Impact of Chronic Diseases - Maine

Dora Anne Mills, MD, MPH
Maine

- Population 1.3 million
- 96% White
- 4% Native American, African American, Hispanic
- Rural
- Poor
Impact of Chronic Disease in Maine
What Are Chronic Diseases?

- Cardiovascular Disease (heart disease and stroke)
- Cancer
- Chronic Lung Disease (emphysema and asthma)
- Diabetes
Other Chronic Diseases?

- Dental Disease
- Depression
Chronic Diseases

- Leading causes of death and disability
- 75% of Mainers will die from 1 of 4 diseases – CVD, Cancer, Diabetes, Chronic Lung Disease
- Mostly preventable – Tobacco and Obesity
- Direct health care costs = 40% of Maine’s Health Care Budget
Cardiovascular Disease

- #1 cause of death and disability
- 40% of all deaths
- 25% of all hospital costs
Cancer

- #2 cause of death
- 65% due to Tobacco or Obesity
- Most are curable if screened, detected, and treated early
Leading 4 Cancers That Kill Maine People
Incidence And Mortality Rates
Age-Adjusted Rate Per 100,000 Population
Maine 2001-2003

Note: Mortality rates would be expected to decline only if incidence and/or percentage of late-stage disease declines (treatment advances have not recently been responsible for dramatic changes in survival.)
Diabetes

- 8% of adult Mainers now have diabetes
Lung Disease

- Asthma
- Emphysema, Chronic Obstructive Pulmonary Disease
Proportion of Adults With Asthma
Maine and U.S. - 2005

Maine: 10.2%
U.S.: 8.0%
Proportion of Children With Asthma
2004

Maine: 15.8%
U.S.: 11.6%
Dental Disease

- 1 in 3 Mainers over age 65 have lost all their teeth
- 40% of Maine 3\textsuperscript{rd} graders have tooth decay
- Highly associated with other chronic diseases
Depression
Mainers suffering from frequent mental distress are twice as likely to:

- Have Diabetes
- Be Tobacco Addicted
- Have Asthma
Effective Strategies
Primary Prevention Strategies

- Tobacco
- Physical Inactivity
- Poor Nutrition
Primary Prevention Strategies

- State and Community Interventions
- Health Communication
- Treatment
- Surveillance and Evaluation
1. State and Community Interventions
Statewide Interventions
Tobacco Tax

1991  $0.37
1997  $0.74
2001  $1.00
2004  $2.00
1997 – Some Tobacco Tax Revenues ($3 per capita) put aside for first state funds for tobacco prevention
1999 – $18 million ($17 per capita) from Tobacco Settlement Funds set aside for state funds for Tobacco and Obesity prevention
<table>
<thead>
<tr>
<th>Year</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>1981</td>
<td>Public meetings</td>
</tr>
<tr>
<td>1983</td>
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<tr>
<td>1985</td>
<td>Stores</td>
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<tr>
<td>1986</td>
<td>Most workplaces</td>
</tr>
<tr>
<td>1989</td>
<td>Hospitals, except psychiatric patients and hospitals</td>
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<tr>
<td>1999</td>
<td>Restaurants</td>
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<tr>
<td>2003</td>
<td>Bars</td>
</tr>
<tr>
<td>2005</td>
<td>All loopholes closed</td>
</tr>
</tbody>
</table>
2005 – All Indoor Public Places in Maine are Smokefree
Breathe easy, you’re in Maine.
All indoor public places are smoke-free.
2007 – Outdoor School Grounds are Smokefree
Community Interventions
2000 – Healthy Maine Partnerships

Maine’s Community Network for Chronic Disease Prevention
Healthy Maine Partnerships

- 28 Comprehensive Community Health Coalitions
- Cover all of Maine
- Funded with Tobacco Settlement and Federal Funds
- Tobacco, Obesity, Substance Abuse community interventions
Obesity Interventions
City/Town ordinances for walkable communities
Food policies for organizations
Bans on school vending machines
2. Health Communication
Goals

- Change culture
  - Secondhand smoke
  - Children watching TV
  - Walking
  - Portion Sizes

- Support community and statewide interventions

- Promote quitting Tobacco
A MESSAGE TO EVERY MAINE PARENT
We’re just getting started.

When it comes to giving you the facts about maintaining a healthy weight, we’re just getting started.

And for good reason: Over half of Maine adults are obese or overweight and nationally, the obesity rate for children has increased by 100% in just the last 20 years. With that comes heart disease, diabetes, high blood pressure and other severe health complications for our kids.

