# Riding the Silver Tsunami

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# "The Silver Tsunami"

metaphor for the expected increase in the senior population

Projected
U.S. population age 65
and older as a percentage
of total population

| YEAR | |
|---|---|
| 2016 | 15.2% |
| 2020 | 16.9% |
| 2025 | 19% |
| 2030 | 20.6% |
| 2035 | 21.4% |
| 2040 | 21.6% |
| 2045 | 21.7% |
| 2050 | 22% |
| 2055 | 22.6% |
| 2060 | 23.4% |

0   5%   10%   15%   20%

National Population Projections (revised)
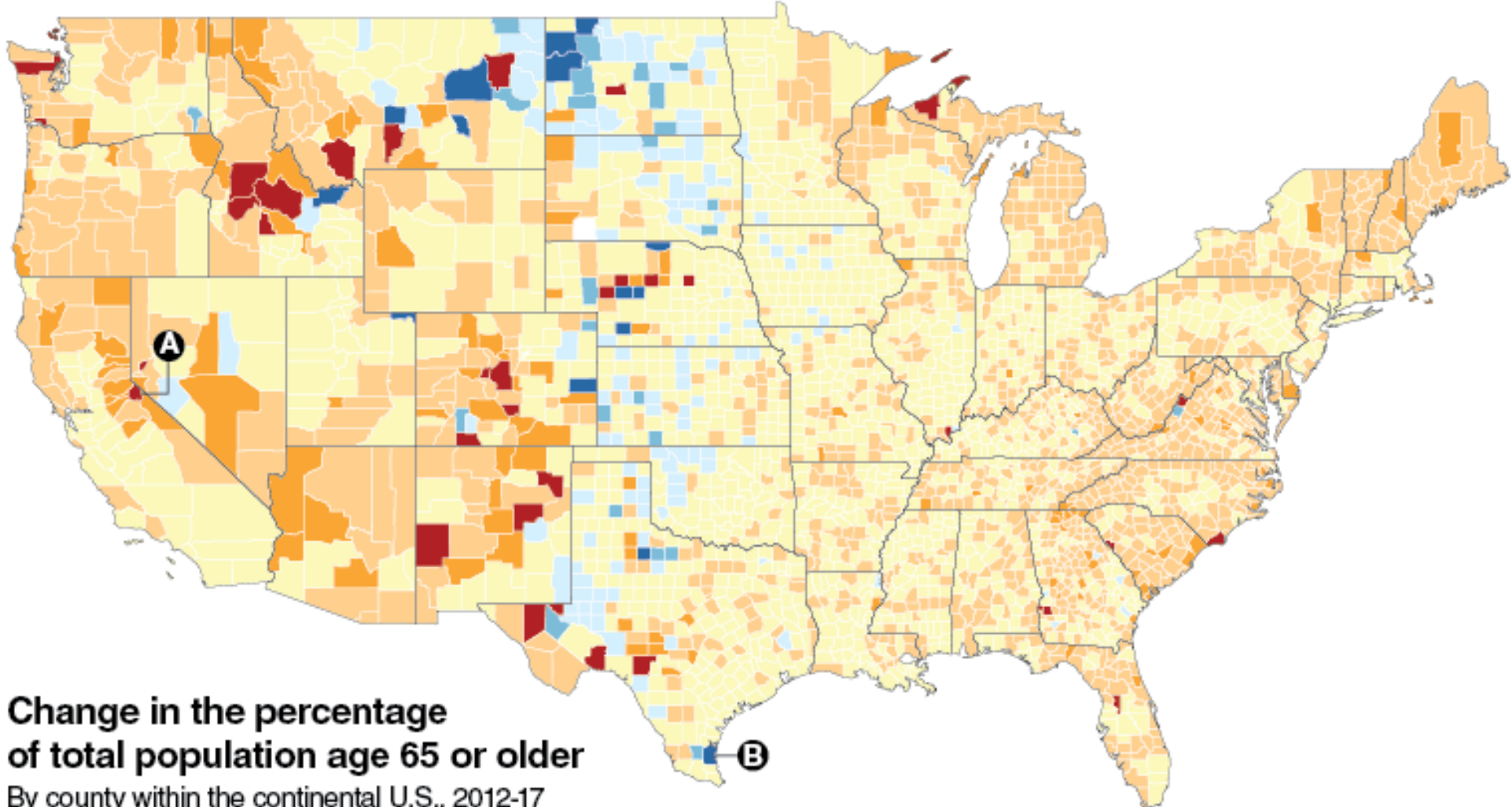
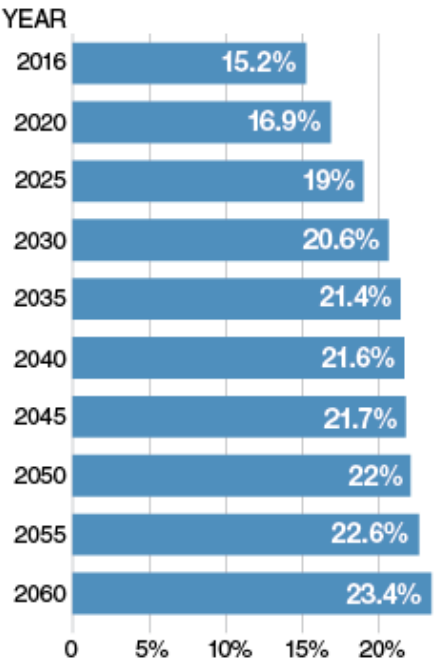## Change in the percentage of total population age 65 or older

