The Local Health Department of the Future and Your Role In It.

Tennessee Public Health Association Annual Conference: September 15th, 2011

“How High is the Wall in Your Town?”

Randy Wykoff, MD, MPH & TM
Dean, East Tennessee State University College of Public Health

ETSU College of PUBLIC HEALTH
**Goals for Today**

1. To discuss the extent to which “public health” is, or is not, important for improving health in the United States;

2. To review the ways that our current “public health” system must evolve to meet today’s health challenges;

3. To highlight the role of the local health worker in the future of “public health.”

**Conclusions I will Reach**

1. “Public Health” is absolutely essential to improve the health of the American people;

2. To meet its future challenges, “Public Health” must “attack”, “refocus”, and “broaden”

3. With these changes, the local health worker will once again become the most important part of our health system.
1. “Public Health” is absolutely essential to improve the health of the American people;
"Public Health" is Absolutely Essential to Improve the Health of the American People

What? is the health status of our Nation?

What? can be done about it?

What is the Health Status of Our Nation?

- Life expectancy
Average Life Expectancy in 2008:

78.1 Years
In 2008, for Life Expectancy the United States Ranks:

34th

Behind---
Andorra, Japan, Singapore, San Marino, Australia, Canada, France, Sweden, Switzerland, Israel, Iceland, New Zealand, Italy, Monaco, Liechtenstein, Spain, Norway, Greece, Austria, Malta, Netherlands, Luxembourg, Germany, Belgium, United Kingdom, Finland, Jordan, South Korea, Bosnia, Cyprus, Denmark, Ireland, Portugal

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<th>Rank</th>
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Harvard University Initiative for Global Health 2006
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<tr>
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<td>Saint Vincent</td>
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**Premature Mortality:**
United States Compared to Tennessee

2011 County Health Rankings: [www.countyhealthrankings.org](http://www.countyhealthrankings.org)
America’s Health Rankings
2010

48  48  47  46  47  44

42

America’s Health Rankings
2010

42

42
America’s Health Rankings
2010

Poor Physical Health Days—48th
Violent Crime—48th
Obesity—48th
Cancer Deaths—46th
Infant Mortality—46th
Preventable Hospitalizations—45th
Prenatal Care—45th
Cardiovascular Deaths—44th
Premature Deaths—43rd
Smoking—41st
Poor Mental Health Days—41st

America’s Health Rankings
2010

Air Pollution—39th
Children in Poverty—39th
Infectious Diseases—39th
High School Graduation—35th
Lack of Health Insurance—31st
Occupational Fatalities—30th
Public Health Funding—21st
Primary Care Physicians—18th
Geographic Disparities—16th
Binge Drinking—2nd
Immunization Coverage—1st
The Health Status of Tennessee

WHY SHOULD A BABY BORN IN TENNESSEE BE MORE LIKELY LIVE A SHORTER AND LESS HEALTHY LIFE THAN A BABY BORN IN MOST OTHER STATES AND IN DOZENS OF OTHER COUNTRIES?

The Health Status of Tennessee

WHY DO WE HAVE HEALTH STATISTICS IN OUR STATE AND OUR NATION THAT ARE SO MUCH LESS THAN WE COULD ACHIEVE?
MOST PEOPLE ARE UNAWARE

OTHERS ASSUME THAT:

THE PROBLEMS ARE INEVITABLE

THE PROBLEMS ARE UNSOLVABLE

Life Expectancy

![Graph showing life expectancy over years](chart.png)
Infant Mortality

The “Virginia Health Bulletin” 1908 and 1909
Causes of Death—United States 1909

Causes of Death—United States 2005
**Why?**

**MOST PEOPLE ARE UNAWARE**

**OTHERS ASSUME THAT:**

**THE PROBLEMS ARE INEVITABLE**

**THE PROBLEMS ARE UNSOLVABLE**

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**Factors Contributing to Premature Death**

- Genetics: 30%

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We Can Do Better: Improving the Health of the American People
Schroeder SA. *New England Journal of Medicine* 357: 1221-1228
http://content.nejm.org/cgi/content/full/357/12/1221
Is it Genetics?

