

Health System Preparedness of Six EU Countries for a Future Alzheimer's Treatment

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Why focus on Alzheimer's treatment now?

- After many failures, guarded optimism for a disease-modifying Alzheimer's drug
- Treatment paradigm is likely to halt progression from Mild Cognitive Impairment to Alzheimer's Dementia
 - Attempts to reverse the disease have repeatedly failed
- Secondary prevention paradigm implies need to screen, diagnose and treat large number of prevalent cases
- Study simulates preparedness of six EU countries (FRA, GER, ITA, ESP, SWE, GBR) to handle expected patient volume
 - Capacity for specialty visits, biomarker testing and treatment delivery

Results illustrate magnitude of the problem but may not predict actual numbers precisely

Alzheimer's disease progression and clinical pathway







MILD COGNITIVE IMPAIRMENT





ALZHEIMER'S DEMENTIA







Assume treatment reduces the risk of transitioning from MCI to dementia



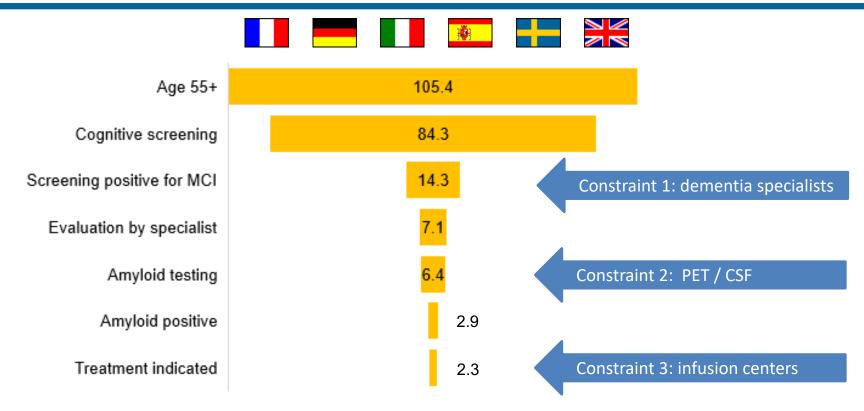
Evaluate



Test



Snapshot of potential patients in 2019 (millions)



NOTE: The number of expected patients are from France, Germany, Italy, Spain, Sweden, and the United Kingdom.

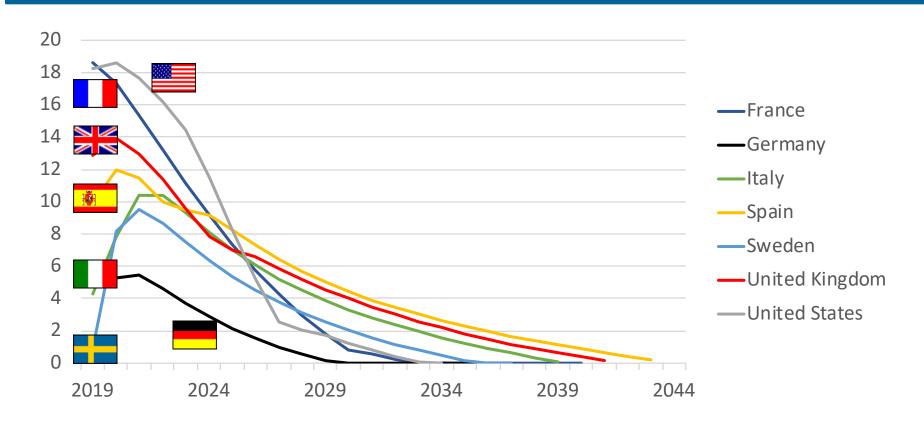
Key Findings

- Some countries have substantial shortage of specialists
 - France, Spain and the UK
- No wait projected for biomarker testing
 - Availability of CSF test for biomarkers in EU avoids most PET scans
 - Assumption is that 10% of patients require amyloid PET scan
 - Capacity for lumbar punctures assumed to be unconstrained
- Varying waits for infusion delivery
 - Infusion capacity is estimated to range between 54% (UK) and 137% (Germany) of US capacity
- Reimbursement and restrictions on scope and volume of services could limit access in spite of sufficient capacity

As a result, wait times are projected to be lower than in the U.S., but with substantial differences between countries

| | Maximum waiting time, months | | | First year with no wait times | Potentially avoidable new Alzheimer's dementia cases occurring while patients wait, 2020-2044 (percent of potentially avoidable cases) | |
|----------------|------------------------------|-----------------|-----------|-------------------------------------|--|------------------------------|
| | Specialists | Amyloid testing | Infusions | | Base case | Scenario 1: specialist waits |
| Germany | None | None | <6 mo. | 2030 | 55,000 (1%) | 0 (0%) |
| Sweden | <6 mo. | None | 6-12 mo. | 2036 | 12,000 (2%) | 1,000 (<1%) |
| Italy | <6 mo. | None | 6-12 mo. | 2040 | 146,000 (3%) | 45,000 (1%) |
| Spain | 6-12 mo. | None | 6-12 mo. | 2044 | 171,000 (5%) | 88,000 (3%) |
| United Kingdom | >12 mo. | None | 6-12 mo. | 2042 | 260,000 (7%) | 171,000 (4%) |
| France | >12 mo. | None | <6 mo. | 2033 | 389,000 (9%) | 357,000 (8%) |
| Total EU-6 | | | | | 1,033,000 (5%) | 662,000 (3%) |
| United States | >12 mo. | 6-12 mo. | <6 mo. | 2034 | 2,100,000 (23%) | 756,000 (8%) |

Projected average wait times in months, by country



Some encouraging activities have been launched



Plan Maladies Neurodégénératives 2014-2019

- 5-year strategic plan to improve care for neurodegenerative disorders
- Emphasis on care pathways and need for screening and early detection
- Calls for the development of better tools for screening and diagnosis and creation of centers of excellence



Multiple sclerosis specialist nurses

- Specially trained nurses to administer infusion treatment for MS in outpatient clinics
- Can also provide disease education and training for selfadministration



The Interceptor Project

- Project to help identify people at higher risk of developing AD and thus the greatest likelihood of benefiting from treatment
- Collects data on cognitive testing, CSF tests, and PET and MRI scans to inform design of nationwide screening program
- Goal to identify and prioritize for treatment patients at high risk of progression



European Joint Action on Dementia

- Aim is to gather epidemiological data, improve the timeliness and reliability of diagnosis, and understand support systems for behavioral and psychological symptoms
- Calls for better evidence on improving outcomes in patients and caregivers through EU-wide collaboration

Action is urgently needed to reduce capacity constraints in time for potential treatments

- Train more providers in dementia care and develop tools to make them more efficient
- Utilize all options for infusion therapy, including the home setting
- Ensure appropriate coverage of services and tests and limit scope and volume restrictions

- Challenge that no individual stakeholder can solve alone
 - Professional societies, policymakers, industry, advocacy groups must be involved in the solution
- Stakeholders must act today given the time it takes to build capacity

Thank you

Reports: www.rand.org/t/RR2503

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