



UNITED
KINGDOM



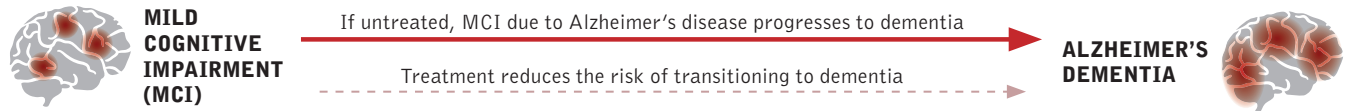
How Prepared Are European Health Care Systems to Deliver a Future Alzheimer's Treatment?

As the populations of European nations age, the devastating burden of Alzheimer's disease on patients and families looms. The prevalence of the disease is expected to double between 2015 and 2050. Yet recent clinical trials give hope that a disease-modifying therapy might become available soon. The therapy would treat early-stage patients to prevent or delay the progression to dementia. When this therapy becomes available, are European health systems prepared to deliver it?

AN ASSESSMENT OF HEALTH CARE INFRASTRUCTURE IN FRANCE, GERMANY, ITALY, SPAIN, SWEDEN, AND THE UNITED KINGDOM

A therapy for early-stage disease means that millions of patients would need care

Recent clinical trials offer hope that an Alzheimer’s disease–modifying therapy may become available soon. The therapy would treat the disease at an early stage to prevent or delay the progression to dementia.



If a therapy becomes available, there would be millions of patients to

- 1. screen** for MCI
- 2. evaluate** for Alzheimer’s disease
- 3. test** for biomarkers (cerebrospinal fluid assays or brain imaging)
- 4. treat** with intravenous infusion therapy

A RAND study used simulation modeling to assess the health care system capacity to evaluate, test, and treat expected patients in six countries that represent 65 percent of the population in the European Union (EU). The analysis looked at a scenario in which a therapy is available in 2020 and is delivered monthly to patients with MCI due to Alzheimer’s disease.

Initially, **7.1 MILLION** patients may seek evaluation by a dementia specialist.

2.3 MILLION patients may have MCI due to Alzheimer’s and be eligible for treatment.

Wait times for specialist visits and infusion therapy could delay access to care

	MAXIMUM WAITING TIME BASED ON THEORETICAL CAPACITY		
	Dementia specialist visits	Infusion therapy	First year with no wait times
France	>12 months	<6 months	2033
Germany	No wait	<6 months	2030
Italy	<6 months	6–12 months	2040
Spain	6–12 months	6–12 months	2044
Sweden	<6 months	6–12 months	2036
United Kingdom	>12 months	6–12 months	2042

Delays in care could result in more than 1 million patients developing Alzheimer’s dementia while waiting for evaluation and treatment between 2020 and 2050.

NOTE: There are no waiting times for biomarker testing if cerebrospinal fluid assays are used for 90 percent of testing and positron emission tomography scans are used for 10 percent of testing.

Policies and planning could help increase capacity

- Establish** graduated clinical pathways to screen for cognitive impairment and develop better detection tools.
- Utilise** dedicated outpatient infusion centers in collaboration with hospitals, memory clinics, and other facilities.
- Ensure** appropriate reimbursement of services.
- Create** EU-wide guidance and best practices for coordinated and timely care.

A combination of reimbursement, regulatory, and workforce planning policies and innovation in diagnosis and treatment delivery is needed **to expand capacity and to ensure that available capacity is leveraged** optimally to treat patients with early-stage Alzheimer’s disease.



