Health of Boston Special Report: Cancer Among City of Boston Residents, 1999-2013

Board of Health
Boston Public Health Commission
September 12, 2018

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Mary Bovenzi, Chronic Disease Prevention and Control
City of Boston’s local health agency:
The mission of the Boston Public Health Commission is to protect, preserve, and promote the health and well-being of all Boston residents, particularly the most vulnerable.

Research and Evaluation Office: Publishes biennial Health of Boston reports. Provides research, public health surveillance, analysis and interpretation of public health data, and program evaluation.

Chronic Disease Prevention and Control program: Focuses on primary and secondary prevention of chronic diseases like obesity, diabetes, cancer and heart disease by promoting healthy eating, active living and early detection/screening
Health of Boston Special Report:
Cancer Among City of Boston Residents, 1999-2013

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All Cancer Incidence and Mortality by Year, 1999-2013

† Age-adjusted rates per 100,000 residents

NOTE: Solid lines represent linear change over time (p<0.05) I-11%, M-22%, M9915-27%
DATA SOURCES: Boston Resident Deaths, Massachusetts Department of Public Health; Cancer Registry, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
All Cancer Mortality by Race/Ethnicity and Year, 1999-2013

Deaths per 100,000 Residents

†Age-adjusted rates per 100,000 residents
Solid lines represent linear change over time (p<0.05) B-23% W-21% 9915 B -30% 9915 W -29%
DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Lung Cancer Incidence and Mortality by 3-Year Time Periods, 1999-2013

† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Solid lines represent linear change over time (p<0.05) I-15%, M-28%, M9915-37%
DATA SOURCES: Boston Resident Deaths, Massachusetts Department of Public Health; Cancer Registry, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Lung Cancer Mortality by Race/Ethnicity, 2011-2013 combined

*Statistically significant difference when comparisons are made between racial/ethnic groups
A-40% L-57% 1415 B-30% 1415 L-63%
† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Bars with patterns indicate the reference group within each selected indicator.
DATA SOURCE Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Female Breast Cancer Incidence and Mortality by 3-Year Time Periods, 1999-2013

† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Solid lines represent linear change over time (p<0.05) M-32%, M9915-41%
DATA SOURCES: Boston Resident Deaths, Massachusetts Department of Public Health; Cancer Registry, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Female Breast Cancer Mortality by Race/Ethnicity, 2011-2013 combined

*Statistically significant difference when comparisons are made between racial/ethnic groups
A-69% L-69% 1415 L-65%
† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Bars with patterns indicate the reference group within each selected indicator.
DATA SOURCE Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Premature (under age 65) Female Breast Cancer Mortality, 2011-2013 combined

***Data for Asian residents not shown due to sample limitations
* Statistically significant difference when comparisons are made between racial/ethnic groups B+78%>W   9910+78%
† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Bars with patterns indicate the reference group within each selected indicator.
DATA SOURCE Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Prostate Cancer Incidence and Mortality by 3-Year Time Periods, 1999-2013

† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Solid lines represent linear change over time (p<0.05) I-27%, M-24%, M9915-30%
DATA SOURCES: Boston Resident Deaths, Massachusetts Department of Public Health; Cancer Registry, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Prostate Cancer Incidence by Race/Ethnicity, 2011-2013 combined

*Statistically significant difference when comparisons are made between racial/ethnic groups
A -39%  B +113%  L +32%
† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Bars with patterns indicate the reference group within each selected indicator.
DATA SOURCE Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Statistically significant difference when comparisons are made between racial/ethnic groups B +165% 1415 B +158%

**Data for Asian residents not shown due to sample limitations
† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Bars with patterns indicate the reference group within each selected indicator.
DATA SOURCE Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
BPHC’s cancer work plan framework

Looking at each cancer type:

1. **Data/program review**: Identify priority population: Who in Boston disproportionally affected. Are there evidenced-based program recommendations and/or MA statewide goals for this cancer?

2. **Gap analysis**: What’s already happening in Boston through our partners to reach priority population? Where are the gaps that Public Health (BPHC) can play a role to fill?

3. **Set goals & develop program**: Engage public and provider communities in the development of educational messaging, strategies, and advocacy components

4. **Advised by new BPHC Cancer Advisory Group (CAG)**: Provides oversight, community engagement, provider engagement and oncology specialty expertise.
   - CAG’s 1st meeting will be on Sept 21st; 25-30 members including type-specific oncology specialists
Getting started: Prostate cancer snapshot

• Priority population:
  • High-risk men (African American men and men with a family history)
  • Family and community members that support men in their health and quality of life

• BPHC role:
  • Develop and support public messaging on prostate health, awareness of risk factors, screening recommendations, importance of shared decision making with providers
  • Support provider education through increasing awareness of prostate cancer early detection recommendations
  • Participate on *Mass DPH Comp Cancer Prevention and Control Network's* Prostate Cancer work group. BPHC’s work plan will align with MA statewide goals

