US Infusion Center Capacity to Accommodate Anti-Amyloid β Treatments for Alzheimer's Disease: A Quantitative Survey

HSD48

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BACKGROUND

- Alzheimer's Disease (AD) is the most common neurodegenerative disorder and a leading cause of mild cognitive impairment (MCI)[1,2]. Research estimates that 5-7 million US adults have MCI or mild AD dementia
- Recent advancements in therapeutic options for early-stage AD patients (with mild MCI or mild AD dementia) include anti-amyloid β treatments – the first disease-modifying therapies that achieve slowing of cognitive decline. The current commercially available treatment in the US is administered via intravenous (IV) infusion every two weeks until progression to moderate AD dementia
- Given the eligible population size and treatment frequency/duration, the potential volume of infusions is expected to be substantial
- There is a distinct lack of published evidence on current and future capacity of infusion centers (ICs) in the US. It is unclear whether ICs have sufficient capacity for current patient demand and whether they are prepared to accommodate future increases in the demand for chair time, with available reports in non-peer-reviewed/published literature citing an aging US population, growing prevalence of chronic diseases, and increasing availability of IV infusion therapies as key drivers for increased demand[3]
- Improved diagnostics[4] coupled with new therapeutic options for patients with AD will increase future demand for infusion delivery, potentially leading to capacity constraints that may limit patients' access to infusion treatments

OBJECTIVES

- This study aimed to quantitatively assess both overall and AD-specific IC capacity, IC patient prioritization practices, and future capacity projections, in order to evaluate health system ability to provide anti-amyloid β IV therapies for patients with AD

METHODS

- The study consisted of a web-enabled survey of approximately 15 minutes in length administered between November to December 2023; the survey included questions assessing IC characteristics, current operations and capacity, and anticipated future capacity
- The inclusion criteria for the potential respondents included:
  - IC director or manager involved in overseeing planning and/or center strategy and responsible for future capacity planning
  - In current role for > 2 years
  - Have access to patient data metrics including volume of patients, availability of chairs, and scheduling of appointments
  - Familiar with AD anti-amyloid β IV therapies
  - IC must treat adult and/or geriatric patients
- ICs that provide oncology-only or hydration-/nutrition-only infusions were excluded
- The study aimed to recruit respondents representing a mix of IC settings (standalone, academic/hospital-based, non-academic, neurologist office-based), locations (urban, rural, suburban), geographies across US regions, and center sizes (small/medium/large - identified using the average monthly infusions administered by the ICs) to ensure the research consisted of a diverse sample
- N=2 cognitive interviews were conducted prior to data collection to ensure the questions were appropriate, clear, and understood by the respondents

TABLE 1. RESPONDENT DEMOGRAPHICS

Respondent Characteristics	N (%)
Total Number of Respondents	N=50
Respondent Job Title	
• Infusion Center Director	19 (38%)
• Head of Infusion Center	13 (26%)
• Infusion Center Manager	12 (24%)
• Infusion Center VP of Operations	5 (10%)
• Clinical/Non-Management Staff	1 (2%)
Tenure in Current Role	
• < 10 years	15 (30%)
• 10 - 14 years	18 (36%)
• 15-19 years	10 (20%)
• ≥ 20 years	7 (14%)

RESULTS

TABLE 2. INFUSION CENTER DEMOGRAPHICS

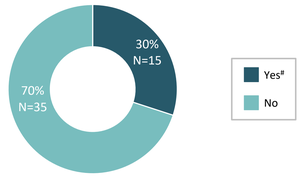
IC Characteristics	N (%)
Total Number of Respondents	N=50
Total Number of Sites*	N=404
IC Type	
• Multi-site§	28 (56%)
• Single site	22 (44%)
Location (N=404)	
• Urban	245 (61%)
• Suburban	125 (31%)
• Rural	34 (8%)
Geography (N=404)	
• Southeast	95 (24%)
• Midwest	85 (21%)
• West	86 (21%)
• Northeast	80 (20%)
• Southwest	58 (14%)
Average Number of Chairs	
• Multi-site centers (average across all centers) (N=382)	69.3
• Single site centers (N=22)	7.8
IC Settings of Care	
• Stand-alone IC (independent from academic medical center or hospital)	25 (50%)
• Neurologist office-based IC	12 (24%)
• Academic hospital-based IC (affiliated with academic medical center or hospital)	7 (14%)
• Non-academic hospital-based IC (affiliated with hospital that is not an academic medical center)	6 (12%)
Therapeutic Areas Treated	
• Neurology	45 (90%)
– Multiple sclerosis	45 (100%)
– Migraines and other headache disorders	45 (100%)
– Pain	43 (96%)
– AD and dementia	33 (73%)
– Traumatic disorders of the nervous system	31 (69%)
– Parkinson's disease	15 (33%)
– Epilepsy	15 (33%)
• Allergy/immunology	41 (82%)
• Iron deficiencies/anemia	40 (80%)
• Hydration/nutrition	40 (80%)
• Cancer/oncology	24 (48%)
• Diabetes	21 (42%)
Average Infusions Administered Per Month	
• Multi-site centers (average across all centers) (N=28)	2,569.5
• Single site centers (N=22)	535.9
Currently Offering Anti-Amyloid β Infusion Therapies	
• Yes, currently offer treatment	22 (44%)
• No, do not currently offer treatment	22 (44%)
• No, but there are plans to offer treatment	6 (12%)