By county within the continental U.S., 2012-17
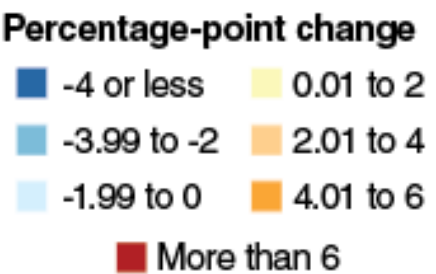
| | 2012 | 2017 | %-point change |
|---|---|---|---|
| **Greatest increase*** | | | |
| Ⓐ Alpine County, Calif. | 12.3% | 27.5% | +15.2 |
| **Greatest decrease*** | | | |
| Ⓑ Kenedy County, Texas | 21.5% | 14.7% | -6.8 |

**Percentage-point change**

- ■ -4 or less
- ■ -3.99 to -2
- ■ -1.99 to 0
- ■ 0.01 to 2
- ■ 2.01 to 4
- ■ 4.01 to 6
- ■ More than 6

* Among counties with at least 500 population in 2017

# Populations are getting older



Percentage aged
60 years or older:

- 30% or more
- 10 to <30%
- <10%

2015

World Health
Organization
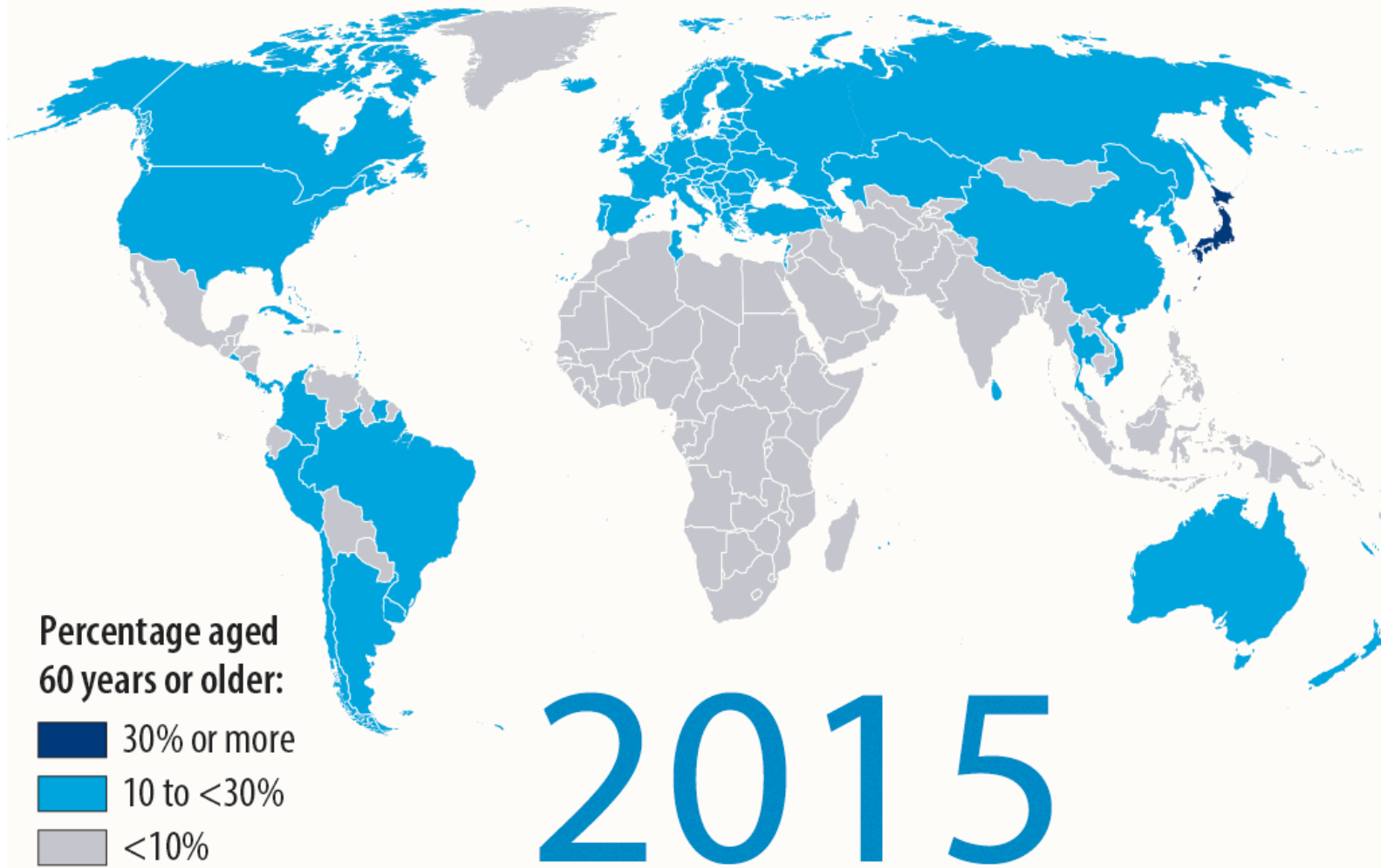
# Speed of population ageing

## Time for percentage of population **over age 60** to double



Percentage of population aged 60 and over (%)

20%

10%

1995

France

1850

1850    1900    1950    2000    2050
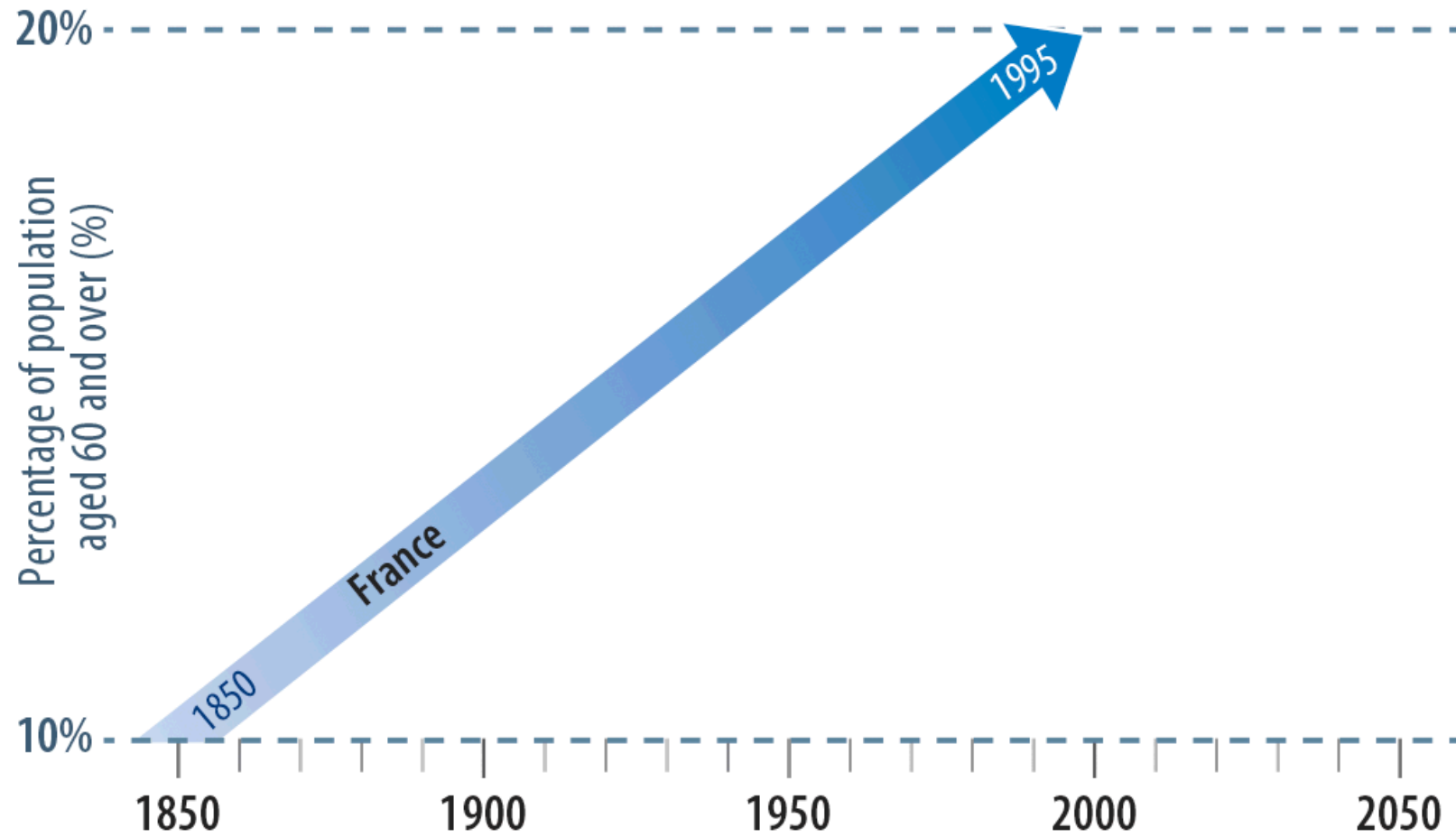
World Health Organization