UNITED KINGDOM: EXPECTED PATIENTS AND HEALTH CARE SYSTEM CAPACITY

Millions of patients could seek diagnosis and treatment

Of the 19.2 million people age 55 and older in 2019,

15.3
MILLION



could seek screening in a doctor's office

Of the 2.5 million who screen positive for MCI,



1.2
MILLION

could seek a dementia specialist for evaluation (there are 4,848 neurologists, geriatricians, and old-age psychiatrists, or 7.3 specialists per 100,000 people)



1.1
MILLION

could be referred for biomarker testing

0.5
MILLION



might test positive for biomarkers and return to the specialist to learn about treatment

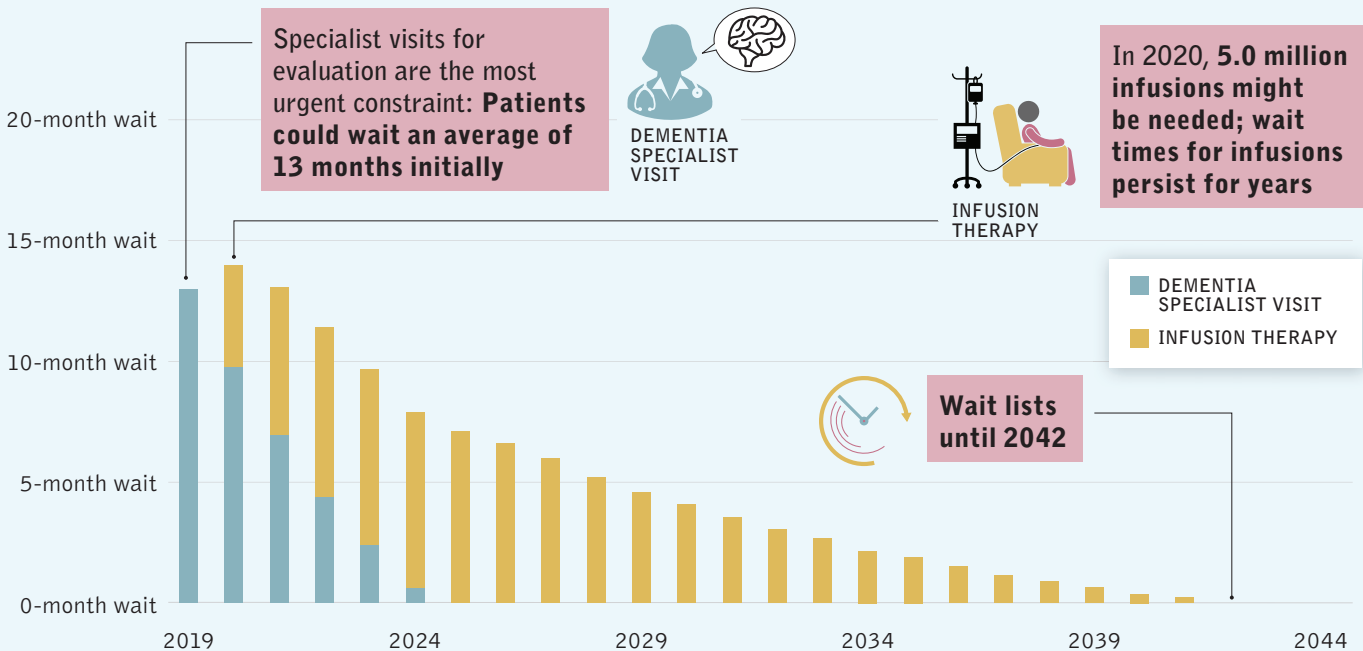
0.4
MILLION



could be recommended for infusion therapy

Wait times might be extensive, particularly for dementia specialist visits

Average wait times in months



Specialist visits for evaluation are the most urgent constraint: **Patients could wait an average of 13 months initially**



DEMENTIA SPECIALIST VISIT

In 2020, **5.0 million** infusions might be needed; wait times for infusions persist for years



INFUSION THERAPY

DEMENTIA SPECIALIST VISIT
INFUSION THERAPY

Wait lists until 2042

No waits for biomarker testing because of the use of cerebrospinal fluid assays



BIOMARKER TESTING

While on wait lists, **260,000 people** might develop Alzheimer's dementia while waiting for evaluation and treatment



Excerpted from *Assessing the Preparedness of the Health Care System Infrastructure in Six European Countries for an Alzheimer's Treatment*, by Jakub P. Hlávka, Soeren Mattke, and Jodi L. Liu, Santa Monica, Calif: RAND Corporation, RR-2503-BIOG, 2018 (available at www.rand.org/t/RR2503). The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest.

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