Besse Brown Cooper
Born in Sullivan County, Tennessee in 1896
Graduated from ETNS (later ETSU) in 1916
In January, 2011, she was declared to be
The World’s Oldest Living Person

Factors Contributing to Premature Death

- Genetics: 30%
- Health Care: 10%
- Behavioral Factors: 40%
- Environmental Exposures: 5%
- Social Circumstances: 15%

We Can Do Better: Improving the Health of the American People
Schroeder SA. New England Journal of Medicine 357: 1221-1228
http://content.nejm.org/cgi/content/full/357/12/1221
### Actual Causes of Death--2000

- **Tobacco**: 18.1% of all deaths
- **Diet/activity patterns**: 15.2% of all deaths
- **Alcohol**: 3.5% of all deaths
- **Microbial agents**: 3.1% of all deaths
- **Toxic agents**: 2.3% of all deaths
- **Motor vehicles**: 1.8% of all deaths
- **Firearms**: 1.1% of all deaths
- **Sexual behavior**: 0.8% of all deaths
- **Illicit Drug Use**: 0.7% of all deaths

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**Actual Causes of Death in the United States, 2000 Mokdad et al**

*JAMA* 291: 1238-1245

[http://jama.ama-assn.org/cgi/content/abstract/291/10/1238](http://jama.ama-assn.org/cgi/content/abstract/291/10/1238) and erratum: [http://jama.ama-assn.org/cgi/content/full/293/3/298](http://jama.ama-assn.org/cgi/content/full/293/3/298)

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**THESE PROBLEMS CAN BE SOLVED**

**THESE PROBLEMS ARE MORE EASILY PREVENTED THAN CURED**
Actual Causes of Death--2000

- Tobacco: 18.1% of all deaths
- Diet/activity patterns: 15.2% of all deaths
- Alcohol: 3.5% of all deaths
- Microbial agents: 3.1% of all deaths
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- Firearms: 1.1% of all deaths
- Sexual behavior: 0.8% of all deaths
- Illicit Drug Use: 0.7% of all deaths

What Should We Do About Tobacco?

We need to keep children from becoming smokers
We need to help current smokers quit
We need to better understand why people start smoking and the factors that lead them to quit
We need to protect children from second-hand smoke

Actual Causes of Death in the United States, 2000 Mokdad et al
JAMA 291: 1238-1245
http://jama.ama-assn.org/cgi/content/abstract/291/10/1238 and erratum:
http://jama.ama-assn.org/cgi/content/full/293/3/298
Public Health

Prevention

Behavior Change

Community-based Research

Advocacy for Better Health

“What we as a society, do collectively to assure the conditions in which people can be healthy.”

Institute of Medicine
The Future of Public Health
The Local Health Department of the Future and Your Role In It

1. “Public Health” is absolutely essential to improve the health of the American people;

2. To meet its future challenges, “Public Health” must “attack”, “refocus”, and “broaden”

The Local Health Department of the Future and Your Role In It

2. To meet its future challenges, “Public Health” must attack Chronic Diseases . . .
Actual Leading Causes of Death

- Tobacco: 18.1% of all deaths
- Diet/activity patterns: 15.2% of all deaths
- Alcohol: 3.5% of all deaths
- Microbial agents: 3.1% of all deaths
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Actual Causes of Death in the United States, 2000 Mokdad et al
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Prevalence of Smoking in the United States:
1965 - 2005
Prevalence of Smoking

America's Health Rankings 2010: http://www.americashealthrankings.org
Adult Smoking: Tennessee and the United States

2011 County Health Rankings: www.countyhealthrankings.org

Actual Leading Causes of Death

- Tobacco 18.1% of all deaths
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Actual Causes of Death in the United States, 2000 Mokdad et al
JAMA 291: 1238-1245
http://jama.ama-assn.org/cgi/content/abstract/291/10/1238 and erratum:
http://jama.ama-assn.org/cgi/content/full/293/3/298
Prevalence of Obesity in the United States: 1986 - 2010

Prevalence of Obesity

America's Health Rankings 2010: http://www.americashealthrankings.org
Adult Obesity: Tennessee and the United States

From 1990 to 2010, the percentage of adults who are obese in Tennessee has increased compared to the United States. The graph shows the trends for both Tennessee and the United States over this period.