*N=22 respondents oversaw single-site IC centers and N=28 respondents oversaw multi-site centers. The total number of ICs represented by respondents at multi-site centers was N=382

§Respondents representing multi-site centers reported on the locations and geographies of individual sites. For all other metrics, an average across all the sites the respondent oversaw was reported unless otherwise specified

FIGURE 1. CURRENT CAPACITY OF INFUSION CENTERS

ICs Currently Experiencing Capacity Constraints (N=50)

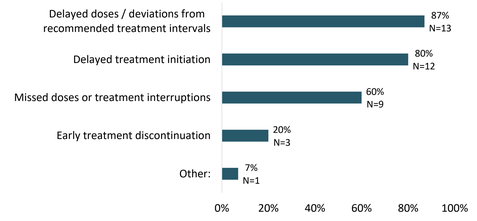


#Respondents representing multi-site centers indicated some or all of their sites are currently experiencing capacity constraints

Survey Question: Is your infusion center/are some or all infusion centers in your system currently experiencing capacity constraints in treating the volume of patients seeking treatment? *Capacity constraints include but are not limited to the number of chairs and infusion stations, availability of staff to administer infusions, etc.* [Yes/No]

FIGURE 2. POTENTIAL IMPACT OF CAPACITY CONSTRAINTS

Impact of Capacity Constraints at ICs (N=15)

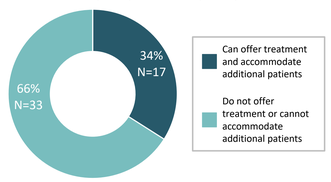


***87% of respondents** indicated that these constraints could lead to delayed treatment initiation or delayed/missed doses*

Survey Question: Do you believe that capacity constraints at your center(s) result in any of the following? [Multi-select from provided responses]

FIGURE 3. ABILITY TO OFFER ANTI-AMYLOID β INFUSIONS AND ACCOMMODATE NEW PATIENTS WITH AD

ICs Able to Offer Anti-Amyloid β Infusions (N=50)



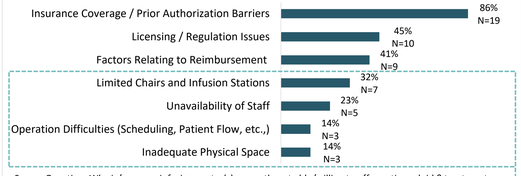
***11 and 87 hours/week** allocated mean chair time for AD patients at single site ICs and multi-site centers respectively*

Survey Question: 1. Do you currently offer anti-amyloid β infusion therapies for the treatment of Alzheimer's disease (outside of clinical trial/research settings) at your infusion center(s)? [Yes (currently offer treatment)/Yes (there are plans to offer treatment)/No] 2. Are you able to infuse more Alzheimer's disease patients than you currently do? [Yes/No]

FIGURE 5. REASONS TO NOT OFFER/UNWILLING TO OFFER ANTI-AMYLOID β TREATMENTS

***44%** (22/50) of respondents are currently unable/unwilling to offer anti-amyloid β treatments at their ICs*

Reasons ICs Currently Unable/Not Willing to Offer Anti-Amyloid β Treatments (N=22)

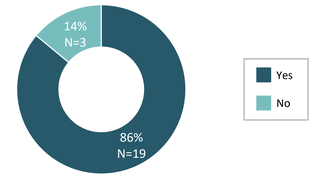


Survey Question: Why is/are your infusion center(s) currently not able/willing to offer anti-amyloid β treatments for Alzheimer's disease? [Multi-select from provided responses]

***36%** (8/22) of respondents do not offer anti-amyloid β treatments due to capacity-related reasons*

FIGURE 6. FUTURE CAPACITY OF INFUSION CENTERS FOR ALZHEIMER'S DISEASE PATIENTS

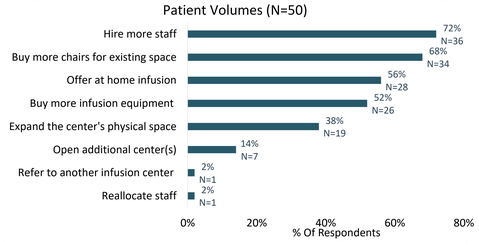
ICs Willingness to Offer Anti-Amyloid β Therapies in the Next 5 Years (N=22)



Survey Question: Would you be willing to offer anti-amyloid β treatments for Alzheimer's disease at your infusion center(s) in the next 5 years? [Yes/No]

FIGURE 7. POTENTIAL CHANGES TO ACCOMMODATE HIGHER PATIENT VOLUMES

Changes That May Happen at ICs in the Next 5 Years to Accommodate Higher Patient Volumes (N=50)

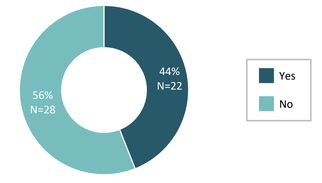


***74% of respondents** expect to increase the available chair time across therapeutic areas at their infusion centers, with the remaining 13 expecting it to remain the same*