The only good news about childhood obesity is that it’s preventable. That’s why we launched Maine’s Healthy Weight Awareness campaign, so Maine parents could know about the real impacts of sugar and empty calories in sodas that contribute to obesity and being overweight. We recommended you cut back on your soda consumption or switch to healthier beverages.

But just drinking excessive amounts of soda is one of several factors contributing to an epidemic of unhealthy weight across our state. Excessive consumption of fast foods and large portions are also to blame.

It gets worse: Our youth are less active than ever before, due mostly to excessive “screen” time — spending too much time in front of a television, a computer or playing video games.

When you consider all this, is it any surprise that obesity is an epidemic among children?

In the weeks ahead, we’ll continue to give Maine parents more helpful information about keeping kids healthy and active.
These are athletic shoes.

Physical activity can be a flop.

Physical activity is a walk on the beach. A stroll around the yard. A trip around the block. And your heart will become stronger for it. In fact, anything you do—no matter how small—can begin to improve your health. It's that simple.
This is an exercise machine.

Simple steps toward better health.

When you have the chance, take the stairs. Your heart will beat faster. Your legs will get stronger. And your health will start to improve. In fact, anything you do—no matter how small—can begin to improve your health. It's that simple.
Maine has a weight problem. But we can do something about it. Start with the stairs. Take them. That's physical activity. Yeah, I know, it doesn't seem like much, but it is. Your heart beats faster, your legs get stronger. Got chores? Picking up around the house, that's good, too. You like music? Put some on and move around. It all counts. It's all physical activity. Anything you do—no matter how small—can begin to improve your health.

It's that simple.
This is not water.

A soda now and then is okay, but don’t overdo it—cut back or switch to a healthier beverage.

We may drink it like water, but a twelve ounce serving of cola can contain up to ten teaspoons of sugar and 150 empty calories. No wonder obesity is an epidemic among children.
QuickTime™ and a H.264 decompressor are needed to see this picture.
QuickTime™ and a Video decompressor are needed to see this picture.
QuickTime™ and a Video decompressor are needed to see this picture.
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3. Treatment Interventions
Effective Treatments

- Behavioral Counseling
- Medications
- Brief Messages by Health Professionals
- Intensive Interventions by Professionals
- Insurance Benefit Coverage
PTM Treatment Components

- Maine Tobacco HelpLine
- Medication Voucher Program
- Tobacco Treatment Training
- Chronic Disease Initiative
Social Support
- Health Professionals and Community
  - Treatment Basics Training
  - Clinical Outreach

Counseling
- Telephone Counseling / NRT
  - HelpLine
  - Medication Vouchers

Medications
- Tobacco Specialists
  - Treatment Specialist Training
    - Certification (A.L.A.)
Motivate Tobacco Users to Quit

Quit for your kids

Quit for your kids
Assist Tobacco Users to Quit

When you’re ready to quit, just call.

1-800-207-1230

The Maine Tobacco Helpline

The HelpLine offers support that can help you stay tobacco-free for life.

The Quit Kit can help by giving you:

- Quitting tips, like how to manage stress without tobacco
- Tips on helping someone else quit
- Things to do instead of using tobacco
- Information on nicotine replacement medication
- How to cope with cravings
- Facts about secondhand smoke
- Tips to help you stay tobacco-free
HelpLine Services

- For any Maine resident
- Ready to Quit 30 days Specialist
- 4 counseling sessions total
- Not Ready to Quit now – materials
- 7 days a week – 8am – 8pm
Percent of Adult Smokers in Maine Calling the Tobacco HelpLine each year, 2001–2006

- 2001: 0.8%
- 2002: 1.9%
- 2003: 2.9%
- 2004: 3.4%
- 2005: 6.6%
- 2006: 4.2%
Six-month Quit Rates by HelpLine Services Delivered

- No Assistance (PHS Guideline) (N=83)
- Mailed Quit Kit (N=107)
- HelpLine Counseling (N=345)

Percent Quit
95% Confidence Interval
"How Did You Hear About the HelpLine?"

