

BRENNAN BEAL

A pharmacist turned data scientist experienced in data science via large databases hosted on platforms such as PostgreSQL, Redshift, and Snowflake. My work has involved improving the speed and efficiency at which our data science teams' processes can be achieved as well as research investigating the limits of causal inference. My best work is done in a cross-functional environment. Reach out to learn more!



ICON INDUSTRY EXPERIENCE

Current
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2021

Quantitative Scientist

Flatiron Health

📍 New York, NY

- Leveraging the RStudio Connect API to lead Flatiron's EDM team in the automation and deployment of a QA pipeline to cut monthly engineering time by 75% and reduce error flagging time to 0 manual seconds
- Thought leader for target-trial emulation to reduce immortal time bias in survival modeling
- Collaborating with our clinicians to develop R packages for scaling the speed at which we can deliver data to clients
- Researching clinical and socioeconomic barriers to access for Chimeric antigen receptor (CAR) T-cell therapy patients
- Conducting research on the use of real-world data (RWD) for ex-US HTA use cases, including collaboration with NICE, UK and thought leadership surrounding the transportability of US-generated real-world evidence

2021
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2019

Post-Doctoral Healthcare Economics Research Fellow

AbbVie with the University of Washington

📍 Seattle, WA

- Designed and led a study employing stratified gamma generalized linear models to indicate that large US payers spend >\$315M on preventable glaucoma costs supporting legacy Allergan's second largest durable growth area prior to the acquisition
- Created and began marketing an RShiny app, the Real-World Evidence Assessments and Needs Guidance (REAdi) Tool, to assist payers in streamlining the process of RWE synthesis and decision-making, which went on to receive \$50,000 in funding
- Managed vendors to support an economic value story for AbbVie's \$2.3B eye care portfolio

2019
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2018

Independent Consultant/Entrepreneur

Chiesi USA, Inc.

📍 Raleigh, NC

- Restructured FY 2020 marketing strategy by identifying a \$600k profit opportunity within their provider outreach program
- Optimized marketing efforts for an \$80M product by demonstrating the synergistic effect of two separate in-house marketing teams, yielding a 300% increase in uptake compared to no marketing

View this CV online with links at brennanbeal.com/cv/

CONTACT

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LANGUAGE SKILLS

R

Survival Modeling

Statistics

Git

SQL

Made with the R package [pagedown](#).

The source code is available on github.com/btbeal/cv.

Last updated on 2022-12-20.



SELECTED PUBLICATIONS, POSTERS, AND TALKS

2022

- **How we think about carrying evidence across country borders¹**
Flatiron Health Evidence Desk
· *Brennan Beal*
- **Passport for Travel: Proposed Framework for Transportability of Oncology Real World Evidence²**
ISPOR 2022 Poster
· *Brennan Beal, Ivy Altomare, Joshua Ray, Danielle Bargo, Blythe Adamson*

2021

- **Comparing Healthcare Resource Utilization and Costs for Patients with Normal Tension Glaucoma Across Levels of Severity: A Retrospective Cohort Study³**
Clinical Ophthalmology
· *Brennan Beal, Vanessa Shih, Joanna Campbell, David Veenstra, and Beth Devine*
- **Online tools to synthesize real-world evidence of comparative effectiveness research to enhance formulary decision making⁴**
Journal of Managed Care and Specialty Pharmacy
· Shuxian Chen, Jennifer Graff, Sophia Yun, *Brennan Beal*, Jamie T Ta, Aastha Bansal, Joshua J Carlson, David L Veenstra, Anirban Basu, and Beth Devine

2021

- **Intro to R⁵**
University of Washington
· Developed and led a course to teach incoming PhD and Fellows the basics of understanding data with R

2020

- **REAdi Tool for RWE Evaluation**
R/Medicine 2020
· Invited to present⁶ the REAdi Tool as a novel use case for RShiny



PACKAGE DEVELOPMENT

2020

- **adheRenceRX⁷**
CRAN
· Authored an opinionated set of R functions, which leverage C++ to improve the speed and efficiency at which researchers can conduct pharmaceutical adherence assessment



SELECTED WRITING/PROJECTS

In my spare time, I really enjoy learning and teaching others - when I get curious about a

- 2022 ● **Reservation Bot⁹**
Private Github
• Developed a reservation bot leveraging crontab, R6 classes, and a popular reservation API to gather in-demand reservations as soon as they become available. Code for demo upon request - not publicly available.
- 2022 ● **Parameterizing RMarkdown Reports with Whisker¹⁰**
Personal Blog
• In a scaling organization, copying and pasting code can be the source of a lot of headache. My blog describes a way to template markdown reports to scale reporting infrastructure in a sustainable way.
- 2019 ● **Indifference Curves Explained Through Visualization¹¹**
Personal Blog
• Understanding the economic theory of utility is often accompanied by two-dimensional graphs of indifference curves; however, this can sometimes be confusing and misleading. This post is meant to demystify indifference curves through three-dimensional visualizations.
- 2019 ● **Expected Loss as a Way to Better Communicate Cost Effectiveness¹²**
Personal Blog
• Discussing why the technology most likely to be cost-effective may not always be the best option for reducing risk

EDUCATION

- 2021 ● **M.S., Healthcare Economics and Outcomes Research**
University of Washington  Seattle, WA
• University Graduate Fellow
• Thesis: Comparing Healthcare Resource Utilization and Costs for Patients with Normal Tension Glaucoma Across Levels of Severity: A Retrospective Cohort Study
• First Fellow to receive the University of Washington School of Pharmacy Graduate Student Leadership Award
- 2019 ● **Doctor of Pharmacy**
University of North Carolina  Chapel Hill, NC
• Focused on healthcare economics and value of pharmacists in primary care clinics
- 2015 ● **B.S., Structural and Molecular Biochemistry**
North Carolina State University  Raleigh, NC

LINKS

- 1: <https://rwe.flatiron.com/evidence-across-country-borders>
- 2: <https://www.ispor.org/heor-resources/presentations-database/presentation/intl2022-3459/115783>
- 3: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7881786/>
- 4: <https://pubmed.ncbi.nlm.nih.gov/33377442/>
- 5: <https://zealous-hawking-ce0a3d.netlify.app/>
- 6: <https://brennanbeal.com/talk/>
- 7: <https://btbeal.github.io/adheRenceRX/>
- 8: <https://brennanbeal.com/projects/>
- 9: <https://github.com/btbeal>
- 10: https://unruffled-bartik-72fba4.netlify.app/project/whisker_tutorial/
- 11: <https://btbeal.github.io/Indifference-Curves/>
- 12: https://btbeal.github.io/Expected_Loss/