• Current work:
  • Spring/summer 2018: Focus groups with at-risk men and caregivers to develop public messaging
  • Fall 2018: CAG meets to advise on plan. Engage with providers to develop provider messaging. Develop public messages/materials & outreach plan
Breast Cancer snapshot

• Priority population
  • Non-white women, especially black women, experiencing the highest inequities in breast cancer outcomes

• BPHC role
  • Partner with organization & coalition already leading breast cancer work: Boston Breast Cancer Equity Coalition (BBCEC) on implementation of NIH-funded TRIP project (BMC, BWH, BIDMC, DFCI, MGH, Tufts)
  • Leverage BPHC’s expertise in community engagement to support BBCEC work. Merge BPHC’s *Pink and Black Education and Support Network* into BBCEC

• Current work
  • Co-lead BBCEC’s community engagement work
  • Close out Pink & Black work plan and promote survivorship video
  • Continue working closely with partners on projects with joint goals
Future focus

• Plan to use framework to look at colorectal, lung and liver cancers in more depth
  • Prioritized Prostate and Breast because of BPHC staff expertise and existing partnership opportunities.
  • CAG will support prioritizing future work areas
Questions? Thoughts? Ideas?
Thank you!

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Public High School Students Who Smoke Cigarettes by Year

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Adults Who Smoke Cigarettes by Year

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Overweight or Obese Adults by Year

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Heavy Drinking among Adults by Year

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

*Statistically significant difference when comparisons are made between racial/ethnic groups

NOTE: Bars with patterns indicate the reference group within each selected indicator.
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Colonoscopy or Sigmoidoscopy, Ages 50-75, During the Past 5 Years by Year

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
All Cancer Incidence by Race/Ethnicity and Year, 1999-2013

Solid lines represent linear change over time (p<0.05) W-14%

DATA SOURCES: Cancer Registry, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

†Age-adjusted rates per 100,000 residents
Lung Cancer Incidence by Race/Ethnicity, 2011-2013 combined

*Statistically significant difference when comparisons are made between racial/ethnic groups
A-30% B-20% L-57%
† Average Annual Age-adjusted rates per 100,000 residents
NOTE: Bars with patterns indicate the reference group within each selected indicator.
DATA SOURCES: Cancer Registry, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Female Breast Cancer Incidence by Race/Ethnicity, 2011-2013 combined

*Statistically significant difference when comparisons are made between racial/ethnic groups
A-28% L-39%
† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Bars with patterns indicate the reference group within each selected indicator.
DATA SOURCES: Cancer Registry, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Colorectal Cancer Incidence and Mortality by 3-Year Time Periods, 1999-2013

† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Solid lines represent linear change over time (p<0.05) I-37%, M-31%, M9915-43%
DATA SOURCES: Boston Resident Deaths, Massachusetts Department of Public Health; Cancer Registry, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Colorectal Cancer Incidence by Race/Ethnicity, 2011-2013 combined

*Statistically significant difference when comparisons are made between racial/ethnic groups  L-27%
† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Bars with patterns indicate the reference group within each selected indicator.
DATA SOURCES: Cancer Registry, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Colorectal Cancer Mortality by Race/Ethnicity, 2011-2013

*Statistically significant difference when comparisons are made between racial/ethnic groups

B +44% 1415 L-62%

† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Bars with patterns indicate the reference group within each selected indicator.
DATA SOURCE Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Liver Cancer Incidence and Mortality by 3-Year Time Periods, 1999-2013

† Average Annual Age-adjusted rates

NOTE: Solid lines represent linear change over time (p<0.05) I+52%, M+34%, M9915+35%
DATA SOURCES: Boston Resident Deaths, Massachusetts Department of Public Health; Cancer Registry, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Liver Cancer Incidence by Race/Ethnicity, 2011-2013 combined

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>New Cases per 100,000 residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston</td>
<td>*</td>
</tr>
<tr>
<td>Asian</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>*</td>
</tr>
<tr>
<td>Latino</td>
<td>*</td>
</tr>
<tr>
<td>White</td>
<td></td>
</tr>
</tbody>
</table>

*Statistically significant difference when comparisons are made between racial/ethnic groups
A +134% B +48% L+59%
† Average Annual Age-adjusted rates per 100,000 residents
NOTE: Bars with patterns indicate the reference group within each selected indicator.
DATA SOURCE Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office
Liver Cancer Mortality by Race/Ethnicity, 2011-2013 combined

*Statistically significant difference when comparisons are made between racial/ethnic groups
A + 101% 1415 A +102%
† Average Annual Age-adjusted rates per 100,000 residents

NOTE: Bars with patterns indicate the reference group within each selected indicator.
DATA SOURCE Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office