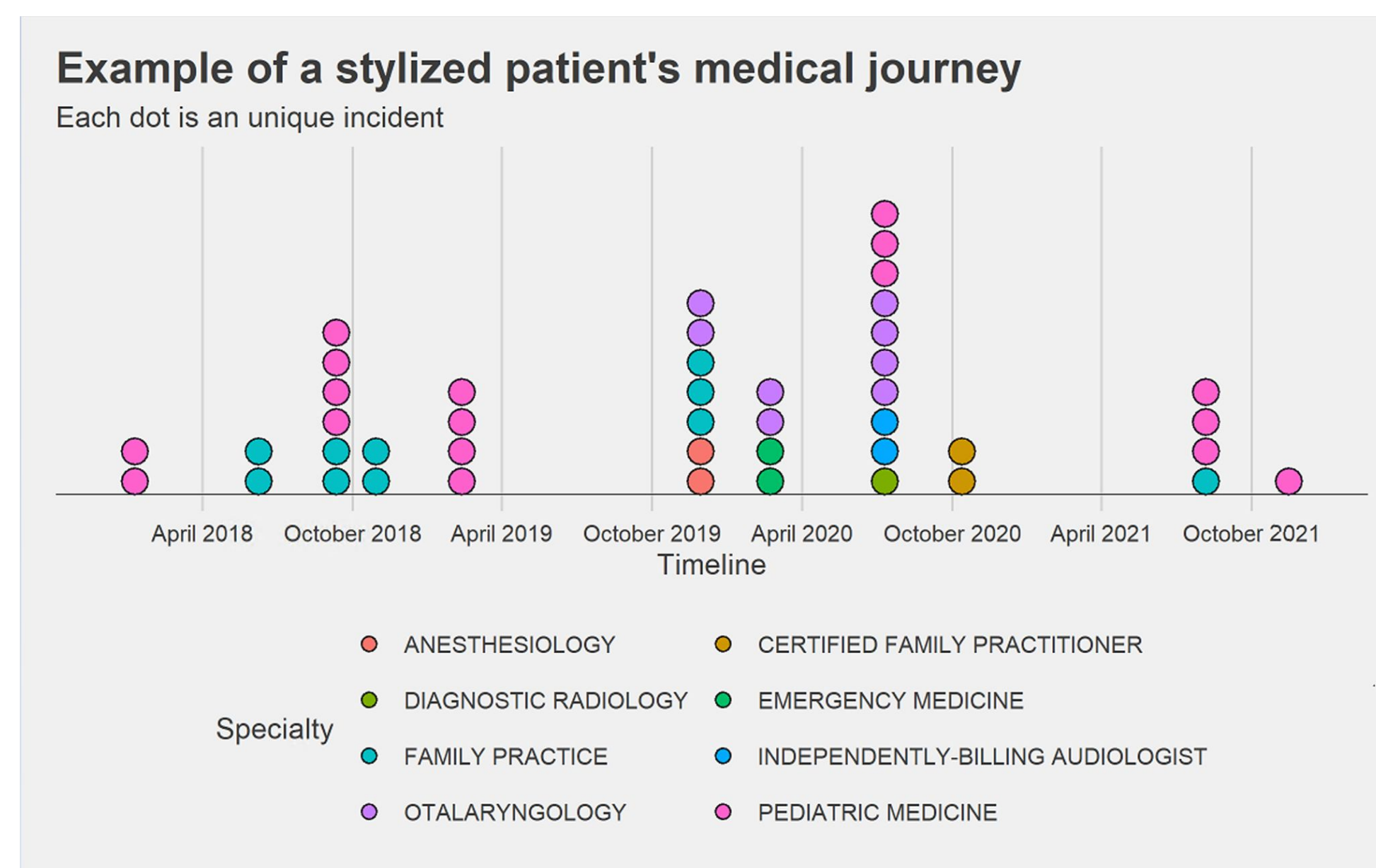


Predicting medical spending and the effects of case management

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