2011 County Health Rankings: www.countyhealthrankings.org
1. “Public Health” is absolutely essential to improve the health of the American people;

2. To meet its future challenges, “Public Health” must “attack”, “refocus”, and “broaden”
Data Resources

• STATE DATA
  – Kaiser Family Foundation: State Health Facts www.statehealthfacts.org
  – US Census Bureau “State and County Quick Facts” http://quickfacts.census.gov/qfd/index.html
  – United Health Foundation: America’s Health Rankings http://www.americashealthrankings.org
  – Trust for America’s Health http://healthyamericans.org/states

• COUNTY DATA
  – County Health Rankings 2010 http://www.countyhealthrankings.org
  – Census “American Community Survey” http://www.census.gov/acs/www
  – HHS Community Health Status Indicators: http://communityhealth.hhs.gov/homepage.aspx?j=1

• CONGRESSIONAL DISTRICT

• TOPIC SPECIFIC DATA
  – CDC Data and Statistics: http://www.cdc.gov/datatistics
  – WHO Data and Statistics http://www.who.int/research/en
  – F as in Fat: 2010 http://healthyamericans.org/reports/obesity2010/
The County Health Rankings: Health Outcomes - Tennessee

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<td>Rutherford</td>
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<td>4</td>
<td>Moore</td>
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<td>5</td>
<td>Blount</td>
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<td>6</td>
<td>Wilson</td>
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<td>7</td>
<td>Pulman</td>
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<td>Loudon</td>
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Rank 1-24 Rank 25-48 Rank 49-71 Rank 72-95

- Hancock
- Polk
- Lake
- Marion
- Clay
- Trousdale
- Decatur
- Rhea
- Cocke
- Carroll
- Hardeman
- Lewis
- Campbell
- Fentress
- Grundy
- Benton
We Must Refocus the Way We Use Data...

1. We must focus more on using data to understand people and less to describe regions;
2. We must focus more on getting data that are relevant and timely to our decision-making;
3. Once we have real-time, people-focused data, we must focus more on using data to drive our activities and our advocacy;

The Local Health Department of the Future and Your Role In It

1. “Public Health” is absolutely essential to improve the health of the American people;
2. To meet its future challenges, “Public Health” must “attack”, “refocus”, and “broaden”
2. To meet its future challenges, “Public Health” must broaden our partnerships.

Factors Contributing to Premature Death

- Behavioral Factors: 40%
- Social Circumstances: 15%
- Health Care: 10%
- Genetics: 30%
- Environmental Exposures: 5%

We Can Do Better: Improving the Health of the American People
Schroeder SA. New England Journal of Medicine 357: 1221-1228
http://content.nejm.org/cgi/content/full/357/12/1221
The Social Determinants of Health

Early Life Experiences

Economy

Race and Ethnicity

Community

Health

Education

Income

Work

Housing

Robert Wood Johnson: Commission to Build a Healthier America

World Development Chart 2004

Make sense of development by viewing IHD statistics
with free software from www.gapminder.org
Relative Risk of Dying Before the Age of 65
By Income: United States

Life Expectancy at Age 45 by Income, Gender and Race (1979-1989)

The Social Determinants of Health

1 Connecticut 10.0
2= New Hampshire 10.5
2= Wyoming 10.5
4 Vermont 12.0
5 Maryland 12.3
6 New Jersey 12.8
7 Nebraska 13.6
8 Utah 13.9
9 North Dakota 14.4
10 Pennsylvania 14.5
11 Iowa 14.7
12 Virginia 14.8
13 Alaska 15.3
14 Wisconsin 15.5
15 Massachusetts 16.7
16 Maine 17.1
17 Minnesota 17.4
18 South Carolina 17.6
19 Nevada 17.9
20=Kansas 18.0
20=Washington 18.0
22 Colorado 18.2
23 Oregon 18.3
24 South Dakota 18.4
25 Ohio 18.7
26 Hawaii 18.9
27 Delaware 19.0
28= Illinois 19.5
28= Louisiana 19.5
30 Idaho 19.7
31 Oklahoma 20.3
32 Michigan 20.7
33= California 21.0
33= Florida 21.0
33= Montana 21.0
36 West Virginia 21.2
37 Rhode Island 22.2
38 Kentucky 22.4
39 Tennessee 23.1
40 Georgia 23.3
41 Missouri 23.8
42 North Carolina 24.5
43 New York 25.0
44 Texas 25.6
45 Arkansas 25.7
46 Alabama 25.8
47 Indiana 26.3
48 New Mexico 29.2
49 Arizona 31.3
50 Mississippi 31.9

