

# Yi-Shin Sheu, Ph.D.

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## PROFESSIONAL SUMMARY

Doctoral-level healthcare data analyst with 5+ years of experience working with EHR, claims, and registry data to support care management, research, and real-world evidence generation. Skilled in SQL and Python for cohort development, data wrangling, and analysis across large healthcare datasets. Recently built a portfolio project using LLMs (ChatGPT API) to extract structured insights from semi-structured ultrasound narratives, showcasing applied NLP for unstructured clinical data. Strong communicator with experience collaborating across clinical and technical teams to deliver practical, stakeholder-aligned analytics.

## PROFESSIONAL EXPERIENCE

### Research Data Analyst II, Mid-Atlantic Permanente Medical Group, Rockville MD (Mar 2022 - Present )

- Lead analytics for 12+ real-world data studies using EHR, claims, and pharmacy data to evaluate healthcare utilization, care quality, and outcomes.
- Design and execute observational studies using methods such as case-control, cohort, and cross-sectional designs, with statistical analyses including survival models, regression, time-series, GEE, GLM, and hypothesis testing.
- Develop SQL and Python code for cohort extraction, time-to-event analysis, and data transformation from large relational databases.
- Collaborate with physicians and stakeholders to define clinical criteria, translate research questions into analytic plans, and interpret results in real-world clinical context.
- Streamline reproducibility by creating standardized statistical plans, codebooks, and analytic templates for internal research initiatives.

### Postdoctoral Researcher, Johns Hopkins University, Baltimore, MD (October 2015 – October 2021)

- Collaborated on research idea conceptualization, experiment design, and statistical analysis for 2 RO1 grant applications, helping secure over \$7 million in total funding for two 5-year NIMH and NIAAA grants.
- Spearheaded 5+ research projects on cerebellar function, resulting in 5 peer-reviewed articles published in top-tier journals on cerebellar function in learning and memory.
- Mentored 8+ graduate students and research assistants, guiding their successful pursuit of careers in research and advanced degrees.

## EDUCATION

**Ph.D.** in Psychological & Brain Sciences, Johns Hopkins University, Baltimore, MD (Sep 2009 - Aug 2015)

## TECHNICAL SKILLS

### Research & Data Analytics:

Study design (case-control, cohort, cross-sectional); statistical analysis (survival analysis, time-series, regression, GLM/GEE, hypothesis testing); real-world data analysis (EHR, claims, registries); machine learning (supervised & unsupervised); natural language processing (LLM prompt engineering, ChatGPT/OpenAI API); scientific writing and conference presentation.

### Programming & Tools:

Python (pandas, NumPy, matplotlib, scikit-learn, seaborn), Jupyter Notebook, SQL, R, MATLAB, Git

### **Selected Publications:**

1. McCary A., **Sheu YS**, Chesbrough K., Jonas MC. Improved Liver Fibrosis Regression After Direct-Acting Antiviral Therapy in Hepatitis C Patients: A Comparison of Patients With and Without MASLD, *Clinical Therapeutics* (2025).
2. Berry NC, **Sheu YS**, Chesbrough K, Bishop RC, Vupputuri S. Guideline-directed medical therapy rates in heart failure patients with reduced ejection fraction in a diverse cohort. *ESC Heart Failure* (2025).
3. Jonas, MC, **Sheu, YS**, Wright, K., Peyton, L., Bishop, R.C., Basra, S., Sarwar, F., Winn, G. and Chesbrough, K., (2024). A care coordination program to support patients with hepatitis B virus at Kaiser Permanente Mid-Atlantic States. *BMC Health Services Research*, 24(1), p.482.
4. Jonas MC, Egan K, **Sheu YS**, McCarthy RJ, Horberg MA. Pride Medical at Capitol Hill: A New Lesbian, Gay, Bisexual, Transgender, Queer/Questioning plus (LGBTQ+) Patient Care Option at Kaiser Permanente Mid-Atlantic States. *Healthcare*. (2023) Oct 24;11(21):2816.
5. Burrell, T.D., **Sheu, Y.S.**, Kim, S., Mohadikar, K., Ortiz, N., Jonas, C. Horberg, M.A. COVID-19 and Adolescent Outpatient Mental Health Service Utilization: an interrupted time series analysis. *Academic Pediatrics* (2023)