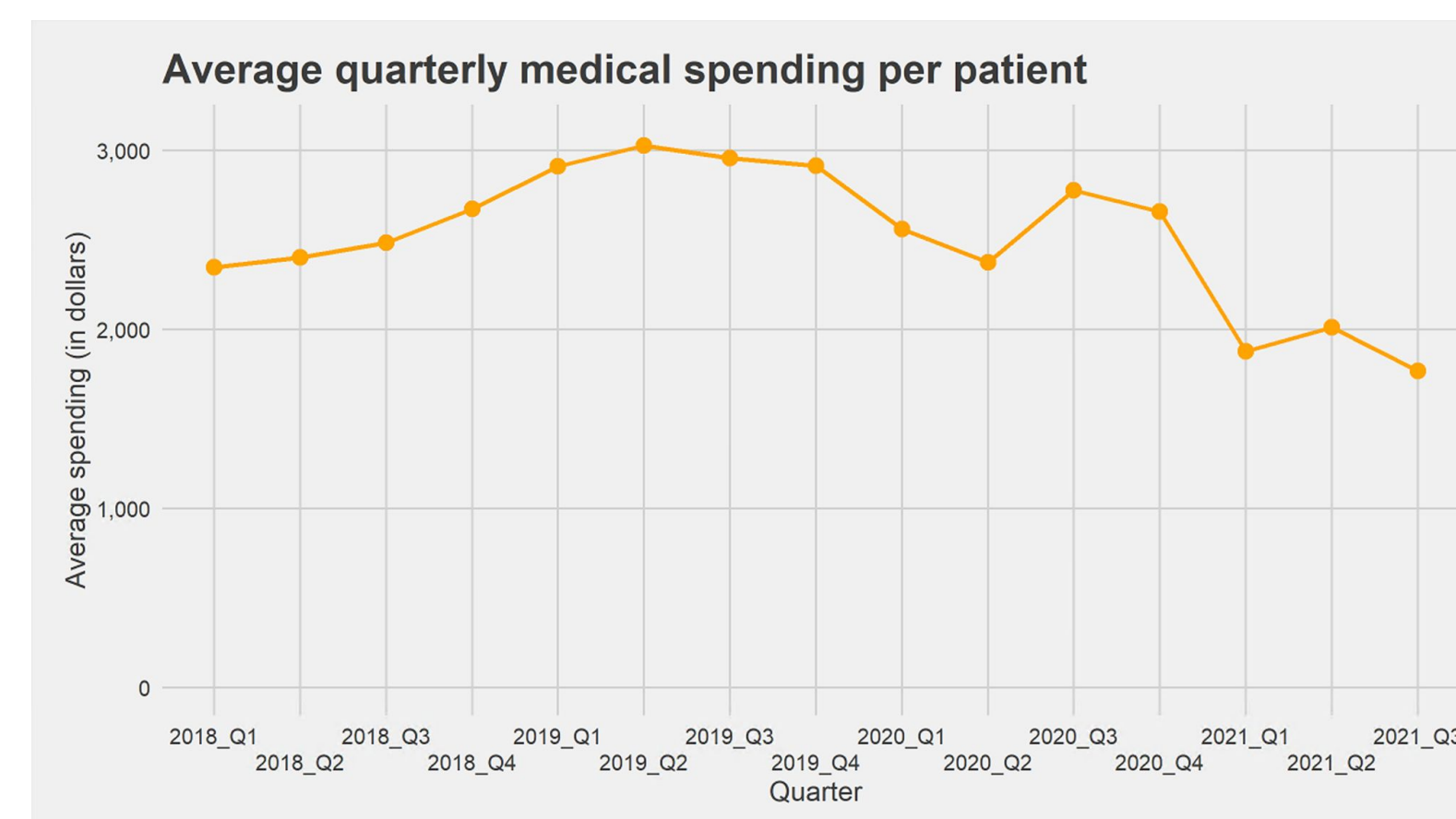


Patient Medical Care and Spending



Can we reliably predict future medical spending?