- Media: 36%
- Provider: 23%
- Family, Friend, Past Caller: 27%
- Health or Community Organization: 3%
- Pharmacist: 5%
- Employer: 3%
- Other: 3%
Improved Treatment of Chronic Diseases
Care Model

- Decision Support
- Information Systems
- Self-Management Support
Diabetes
Decision Support & Information Systems

- Diabetes Registries
- Learning Collaboratives
Self-Management Support

- Diabetes Educators
- Diabetes Support Groups
4. Surveillance & Evaluation
Tobacco and Obesity

- Comprehensive Adult Tobacco Survey (phone – every 3 years)
- Behavioral Risk Factor Surveillance Survey (phone – every year)
- Comprehensive Youth Tobacco Survey (in schools – every 3 years)
- Simplified Youth Risk Behavior Survey (in schools – every 2 years)
Disease Surveillance

- Cancer – Registry and Vital Records
- Cardiovascular Disease – Hospitalizations and Vital Records
- Diabetes – Behavioral Risk Factor Surveillance System Survey and Vital Records
- Asthma – Behavioral Risk Factor Surveillance System Survey and Hospitalizations
Evidence of Impact
Tobacco Successes
Smoking Rates - High School Students

64% Drop!

1999 data is unweighted.

Smoking Rates - Middle School Students
Maine 1997-2007

73% Drop!

Smoking Rates, Middle School Students, Maine 1997-2007
Cigarette Consumption - Packs Sold Per Capita
Maine and US 1990-2006

Source: The Burden on Tobacco, Orzechowski and Walker
Maine Consumption of Cigarettes, Packs per Capita Sold

Maine Revenue Service, published in The Tax Burden On Tobacco, Orzechowski and Walker

Number of packs sold per capita

Year


117.5 116.1 114.5 108.5 101.6 102.3 100 101.1 94.5 85.5 82.9 81.2 79.6 74.6 72.4 71.5 64.8

* Excise Tax Increases
Cigarette Smoking Adults
Maine And US 1990-2005

<table>
<thead>
<tr>
<th>Year</th>
<th>Maine Adults</th>
<th>US Adults</th>
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<tbody>
<tr>
<td>1990</td>
<td>27.0%</td>
<td>23.0%</td>
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<tr>
<td>1992</td>
<td>26.1%</td>
<td>23.1%</td>
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<tr>
<td>1994</td>
<td>23.3%</td>
<td>22.2%</td>
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<tr>
<td>1996</td>
<td>24.7%</td>
<td>22.6%</td>
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<tr>
<td>1998</td>
<td>23.6%</td>
<td>22.7%</td>
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<tr>
<td>2000</td>
<td>25.0%</td>
<td>22.4%</td>
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<tr>
<td>2002</td>
<td>25.3%</td>
<td>23.4%</td>
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<tr>
<td>2004</td>
<td>20.9%</td>
<td>21.0%</td>
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<tr>
<td>2010</td>
<td>19%</td>
<td>20.6%</td>
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Baseline: 1990
Healthy Maine 2010 Target: 20.8%
Proportion Of Maine Adults Age 18 And Older Who Are Obese Or Overweight 1990-2005

Proportion Of Maine Adults Who Are Overweight
Proportion Of Maine Adults Who Are Obese
Proportion of Maine and US Adults Who Engage in No Leisure Time Physical Activity 1994-2005

Maine

US

1994 40.7%
1996 34.0%
1998 27.7%
2000 27.2%
2001 26.9%
2002 25.7%
2003 24.4%
2004 23.1%
2005 22.8%
2010 Target 20%

1994 28.8%
1996 27.8%
1998 27.7%
2000 26.9%
2001 25.7%
2002 24.4%
2003 23.1%
2004 22.8%
2005 22.3%
Proportion Of Maine And US Adults Consuming At Least 5 Or More Servings Of Fruits And Vegetables A Day
1994-2005

<table>
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<tr>
<th>Year</th>
<th>Maine Proportion</th>
<th>US Proportion</th>
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<td>1994</td>
<td>21.1%</td>
<td>28.7%</td>
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<td>26.2%</td>
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<td>1998</td>
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<td>2003</td>
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<tr>
<td>2005</td>
<td>27.0%</td>
<td>23.1%</td>
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Cardiovascular Disease
Coronary Heart Disease Deaths
Age-Adjusted Rate Per 100,000 Population
Maine And US Selected Years 1990-2004

Note: Coronary Heart Disease = ICD-9 Codes 402, 410-414, 429.2; and for years 1999 and 2000, ICD-10/11, I20-I25.
Stroke Deaths
Age-Adjusted Rate Per 100,000 Population
Maine And US 1990-2005

Note: Stroke = ICD-9 Codes 430-438; and for years 1999 and 2000, ICD-10 I60-I69.

