Senior Housing: Community as an Antidote to Isolation

MASS Design Group

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Life expectancy, 1770 to 2019

Source: Riley (2005), Clio Infra (2015), and UN Population Division (2019)

Note: Shown is period life expectancy at birth, the average number of years a newborn would live if the pattern of mortality in the given year were to stay the same throughout its life.
43% of seniors in the US experience loneliness

THE STORY OF HARRY TRUMAN

Atul Gawande, *Being Mortal*
At 83, we expect more from life than safety

Source: CNN
POORHOUSES WERE DESIGNED TO HOUSE VULNERABLE PEOPLE WHO WERE UNABLE TO SUPPORT THEMSELVES

BY THE 1920s, TWO-THIRDS OF POORHOUSE RESIDENTS WERE ELDERLY

Source: St. Louis Water Division
IN 1935, THE SOCIAL SECURITY ACT CREATED A SYSTEM OF NATIONAL PENSIONS

HOWEVER, THE NUMBER OF OLDER ADULTS IN POORHOUSES REFUSED TO DROP
AFTER WORLD WAR II, HOSPITALS SPRANG UP AND BECAME A MORE ATTRACTIVE PLACE TO PUT SENIORS

POORHOUSES CLOSED, AND HOSPITALS FILLED UP WITH OLDER ADULTS WHO HAD NOWHERE ELSE TO GO

Source: Blue Ridge Healthcare Foundation
IN 1954, LAWMAKERS PROVIDED FUNDING FOR HOSPITALS TO BUILD SEPARATE WINGS FOR THOSE REQUIRING CONTINUOUS CARE

IT WAS THE BEGINNING OF THE MODERN NURSING HOME

Source: Gottscho-Schleisner Collection, Library of Congress
In 1965, the Medicare and Medicaid Act was signed.

Nursing homes sprang up all over the country.
The nursing home was designed as a hospital, not as a home
I don't feel safe. I feel alone.

I don't feel in control. I feel alone.
J.J. Carroll
Boston, MA, USA
In Boston alone, the number of senior households will increase by 53 percent between 2010 and 2030.

Boston 2030: Housing a Changing City

But Massachusetts has the second largest shortfall between income and basic living expenses, and many older adults can’t afford the high cost of living.
62% of seniors living alone in MA cannot cover basic expenses
“Efficiency”
Isolation and loneliness in seniors has been identified as a great public health risk.

Low Social Interaction Harms Lifespan on a Par with Obesity, Smoking, Inactivity

Boston 2030: A Housing a Changing City
In the long term, a building will only be efficient if it is healthy in the first place.
Harvard study, almost 80 years old, has proved that embracing community helps us live longer, and be happier.

Second in an occasional series on how Harvard researchers are tackling the problematic issues of aging.

When scientists began tracking the health of 68 Harvard sophomores in 1938 during the Great Depression, they hoped the longitudinal study would reveal clues to leading healthy and happy lives.

The New York Times

Social Interaction Is Critical for Mental and Physical Health

APRIL 15, 2019

Surprising new research, covered in this week’s New York Times, has found that the brain waves of close friends actually resemble each other. Researchers could predict whether two people were closely connected or not based on waves of their brain when reacting to video stimuli. Friends often enjoy similar jokes, hobbies or have other things in common; this research suggests they are also actually physically in sync with each other.

Researchers do not yet know whether this brain sync is a result of the friendship or existed before it begins.

“Good relationships don’t just protect our bodies; they protect our brains,” said Waldinger in his TED talk. “And those good relationships, they don’t have to be smooth all the time. Some of our octogenarian couples could bicker with each other day in and day out, but as long as they felt that they could really count on the other when the going got tough, those arguments didn’t take a toll on their memories.”
CREATE A MODEL OF HOUSING THAT EMPOWERS RESIDENTS TO LIVE IN COMMUNITY
Start from the most efficient scheme
Break down into smaller 'neighborhoods'
Connect ‘neighborhoods’ through a central shared space
Provide opportunities for outdoor living
Respond to context
People 65 years or older represent 80% of all deaths from COVID-19.

