. . . health is worth more than learning.
Objectives

Competency: systems-based practice

- Review current trends in mortality in Florida & across the US
- Compare life expectancy in the US with other countries
- Discuss drivers of life expectancy in the US
Florida 1889

270,000

? visitors

38 yrs
Florida cannot be said to have any endemic disease that is not preventable. I believe that 9/10s of the sickness that afflicts the native population is preventable.
FL demographics

- 21% < 18
- 19% > 65
- 25% Hispanic
- 17% African American
FL boomer challenge

- 3.9 M > 65 yrs
- 1.7 M > 75 yrs
- 0.5 M > 85 yrs

FL deaths = 197,000

Heart disease      Cancer

Unintentional injury
Chronic lung disease
Stroke

Florida Vital Statistics 2016
Start life
Extend life
Improve quality of life
5.9 per 1000 live births

0 - 4.8
4.8 - 5.8
5.8 - 6.2
6.3 - 7.3
7.4 - 9.1
634 K heart
596 K cancer
155 K COPD
147 K unintentional injuries
140 K stroke

2.7 M

111 K Alzheimer’s
79 K diabetes
57 K flu & pneumonia
50 K renal disease
44 K suicide

321 M

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US life expectancy falls for first time since 1993
[78.9 to 78.8]
12-8-2016
US life expectancy falls for 2\textsuperscript{nd} straight year for the first time since 1963

[78.8 to 78.6]

12-21-2017
U.S. life expectancy falls for second straight year—first time since 1963

Florida Vital Statistics 2016
US life expectancy declining again

- **At Birth**
  - Both sexes: 78.6 (2016), 78.7 (2015)
  - Male: 76.1 (2016), 76.3 (2015)

- **At Age 65**
  - Male: 18.0 (2016), 18.0 (2015)
  - Female: 20.6 (2016), 20.5 (2015)
US life expectancy

At birth  78.6 years
At 65  19.4 years
At 75  12.3 years
Figure 1. Determinants of Health and Their Contribution to Premature Death.
Adapted from McGinnis et al.\textsuperscript{10}

NEJM 357;12, 2007
Preventable diseases

Health care

Death

Life

Choices

Kaieteur Falls, Guyana
\ldots \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice} + \text{choice}
= \text{health status}
Behaviors are undermining advances in medical care
Life expectancy in years

$3.3 trillion
“A new study has found a link between obesity and food.”
2014

Source: http://stateofobesity.org/2015
https://stateofobesity.org/adult-obesity/2017
A Life Expectancy at 18 Years of Age

- All nonsmoking and normal weight by 2020
- Smoking decline at past 15-yr rate, BMI at 2005 level
- Smoking and obesity held at 1990 levels
- Smoking and BMI changes at past 15-yr rates
- BMI increase at past 15-yr rate, smoking at 2005 level

NEJM 2009; 361:2252-2260
Estimated content:

Propylene glycol
Glycerin
Nicotine

Water
Flavoring

Potentially toxic contaminants and vaporization by-products

VAPOR

Battery

Heating element in the atomization chamber vaporizes the nicotine solution.

Nicotine cartridge holds the nicotine solution.
The nicotine content may be high, medium, low, or none.

Mouthpiece
CUT ONE OFF...

AND I'LL REGROW IT!

OPIOIDS
**Think Measles**

**Florida Department of Health • Find county contact information at:** FloridaHealth.gov

<table>
<thead>
<tr>
<th>1. IDENTIFY</th>
<th>2. ISOLATE</th>
<th>3. INFORM</th>
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<tbody>
<tr>
<td><strong>Suspect measles in patients with:</strong></td>
<td><strong>Immediately report ALL suspected measles infections to your county health department. Notify other facilities of suspected measles before transport.</strong></td>
<td></td>
</tr>
<tr>
<td>- Fever and rash.</td>
<td>- Implement airborne infection control precautions, mask and isolate patient in a negative pressure room, if available.</td>
<td></td>
</tr>
<tr>
<td>- History of international travel or contact with visitors from locations with known measles outbreaks in the past 3 weeks.</td>
<td>- Permit only staff immune to measles to be near the patient.</td>
<td></td>
</tr>
<tr>
<td>- No or unknown MMR vaccine status. History of MMR vaccine does not exclude a measles diagnosis.</td>
<td>- Collect nasopharyngeal swab; urine, and serum for measles IgG, IgM and PCR.</td>
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</tbody>
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**Vaccination Protects Against Measles**

* A single dose is 93% effective and two doses are 97% effective.

**Risk Factors**
- History of international travel, contact with international travelers, or domestic travel to locations with known measles outbreaks.
- No or unknown MMR vaccine status. History of MMR vaccine does not exclude a measles diagnosis.
- Contact with a person that had a febrile rash illness.

**Prodrome**
- Fever, cough, coryza, conjunctivitis

**Rash Onset**
- Fever spikes, often up to 104°F.
- Red, maculopapular rash that may become confluent—typically starts at hairline, then face and spreads down body.
- The rash may be difficult to see on darker skin.
- Koplik’s spots (small, red, irregularly-shaped spots with blue-white centers found on the oral mucosa) may be present in a small number of cases.

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Photo courtesy of the CDC.
Epidemic: occurrence of more cases of disease than expected in specific area or group over a particular period of time
Spaces

Messages

Physical activity

School

Workplace

Home

Food & beverage

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Reshape where & how we live so that healthy choices are the easier choices
Integration

Community health

Clinical care

Public health

Community health
The majority of today’s children will have obesity at age 35

Predicted prevalence of obesity among 2-year-olds at future ages

Projections show that 59% of today’s 2-year-olds will have obesity when they are 35.

NEJM, 11-29-17
Evolution
The best way to predict your future is to create it.
Summary

• Heart disease & cancer dominate mortality, unintentional injury increasing

• US life expectancy < peer countries

• US life expectancy driven by behaviors