* Indicates preliminary data

Maine Stroke Deaths
US Stroke Deaths

1990: 59.6, 62.9
1992: 58.6, 60.7
1994: 58.0, 60.9
1996: 55.7, 61.5
1998: 54.2, 61.0
2000*: 55.5, 59.8
2002: 56.6, 58.7
2004: 50.9
Overall Cancer Incidence Rates
Age-Adjusted Rate Per 100,000 Population
Maine And US 1990-2003

<table>
<thead>
<tr>
<th>Year</th>
<th>Maine Rate</th>
<th>US Rate</th>
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<tbody>
<tr>
<td>1990</td>
<td>489.5</td>
<td>510.8</td>
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<tr>
<td>1992</td>
<td>446.0</td>
<td>467.7</td>
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<td>1994</td>
<td>456.3</td>
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<td></td>
<td>500.8</td>
<td>400.0</td>
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</table>

Source: Maine Department of Human Services, Bureau of Health, Maine Cancer Registry. SEER (Surveillance Epidemiology and End Results) - whites only, NCHS (National Center for Health Statistics) - for Maine and for US whites at http://wonder.cdc.gov; Age-adjusted rate per 100,000.

Slightly Lower Incidence Rate
Overall Cancer Deaths
Age-Adjusted Rate Per 100,000 Population
Maine And US 1990-2003

*Note: Because 1999 data is coded according to ICD-10 Coding rules and 1990-1998 is coded using ICD-9 coding rules, comparisons between 1998 and 1999 may not be accurate. Mortality rates would be expected to decline only if incidence and/or percentage of late-stage disease declines (treatment advances have not recently been responsible for dramatic changes in survival).
Proportion Of Women Aged 18 And Older Receiving A Pap Smear In The Past 3 Years
Maine and US  1992-2004

Maine Women

US Women

<table>
<thead>
<tr>
<th>Year</th>
<th>Maine</th>
<th>US</th>
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<tbody>
<tr>
<td>1992</td>
<td>85.5%</td>
<td>84.1%</td>
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<tr>
<td>1993</td>
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<td>1995</td>
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<tr>
<td>1996</td>
<td>83.7%</td>
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<tr>
<td>1997</td>
<td>88.1%</td>
<td>84.8%</td>
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<td>85.5%</td>
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<tr>
<td>2002</td>
<td>91.7%</td>
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<td>2004</td>
<td>88.8%</td>
<td>85.9%</td>
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Healthy Maine 2010 Target: 92.0%
Mammogram And Clinical Breast Exam Women Aged 50+
Proportion Receiving Both Within The Preceding Year

- Maine Women
- US Women

<table>
<thead>
<tr>
<th>Year</th>
<th>Maine</th>
<th>US</th>
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<tbody>
<tr>
<td>1990</td>
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<td>2000</td>
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<tr>
<td>2001</td>
<td>62.3%</td>
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</tr>
<tr>
<td>2004</td>
<td>61.6%</td>
<td>70%</td>
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</table>
Proportion of Adults Aged 50+ Who Report Having Colon Cancer Screening (Fecal Blood Test Within 2 Years or Sigmoidoscopy/Colonoscopy Within 5 Years) Maine 1998 and 2004

1998: 51%
2004: 66%
Percent of Cancer Diagnosed in Local vs. Distant Stages - Colorectal Cancer

- **Maine 1995-1997**
  - Local: 37%
  - Distant: 17%

- **Maine 2001-2003**
  - Local: 44%
  - Distant: 16%
Diabetes
Diabetes Deaths
Age-Adjusted Rate Per 100,000 Population
Maine 1990-2004

* Indicates preliminary data.

65.0
Respiratory Disease
Asthma Hospitalization Rates
Age-Adjusted Rate Per 10,000 Population
Maine and US Selected Years 1990-2003

- Maine
- Maine Medicaid
- US

Healthy Maine 2010 Target

- 1990: 13.9
- 1991: 13.0
- 1992: 13.6
- 1993: 13.3
- 1994: 11.9
- 1995: 11.8
- 1996: 11.6
- 1997: 10.9
- 1998: 9.5
- 1999: 18.8
- 2000: 17.6
- 2003: 10.3
- Healthy Maine 2010 Target: 6.5
Chronic Obstructive Pulmonary Disease Deaths
Age-Adjusted Rate Per 100,000 Population
Maine and US 1990-2004

Maine Chronic Obstructive Pulmonary Disease (COPD) Deaths
US Chronic Obstructive Pulmonary Disease (COPD) Deaths

*Indicates Preliminary Data

Note: Chronic Obstructive Pulmonary Disease = ICD-9 Codes 490-496.
Questions & Answers