Using data from patients not receiving case management



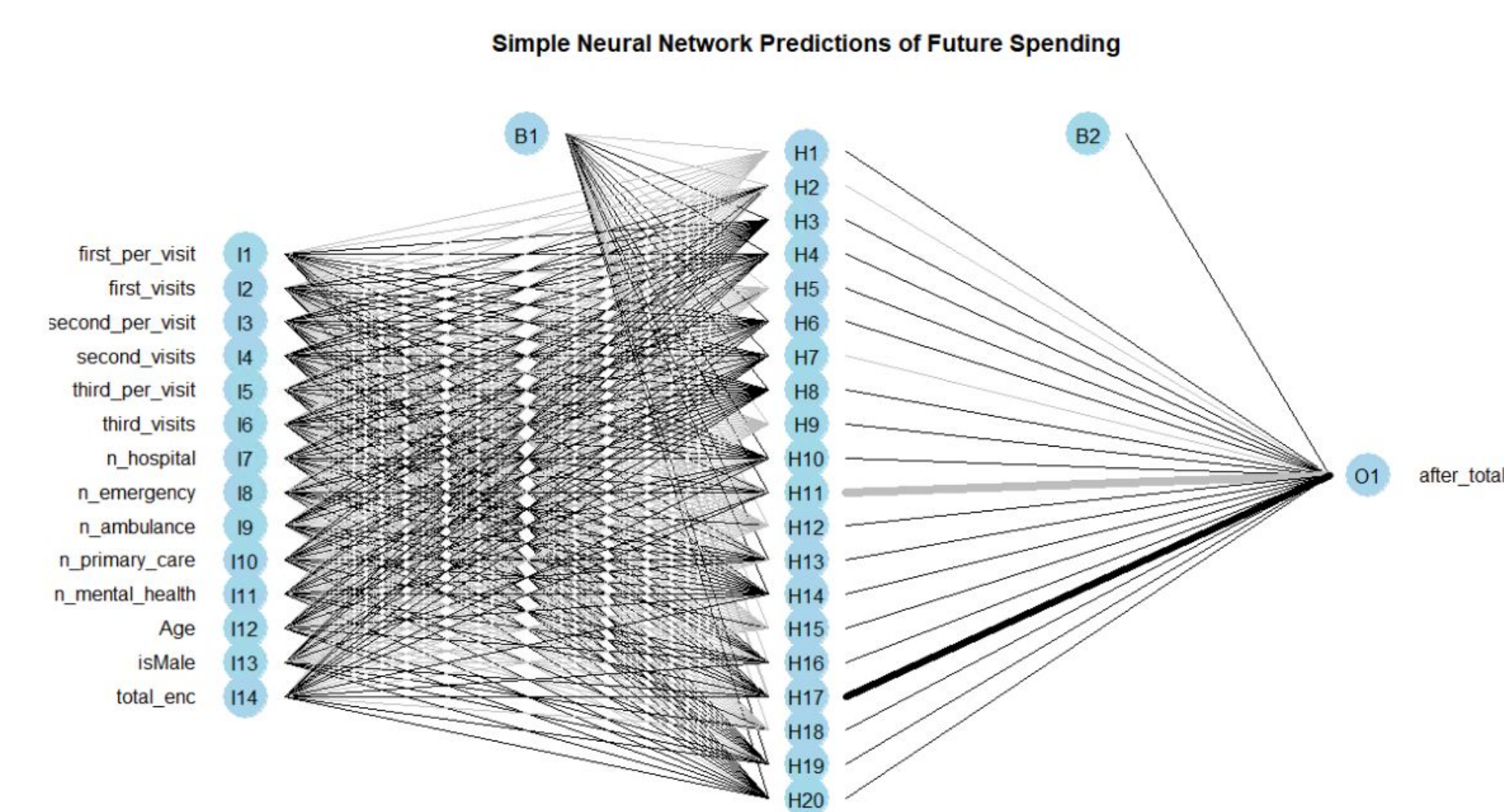
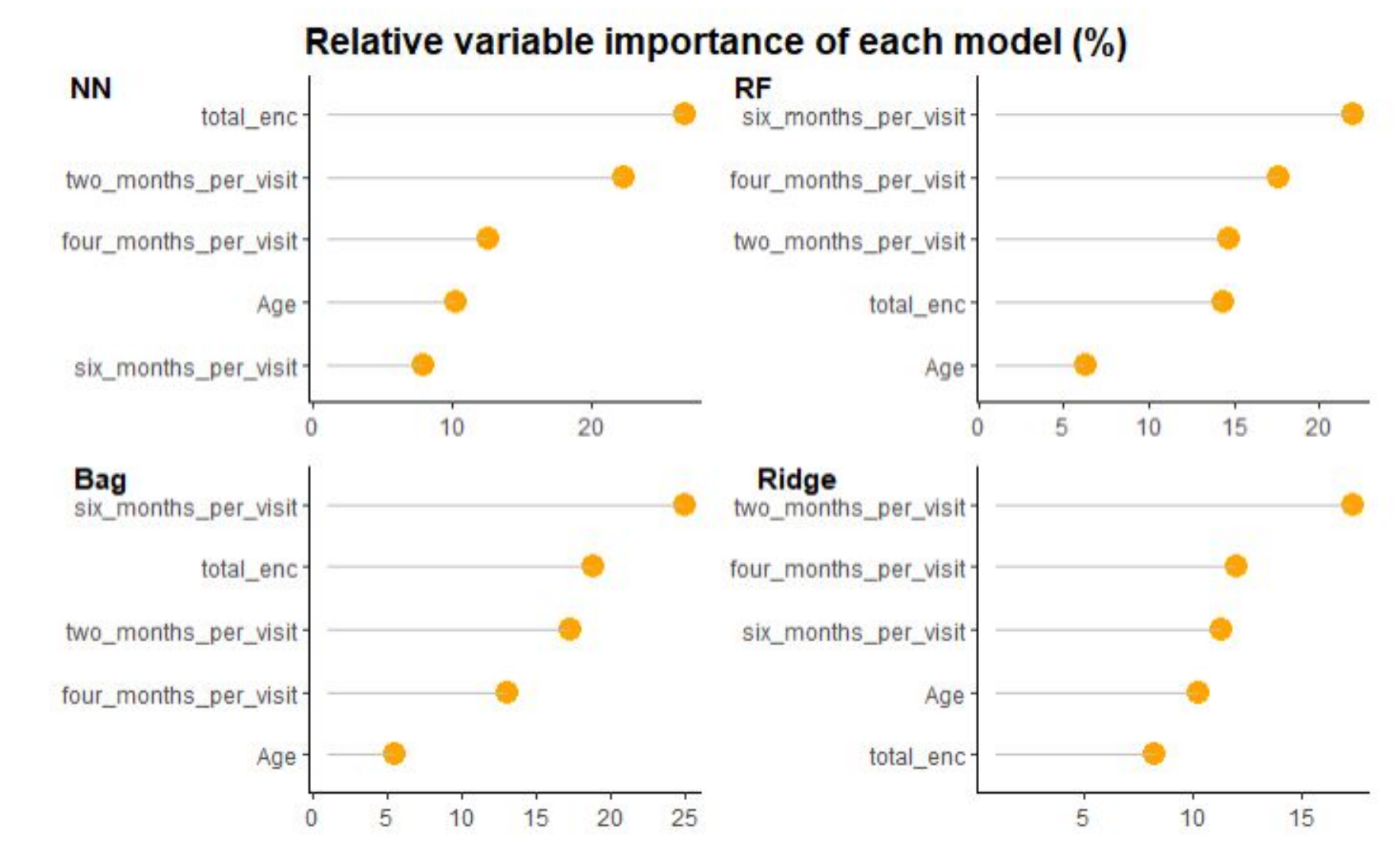
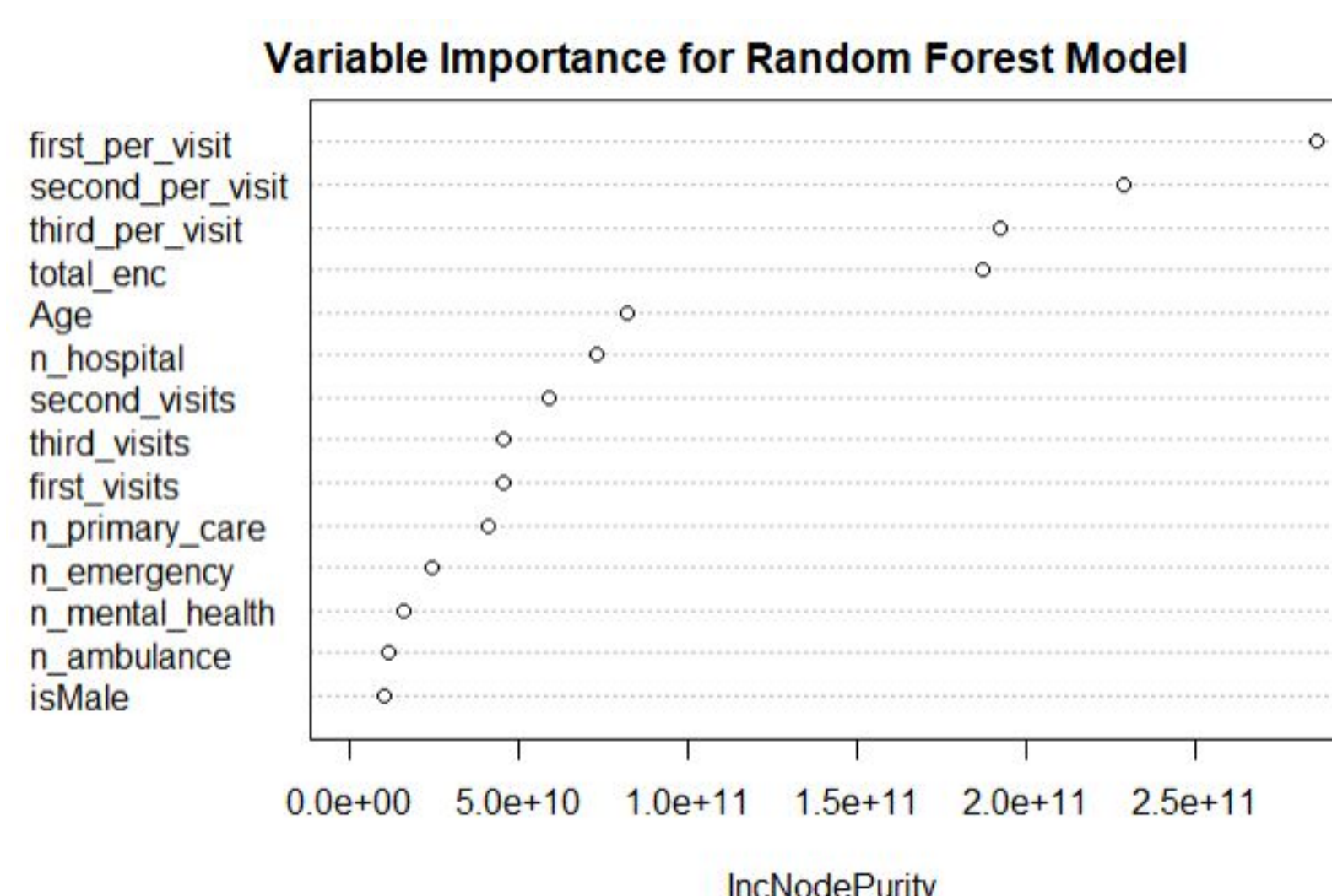
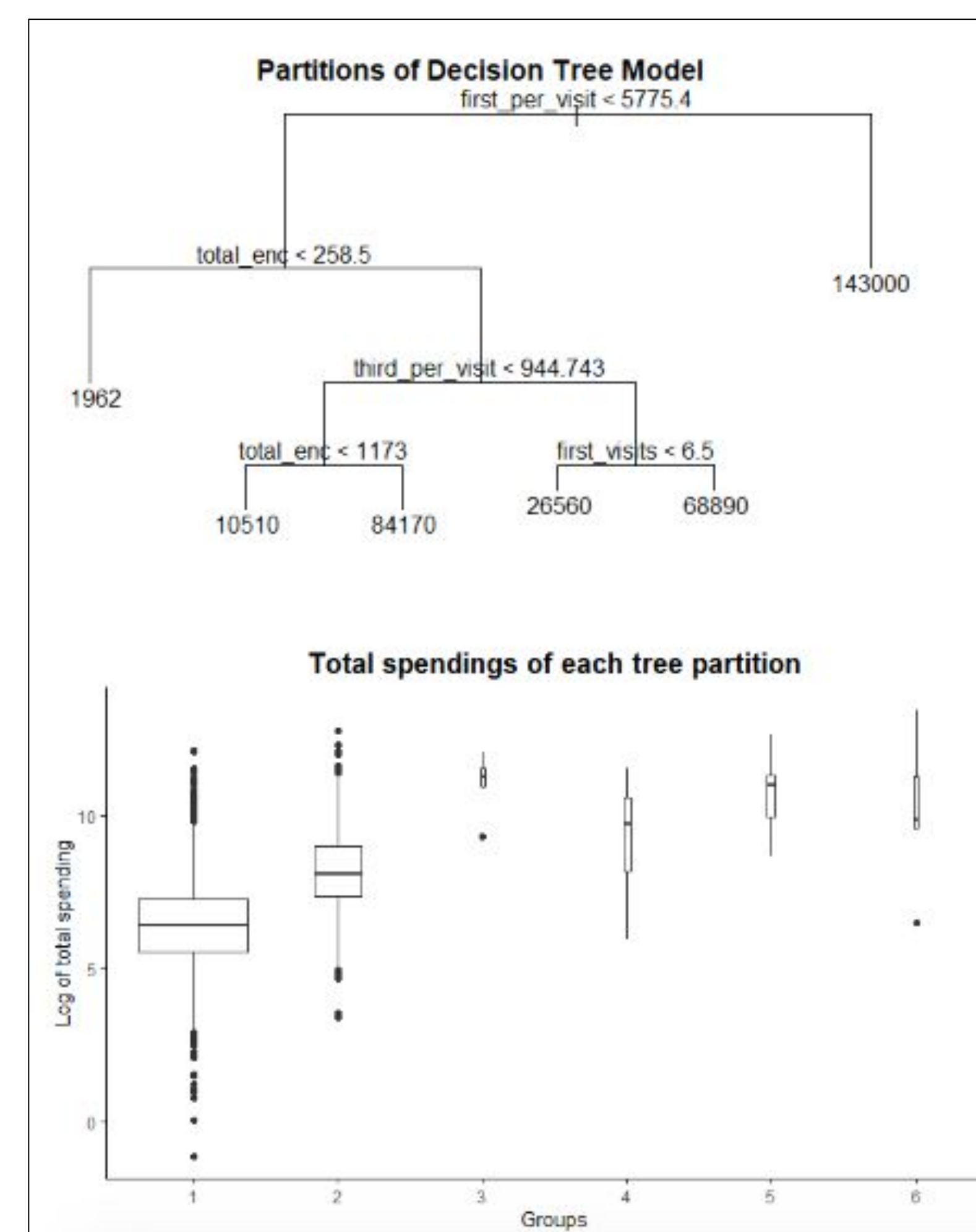
Case Management

Do patients with case management spend less than before?

- Data provided were limited.
- Seems to be a decreasing spending trend immediately following case management (small sample size).
- No significant model to predict spending. Future work required.

Are there factors that reliably predict how much the change in spending will be?

- Spending per visit in different intervals.
- Number of visits on file.
- Age.
- Visit type and gender aren't effective predictors.



Conclusion

- Using the Random Forest method, we can reliably predict future spending (R^2 of 0.8).
- Model works well on test data (low out-of-sample prediction error).
- Not enough data to evaluate case management effectiveness.
- Data collection/storage in healthcare needs a revamp.

References

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