# AGEING and HEALTH

**World Health Organization**

Between 2000 and 2050, the number of people aged 60 and over is expected to double

In 2050, more than 1 in 5 people will be 60 years or older.

By 2050, 80% of older people will be living in low- and middle-income countries.

# Current American Development Paradigm

"meet the perceived needs of
families with children"

# Impact

**Policy**: Predominance of single-family detached homes within auto-centric transportation networks and largely separated from commercial and industrial uses.

**Environment**: rapid land conversion, increased demands for energy and water, and growing carbon emissions.

**Social**: longer and more costly commutes, increased social isolation, higher infrastructure costs, greater dependency on automobiles for mobility and independence, and more financial vulnerability associated with housing costs.

# Emerging American Development Paradigm
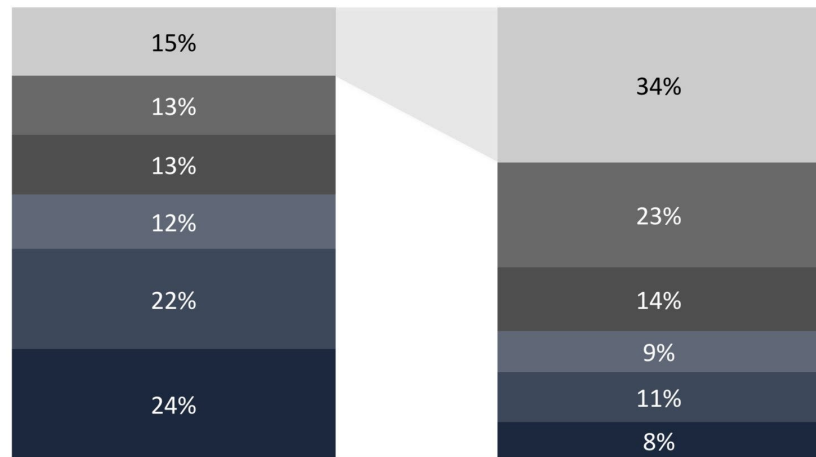
"meet the perceived needs of seniors"

# Impact

## All systems and arenas:
- Policy, Justice, Housing, Transportation, **Healthcare**, …

**US Seniors Account For The Largest Portion Of Healthcare Spending**

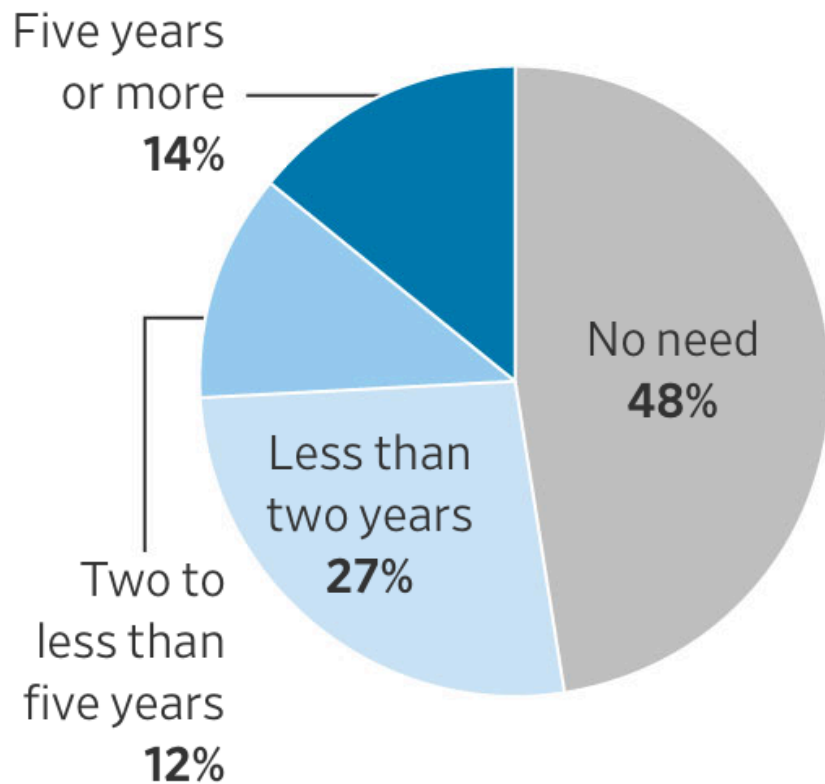Legend: ■ Under 19 ■ 19 to 34 ■ 35 to 44 ■ 45 to 54 ■ 55 to 64 ■ 65 and above

Share of population:
- 15%
- 13%
- 13%
- 12%
- 22%
- 24%

Share of health spending:
- 34%
- 23%
- 14%
- 9%
- 11%
- 8%

*Note: Data is for 2015, the most recent year available.*
*Source: Kaiser Family Foundation, 2017*

BUSINESS INSIDER INTELLIGENCE

1. Total national health expenditures are expected are $4 billion today and $5 billion by 2025 – US Census Bureau & CMS
2. National health expenditures as a percentage of GDP hit more than 15% in 2016, and that figure will climb to 19.4% of GDP (approximately $6 trillion) in 2027 - CMS
3. Greater demand for long term care and care-at-home options

