Cancer in Philadelphia: Surveillance, prevention and control

Philadelphia Department of Public Health

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Health Commissioner

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Cancer in Philadelphia

- Overview
  - Cancer as a public health issue
  - Philadelphia statistics
    - Compared to other cities
    - Over time
  - Risk factors, screening, and prevention
  - Future directions
Cancer as a public health issue
Cancer = 2nd leading cause of death

### Leading Causes of Death: Philadelphia, 2005

- **Cancers**: 22%
- **Heart Disease**: 37%
- **Stroke**: 27%
- **Unintentional Injuries**: 6%
- **Chronic lung disease**: 4%
- **All other causes**: 4%

**Philadelphia (2005)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Death Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total deaths</td>
<td>15,459</td>
</tr>
<tr>
<td>All cancer deaths</td>
<td>3432</td>
</tr>
<tr>
<td>Lung cancer deaths</td>
<td>991</td>
</tr>
<tr>
<td>Colorectal cancer deaths</td>
<td>353</td>
</tr>
<tr>
<td>Breast cancer deaths</td>
<td>264</td>
</tr>
<tr>
<td>Prostate cancer deaths</td>
<td>200</td>
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</table>
Approximately half of cancer deaths are preventable by making lifestyle changes and getting recommended screening tests.
Compared to non-smokers, smokers are:

- 2x as likely to develop cervical cancer (females)
- 5-11x as likely to develop oral cancer
- 7-8x as likely to develop esophageal cancer
- 13-23x as likely to develop lung cancer

Other behavioral factors also increase risk

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>Associated cancer</th>
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</thead>
<tbody>
<tr>
<td>Overweight and obesity</td>
<td>Breast, colorectal, uterine, esophageal</td>
</tr>
<tr>
<td>Alcohol overuse</td>
<td>Breast, oral, esophageal</td>
</tr>
<tr>
<td>Sexually Transmitted Diseases (STDs)</td>
<td>Cervical</td>
</tr>
</tbody>
</table>

American Cancer Society, [www.cancer.org](http://www.cancer.org)
Screening can reduce disease & death

- Colon cancer screening, ≥ 50 yrs
  - Fecal blood testing every year
  - Sigmoidoscopy every 5 years
  - Barium enema every 5 years
  - Colonoscopy every 10 years

- Breast cancer screening, women ≥ 40 yrs
  - Mammogram every 1-2 years

- Cervical cancer screening, women ≥ 21 yrs
  - Pap smear every 1-3 years

U.S. Preventive Services Task Force, 2008
First vaccine to prevent cancer

• Human Papilloma Virus (HPV) vaccine
  – High-risk HPV causes 70% of cervical cancer
  – Transmitted through sexual contact
  – 3-shot series for women 11-26 years
    100% effective at preventing pre-cancerous changes due to high-risk HPV types
Philadelphia statistics
Philadelphia vs. 4 other urban counties

Cancer Incidence, 2001-2005

Age-adjusted cases/100,000 persons

Cancer incidence
Lung cancer incidence
Breast cancer incidence
Colon cancer incidence

Philadelphia
D.C.
LA county
NY county
Wayne county

SEER 2001-2005
Philadelphia vs. 6 other major cities

Cancer mortality rates, 2004

Cancer mortality

Lung cancer mortality

Breast cancer mortality

NCHS VSRS 2004
Cancer mortality and poverty

Cancer mortality rates as a function of poverty for 7 major cities

- Cancer mortality
- Lung cancer mortality
- Breast cancer mortality

NCHS VSRS 2004
Philadelphia’s cancer incidence over time


Philadelphia State SEER data, 1990-2005

- Lung cancer
- Breast cancer
- Prostate cancer
- Colorectal cancer
Philadelphia’s cancer incidence over time


Cases/100,000 persons (unadjusted)

Philadelphia State SEER data, 1990-2005
Philadelphia’s cancer mortality over time


Excess mortality and disparities

- Philadelphia cancer mortality rates are 1.5-2x higher than Healthy People 2010 goals
  - Lung, breast, colorectal cancers; total cancer mortality

- Racial disparity in total cancer mortality*
  - Black: 330.7 deaths/100,000 persons
  - White: 249.8 deaths/100,000 persons

*adjusted to White age distribution
Risk factors, screening, prevention
Preventable risk factors among adults

Risk factors among Philadelphia adults

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<tbody>
<tr>
<td>Obesity</td>
<td>28.0</td>
<td>27.8</td>
<td>26.3</td>
<td>15.0</td>
</tr>
<tr>
<td>Smoker</td>
<td>24.8</td>
<td>25.9</td>
<td>19.8</td>
<td>12.0</td>
</tr>
<tr>
<td>Binge drinking in past month</td>
<td>22.5</td>
<td>13.3</td>
<td>13.4</td>
<td></td>
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PHMC Household Health Survey, 2002/06; BRFS 2006, HP 2010
Preventable risk factors among children

Risk factors among Philadelphia children

PHMC Household Health Survey, 2002/06; YRBS 2003/07, HP 2010
Recommended cancer screening among Philadelphia adults

PHMC Household Health Survey, 2002, 2006; BRFS 2006, HP 2010
Cancer prevention activities

- Ambulatory Health Services
  - Cancer screenings
  - Smoking cessation
  - STD screening and treatment
  - HPV vaccination

- Division of Disease Control
  - School-based STD screening

- Division of Chronic Disease Prevention
  - Coalitions to promote fitness, nutrition, policy change
  - Menu labeling law
Tobacco control and prevention

- Funded via Master Settlement Agreement
- Cessation
  - ~600 complete program/yr → 45% quit
- Education, outreach, counter-marketing
  - www.smokefreephilly.org
  - 215-683-LIVE
- Policy/advocacy
  - Smoke Free Philly Coalition
Youth tobacco sales

- Local investigations
  - 20% of stores city-wide
  - 40% of stores in SW Philly
Future directions
Surveillance

- Analyze state-city cancer data yearly
- Incorporate cancer and chronic disease data into neighborhood health profiles
- Amend Vital Statistics report
  - Actual causes of death
- Monitor HPV vaccine take-up
Tobacco control and prevention

• Advocate for increased portion of Master Settlement Agreement funds

• Partner with state for free nicotine replacement via quit line
  – 1-800-QUIT-NOW (784-8669)

• Implement new public health media campaign targeted at women 15-44 years

• Explore other regulatory approaches