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

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.

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.

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.

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

<table>
<thead>
<tr>
<th></th>
<th>Maximum Waiting Time Based on Theoretical Capacity</th>
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<tbody>
<tr>
<td></td>
<td>Dementia specialist visits</td>
</tr>
<tr>
<td>France</td>
<td>&gt;12 months</td>
</tr>
<tr>
<td>Germany</td>
<td>No wait</td>
</tr>
<tr>
<td>Italy</td>
<td>&lt;6 months</td>
</tr>
<tr>
<td>Spain</td>
<td>6–12 months</td>
</tr>
<tr>
<td>Sweden</td>
<td>&lt;6 months</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>&gt;12 months</td>
</tr>
</tbody>
</table>

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.
FRANCE: EXPECTED PATIENTS AND HEALTH CARE SYSTEM CAPACITY

Millions of patients could seek diagnosis and treatment

Of the 20.3 million people age 55 and older in 2019,

- **16.2 MILLION** could seek screening in a doctor's office
- **1.4 MILLION** could seek a dementia specialist for evaluation (there are 4,327 neurologists and geriatricians, or 6.7 specialists per 100,000 people)
- **1.3 MILLION** could be referred for biomarker testing
- **0.6 MILLION** might test positive for biomarkers and return to the specialist to learn about treatment
- **0.5 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 19 months initially

In 2020, 5.6 million infusions might be needed

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

While on wait lists, 389,000 people might develop Alzheimer's dementia while waiting for evaluation and treatment
**GERMANY: EXPECTED PATIENTS AND HEALTH CARE SYSTEM CAPACITY**

### Millions of patients could seek diagnosis and treatment

Of the 28.2 million people age 55 and older in 2019,

- **22.6 MILLION** could seek screening in a doctor’s office
- **1.9 MILLION** could seek a dementia specialist for evaluation (there are 19,699 neurologists, geriatricians, and geriatric psychiatrists, or 24.0 specialists per 100,000 people)
- **1.7 MILLION** could be referred for biomarker testing
- **0.8 MILLION** might test positive for biomarkers and return to the specialist to learn about treatment
- **0.6 MILLION** could be recommended for infusion therapy

### Wait times might be extensive for infusion therapy

#### Average wait times in months

- **20-month wait**
  - Adequate training and reimbursement for specialist evaluations are needed to ensure that capacity is utilised

- **15-month wait**

- **10-month wait**

- **5-month wait**

- **0-month wait**

**In 2020, 7.5 million infusions might be needed**

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

**While on wait lists, 55,000 people might develop Alzheimer’s dementia while waiting for evaluation and treatment**
ITALY: EXPECTED PATIENTS AND HEALTH CARE SYSTEM CAPACITY

Millions of patients could seek diagnosis and treatment

Of the 20.6 million people age 55 and older in 2019,

- **16.4 MILLION** could seek screening in a doctor's office
- **1.4 MILLION** could seek a dementia specialist for evaluation (there are 9,501 neurologists, geriatricians, and geriatric psychiatrists, or 16.0 specialists per 100,000 people)
- **1.3 MILLION** could be referred for biomarker testing
- **0.6 MILLION** might test positive for biomarkers and return to the specialist to learn about treatment
- **0.5 MILLION** could be recommended for infusion therapy

Wait times might be extensive for infusion therapy

Average wait times in months

- **20-month wait**
- **15-month wait**
- **10-month wait**
- **5-month wait**
- **0-month wait**

Adequate training and reimbursement for specialist evaluations are needed to ensure that capacity is utilised

In 2020, 5.8 million infusions might be needed; wait times for infusions persist for years

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

While on wait lists, **146,000 people** might develop Alzheimer's dementia while waiting for evaluation and treatment
SPAIN: EXPECTED PATIENTS AND HEALTH CARE SYSTEM CAPACITY

Millions of patients could seek diagnosis and treatment

- Of the 14.1 million people age 55 and older in 2019, 11.3 MILLION could seek screening in a doctor’s office.
- Of the 1.9 million who screen positive for MCI, 1.0 MILLION could seek a dementia specialist for evaluation (there are 4,424 neurologists, geriatricians, and geriatric psychiatrists, or 9.5 specialists per 100,000 people).
- Of the 0.9 million who screen positive for biomarker testing, 0.4 MILLION might test positive for biomarkers and return to the specialist to learn about treatment.
- Of the 0.3 million who might test positive for biomarkers and return to the specialist to learn about treatment, 0.3 MILLION could be recommended for infusion therapy.

Wait times might be extensive for specialist visits and infusion therapy

Average wait times in months

<table>
<thead>
<tr>
<th>Wait Time</th>
<th>2019</th>
<th>2024</th>
<th>2029</th>
<th>2034</th>
<th>2039</th>
<th>2044</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-month wait</td>
<td>15-month wait</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-month wait</td>
<td>5-month wait</td>
<td>0-month wait</td>
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</tbody>
</table>

Specialist visits for evaluation are the most urgent constraint: Patients could wait an average of 10 months initially.

In 2020, 3.9 million infusions might be needed; wait times for infusions persist for years.

Wait lists until 2044

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

While on wait lists, 171,000 people might develop Alzheimer's dementia while waiting for evaluation and treatment.
SWEDEN: EXPECTED PATIENTS AND HEALTH CARE SYSTEM CAPACITY

Millions of patients could seek diagnosis and treatment

- Of the 3.0 million people age 55 and older in 2019, 2.4 MILLION could seek screening in a doctor’s office.
- Of the 0.4 million who screen positive for MCI, 0.2 MILLION could seek a dementia specialist for evaluation (there are 1,799 geriatricians and geriatric psychiatrists, or 18.2 specialists per 100,000 people).
- 0.2 MILLION could be referred for biomarker testing.
- 0.1 MILLION might test positive for biomarkers and return to the specialist to learn about treatment.
- 0.1 MILLION could be recommended for infusion therapy.

Wait times might be extensive for infusion therapy

Average wait times in months

Adequate training and reimbursement for specialist evaluations are needed to ensure that capacity is utilised.

In 2020, 805,000 infusions might be needed; wait times for infusions persist for years.

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

While on wait lists, 12,000 people might develop Alzheimer’s dementia while waiting for evaluation and treatment.

Wait lists until 2036.
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:

- **20-month wait**: Specialist visits for evaluation are the most urgent constraint: Patients could wait an average of 13 months initially.
- **15-month wait**: No waits for biomarker testing because of the use of cerebrospinal fluid assays.
- **10-month wait**: While on wait lists, 260,000 people might develop Alzheimer’s dementia while waiting for evaluation and treatment.
- **5-month wait**: INFUSION THERAPY
- **0-month wait**: BIOMARKER TESTING

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