Survey Questions: 1. Which of the following changes may happen at your infusion center across some/all your infusion center sites in your system to accommodate higher patient volumes in the next 5 years? [Multi-select responses] 2. Do you anticipate the available chair time to change across therapeutic areas at your infusion center/across some/all your infusion center sites in your system to accommodate patient volume? [Increase/Decrease/Unchanged]

FIGURE 8A. PATIENT PRIORITIZATION

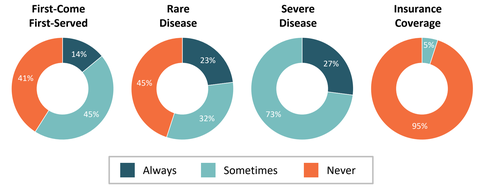
ICs Using Patient Prioritization (N=50)



Survey Question: When scheduling appointments, does your infusion center/do some/all of your infusion center sites in your system facility prioritize appointment scheduling for certain patients? [Yes/No]

FIGURE 8B. FACTORS USED FOR PATIENT PRIORITIZATION

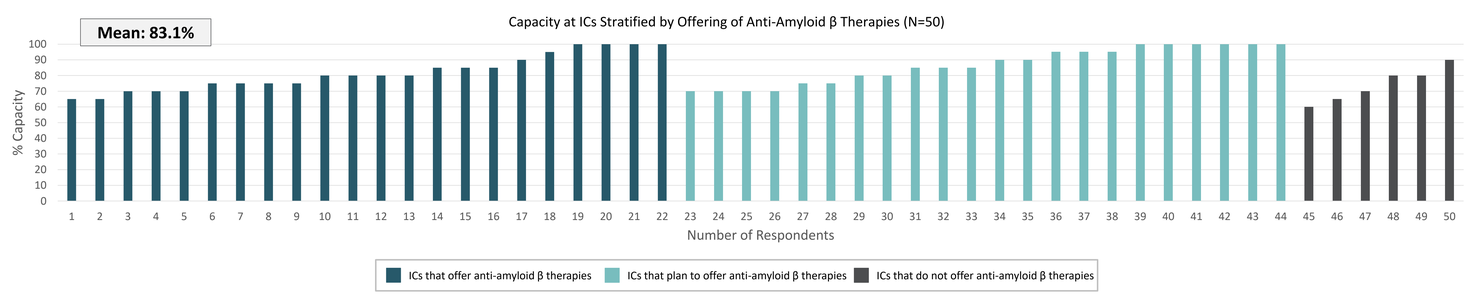
Reasons for Patient Prioritization (N=22)



Survey Question: Based on your experience, how often are the following factors used for patient prioritization at your infusion center/across all or some of your infusion center sites in your system? Please rate on a scale of 1-3 where 1 is "Never" and 3 is "Always". [Single-select response]

FIGURE 4. IC CAPACITY BY ABILITY TO OFFER ANTI-AMYLOID β INFUSIONS

Capacity at ICs Stratified by Offering of Anti-Amyloid β Therapies (N=50)



Survey Question: At what capacity is your infusion center/are all infusion centers in your system currently operating on average with the current patient volume? [Capacity %]

DISCUSSION

- Based on a literature review, this is the first scientific evaluation of the current capacity of ICs in the US to the authors' knowledge
- On average, ICs are currently operating at levels exceeding 80% of total capacity with existing patient volumes. This is aligned with media/other reports that there are capacity constraints currently in ICs[5]
- The most common impacts on patient care resulting from capacity constraints were delayed doses/deviation from recommended treatment intervals and delayed treatment initiation, highlighting the detrimental effect on patients
- The majority of ICs (66%) currently (1) do not currently offer anti-amyloid β therapies or (2) are unable or unwilling to accommodate additional patients with AD, demonstrating the shortage in accessibility of anti-amyloid β therapies for the patients currently seeking treatment
- ICs reported that hiring more staff, expanding physical capacity, and/or number of chairs would be the actions most likely to be taken to accommodate higher patient volumes. However, there is urgency for identifying other solutions as the lack of capacity in ICs could restrict the accessibility of these treatments for patients in the near term

CONCLUSION

- These results highlight a **clear strain on current US IC capacity** and **barriers to patient access** particularly for anti-amyloid β therapies for patients with AD
- Other treatment modalities and/or routes of administration may alleviate burden on ICs and enable access for patients who are in need

LIMITATIONS

- Responses to questions regarding current capacity suggest subjectivity in interpretation. Respondents may have reported capacity at <100% but may still be at functional capacity wherein they may be unable to accommodate new patients
- Future-looking questions in the survey required hypothetical projections from respondents which may not align with the realistic future investment decisions affecting IC capacity; however, these questions do speak to the current cross-sectional perceptions of the future state of ICs
- The limited sample size of n=50 respondents / n=404 sites may not be fully representative of the totality of ICs in the US. Further studies may expand the included number of centers to increase the robustness/generalizability of the data

Note that the References are captured in the file linked to the QR code.

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