Older adults also need to balance another threat to their health - social isolation.

How do we design for safe interaction, not social isolation?
Designing Senior Housing for Safe Interaction

The Role of Architecture in Fighting COVID-19
Implementing design principles aligned with infection control strategies can help us preserve healthy social interaction.

- Provide access to fresh air
- Sequence flows through a space
- Reduce pressure on high traffic places
- Group residents into villages
- Encourage people to spend time outdoors
- Increase cleaning protocols for high-touch surfaces
- Expand the threshold of the unit
- Embed technology
500 Lynnfield St
Lynn, MA, USA
LYNN HAS BEEN A CENTER OF COVID-19 IN MASSACHUSETTS THROUGHOUT THE PANDEMIC

Lynn emerges as a new center of COVID-19 in Massachusetts

By Zenia Mehta | Globe Staff | Updated August 14, 2020, 9:44 p.m.

LYNN — As COVID-19 ravaged Massachusetts in the spring and summer, a blue-collar city north of Boston emerged as the state’s worst outbreak.
Lynn has **higher rates of infectious disease** than the state average, and almost twice the rate for several diseases.

<table>
<thead>
<tr>
<th>Infectious Disease</th>
<th>Lynn Count</th>
<th>Lynn Crude Rate</th>
<th>State Crude Rate</th>
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<tbody>
<tr>
<td>HIV/AIDS Prevalence</td>
<td>367</td>
<td>398.1</td>
<td>216.0</td>
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<td>AIDS and HIV-related Deaths</td>
<td>2</td>
<td>2.2</td>
<td>1.8</td>
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<tr>
<td>Tuberculosis</td>
<td>6</td>
<td>6.5</td>
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<td>Hepatitis-B</td>
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<tr>
<td>Syphilis</td>
<td>17</td>
<td>18.4</td>
<td>9.4</td>
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<tr>
<td>Gonorrhea</td>
<td>73</td>
<td>79.2</td>
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<tr>
<td>Chlamydia</td>
<td>573</td>
<td>621.6</td>
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1/5 elderly people in Massachusetts suffers from one or more mental health and/or substance use conditions.

Lynn experiences even higher rates.
THE SITE IS DISRUPTED AND ‘TRAUMATIZED’

EXISTING UNION HOSPITAL
Forests are therapeutic landscapes.

Access to nature makes us “healthier, more creative, more empathetic and more apt to engage with the world and with each other.”

Create an environment that brings people out of the woods and into the light of the clearing.
32% Green

Before

68% Grey

70% Green

After

30% Grey
<table>
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<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
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Comfort
How can we provide people more access to fresh air throughout the year?
3-SEASON PORCHES EXPAND OPPORTUNITIES FOR OUTDOOR LIVING

Source: Library of Congress
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<th>Comfort</th>
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TYPICAL BUILDING SECTION – PASSIVE HOUSE AIMS TO ISOLATE THE BUILDING FROM THE CLIMATE
3-SEASON PORCHES EXTEND ACCESS TO FRESH AIR THROUGHOUT THE SEASONS

Each dot represents one hour of the year.

Outside temperature

3-season porch temperature
3-SEASON PORCHES EXTEND ACCESS TO FRESH AIR THROUGHOUT THE SEASONS
3-SEASON PORCHES EXTEND ACCESS TO FRESH AIR THROUGHOUT THE SEASONS
PLAN DRIVERS
• Break down into 5 clusters
  • 7-11 apartments / cluster
  • Connect with common areas
• Add 1 three-season porch / floor
• Add 1 balcony / floor
“6,000 seniors are on the waitlist for affordable housing in Lynn. They are unsafe, upset and unseen. Seniors in Lynn deserve the comfort and security of a warm home.”

Kathy Lowry, 73