# Long-Term Problems

More than half of U.S. adults at least 65 years old are projected to need nursing-home or other care services...

**Length of care needed***



Five years or more **14%**

Two to less than five years **12%**

Less than two years **27%**

No need **48%**

...and the cost of care is steep for those who need it...

**Projected spending on needed care**

**No care**
48%

**Less than $10,000**
5.7%

**$10,000-$49,999**
9.7%

**$50,000-$99,999**
9.7%

**$100,000-$249,999**
11.7%

**$250,000 or more**
15.2%

...so millions of Americans have bought long-term-care coverage.

# Long Term Care

"... the current system as structured is being stressed to its limits and its functioning is inadequate, with serious problems in cost and financing, and in access to and quality of, long-term care services"*

*Institute of Medicine, "Toward a National Strategy for Long-Term Care of the Elderly: A Study Plan for Evaluation of New Policy Options for the Future". National Academies Press.

# Current Problems in Long Term Care

- Demand significant exceeds supply
- Lack of standards and adoption
- Facility Preparedness
  - Shortage of staff at LTC facilities,
  - Facility occupancy averaged ninety percent annually
  - Low process maturity
  - Technology Coherence
  - Technology Maturity
  - Timeframe for application and approval takes months

# Long Term Care, Technology & Data

"Limited adoption and use of Health Information Technology and quality measurement"

- Insufficient business and/or financial incentives for service providers to acquire and use health IT to support coordination of services
- Minimal national standards for quality measurement in LTSS outcomes
- Lack of uniformity in the terminology and definitions of data elements
- Lack of consensus on the interrelationships between a beneficiary's plans across care, services and supports;
- Lack of evidence and understanding of how health IT may benefit the beneficiary and encourage their adoption and use of technology.

