Clinic Utilization Trajectories After ADRD Diagnosis: Evidence from Longitudinal EHRs

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Abstract

ADRD require multi-specialty care, yet many clinics lack ADRD-specific resources. Using EHRs (2018–2025), we analyzed 184,273 post-diagnosis visits from 5,309 patients across 15 six-month intervals. From the specialty perspective, we quantified interval-specific visit volume by specialty using all patients who had visits in each interval, identifying Radiology, Adult Primary Care, Cardiology, and Neurology as consistently among the highest-volume services across intervals. From the patient perspective, we fixed a cohort of patients with visits in 2018 and tracked their interval-specific volumes by specialty over 15 intervals. Visit volumes declined over time after diagnosis across specialties, informing resource planning and sustained cross-specialty follow-up.

Introduction

Alzheimer's disease and related dementias (ADRD) are progressive conditions requiring long-term and multi-specialty care. With neurology being playing a central role, patients also often receive care across many other specialties. But many clinics are not equipped with ADRD-specific training and resources which brings challenges for coordinated management. Understanding where patients seek care and how visit patterns change over time can help health systems identify high-demand specialties and prioritize areas for targeted support and resource allocation.

Methods

We used the Longitudinal EHR data from a large academic medical center to build a cohort of adult patients with ≥2 ADRD-coded visits (ICD-9/10) between Jan 2018–Jun 2025 resulting 5,309 patients, 184,273 outpatient visits and 109 specialties involved in the visits. From specialty perspective, we examined visit counts and unique patient numbers across 15 half-year intervals. From patient perspective, we observed the group of patients during Jan 2018–Jun 2018 by tracking their visits to each specialty over 15 half-year intervals to obtain longitudinal care patterns.

Discussion and Conclusion

ADRD care extends well beyond Neurology; Radiology, Adult Primary Care, and Cardiology account for much of the visit volume. Visits are highest soon after diagnosis and then decline, marking a key window for coordinated intervention. Focusing ADRD-specific training, tools, and staffing in these specialties - and emphasizing early cross-specialty follow-up - can concentrate scarce resources and improve long-term outcomes.

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Results

Top Specialties: Radiology (26,789 visits, 14.6%), Adult Primary Care (25,604; 13.9%), Cardiology (14,462; 7.8%), and Neurology (13,763; 7.5%) were highest, with sixteen additional specialties each >1% of visits.

Specialty Trends: Visit volumes rose in Radiology and Primary Care noticeably, remained relatively stable in others, dipped sharply in early 2020 (COVID-19), then rebound. Patient counts increased steadily across years (Figure1-up).

Patient Journeys: Patients visited multiple specialties early after being diagnosed, then diminished over years. Declines in visit frequency mirrored reductions in active patient numbers (Figure 1- down).

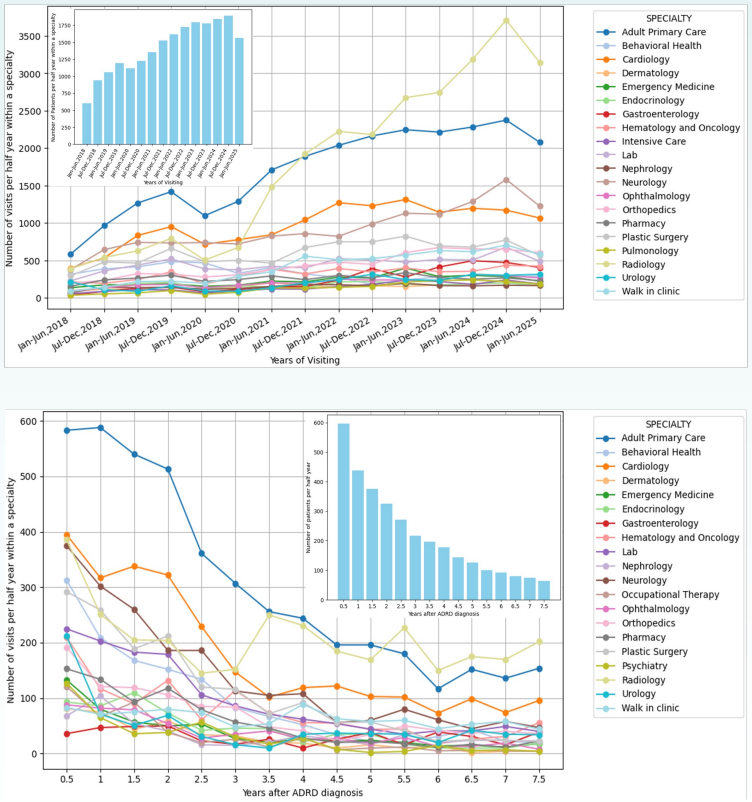

Figure 1 Interval-specific visit volume by specialty across 15 six-month intervals (up), and interval-specific visit volume by specialty for the same patients who had at least one visit in 2018, followed across 15 six-month intervals through 2025 (down).