United States 20.7

Children in Poverty

America’s Health Rankings 2010: http://www.americashealthrankings.org
**Children Living in Poverty: Tennessee and the United States**

- **USA**
- **Tennessee**

**2011 County Health Rankings:** [www.countyhealthrankings.org](http://www.countyhealthrankings.org)

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**Income Change in the United States: 1969 - 2009**

- **1969:** Ratio = 10.6:1
- **2009:** Ratio = 14.8:1

- **15.6%**
- **61.0%**

The Social Determinants of Health

- Early Life Experiences
- Economy
- Race and Ethnicity
- Community
- Housing
- Income
- Education
- Work

Robert Wood Johnson: Commission to Build a Healthier America

FIGURE 2
Decomposing the Top Decile US income Share into 3 Groups, 1913-2007

Income is defined as market income including capital gains.
Top 1% denotes the top percentile (families with annual income above $398,500 in 2007).
Top 5-1% denotes the next 4% (families with annual income between $155,400 and $398,500 in 2007).
Top 10-5% denotes the next 5% (bottom half of the top decile, families with annual income between $109,600 and $155,400 in 2007).
Life Expectancy at Age 25 by Educational Achievement

- Men: 6.8 yrs
- Women: 5.1 yrs

Infant Mortality by Mother’s Educational Status

- 0 - 11 years: 8.1/1000
- 12 years: 4.2/1000

Education Matters for Health: Robert Wood Johnson Foundation. September, 2009
### The Social Determinants of Health

#### Health vs. Education

- Health
- Education

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<table>
<thead>
<tr>
<th>Rank</th>
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<th>Percent</th>
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Percent of Adults over 25 with a college degree [www.fedstats.gov](http://www.fedstats.gov)
**Adults With “Some College”: Tennessee and the United States**

2011 County Health Rankings: [www.countyhealthrankings.org](http://www.countyhealthrankings.org)

**Percent of High School Sophomores Who Complete College in Ten Years Based on Parents’ Education Level**

Education Matters for Health: Robert Wood Johnson Foundation. September, 2009
Assuring Conditions in Which People Can Be Healthy

The Local Health Department of the Future and Your Role In It

1. “Public Health” is absolutely essential to improve the health of the American people;

2. To meet its future challenges, “Public Health” must “attack”, “refocus”, and “broaden”

3. With these changes, the local health department will once again become the most important part of our health system.
What is the Role of Public Health?

“What we as a society, do collectively to assure the conditions in which people can be healthy.”

Institute of Medicine
The Future of Public Health

What is the Role of the Local Health Department?

Your role is assure conditions in which people can be healthy
Your role is to improve the health of the American people
What is the Role of the Local Health Department?

1. Not really—my job is “health director”; or “to give immunizations” or “Dean of the College”; or . . . . . .

2. Trying to Change the Health of the American People is too big a challenge;

Virginia Health Bulletin: 1908

CAUSES OF DEATH
RICHMOND, VA.

276 TUBERCULOSIS

41 INFLUENZA

52 WHOOPING COUGH

75 CANCER

Simple Fever Gastroenteritis Typhoid
Life Expectancy

![Life Expectancy Graph]

- 1900: 40 years
- 1950: 60 years
- 2006: 80 years

30+ years increase in life expectancy.
"The Local Health Department of the Future . . .
and Your Role In It

“The Health Department of the future will be a . . .
department for the suppression of disease and death
and the promotion of general . . . health . . .
. . .not as at present a pseudo-charitable institution for the
conduct of a jumble of activities . . .
. . .The administrative head will be an expert . . . His
lieutenants will be [people] of training as deep and
broad as his own, each in their specialties.”

“The New Public Health” Page 156
By Hibbert Winslow Hill
1922
Randy Wykoff, MD, MPH & TM
Dean, College of Public Health
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