- Office of the National Coordinator for Health Information Technology

# Current Solution Initiatives
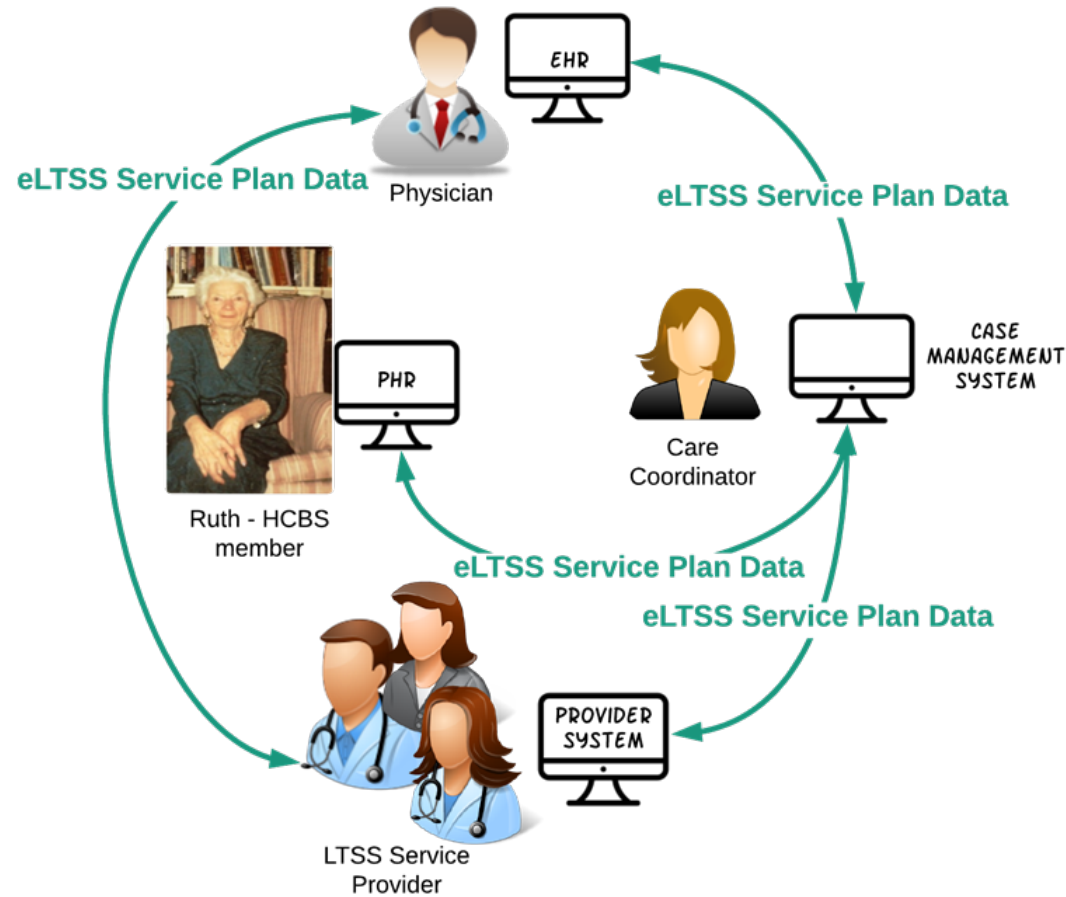


electronic Long-Term Services and Supports (eLTSS) Initiative
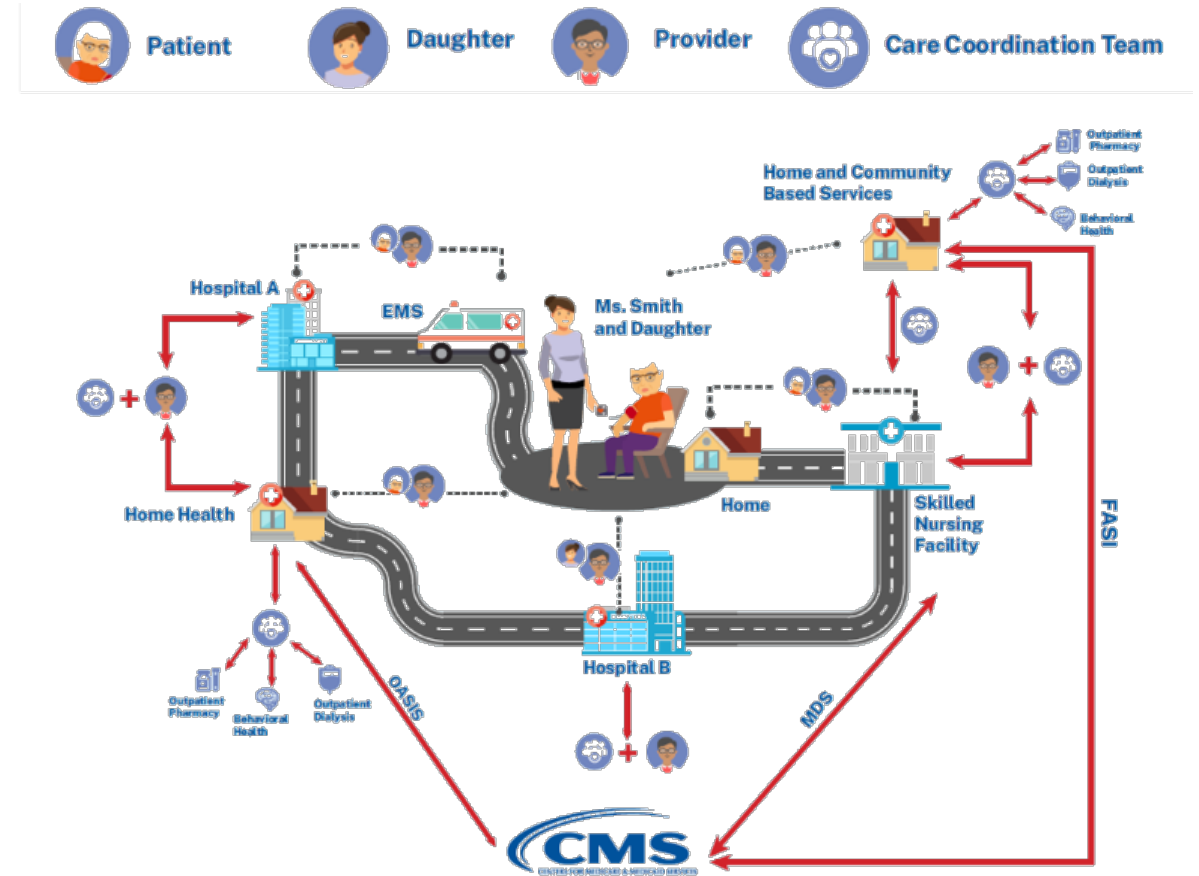


The PACIO Project

# Initiatives' Focus Areas

| eLTSS | The PACIO Project |
|---|---|
| • LTSS Eligibility Determination, eLTSS Plan Creation and Approval<br>• Sharing a Person-Centered eLTSS Plan | • Care Coordination |

Project Focus

Speed up the intake and onboarding for a senior entering a care home

# Long Term Goal

LTC_CAP aims to develop a FHIR resource specification, and associated enabling technologies, for a senior that has found a care home and is in the process of securing their place in that home.

# Methodology

Use existing knowledge and tools, while collaborating with LTC facility providers on a useful end-result for them


LTC Facility (19)


eLTSS Initiative


The PACIO Project


HEALTH SAMURAi

# Current Status

1. Collaborating with our 19 LTC facility providers, we identified an initial set of common data elements.
2. Created a generic database schema for this initial set.
3. Cross- referenced this initial set against the work done by the PACIO project and the CMS Data Element Library to determine the FHIR resources that need to be incorporated.
4. Documented a draft LTCFacilityApplication FHIR specification.

# Current Status

5. Used Health Samurai's IGPOP tool to craft a draft FHIR implementation guide. Imported into Health Samurai's FHIRBase tool.
   - The use of FHIRBase allows the data from Pearl Long Term Care Solutions ("Pearl") to be read by our authorized provider partners.
6. Ongoing work to create a translator (in Python) that converts from Pearl's internal data system (a mix of MySQL and Mongo DB) into the draft FHIR spec.
7. Open sourced and assets available via Github.

# Ask #1

**LTC Facility Owners and Managers**

Reach out and provide input on the data you require during your application

# Ask #2

**LTC Facility Owners and Managers**

Tell us about your systems and their FHIR capabilities

# Ask #3

**IT Vendors for LTC Facilities**

Work with us on "translators"

Thank You

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