PEATT Pilot Project
PFAS TESTING
in the
Warrington, Warminster, Horsham areas
Pennsylvania Department of Health
September 13, 2018
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State Epidemiologist
• CDC/ATSDR has developed a toolkit to conduct biomonitoring for PFAS
• Pennsylvania was chosen for the pilot program to evaluate the toolkit
• Feedback from this project-
  ▪ Used to improve the toolkit
  ▪ Will support a larger, national study
Project Information

• We are testing residents exposed through drinking water
• We can only test 500 people
• People must have lived in affected area prior to July 1, 2016
600 Households selected for the project

- Randomly selected
- Two rounds -
  - During month of May
    - Invitation letters sent to 350 households
    - Given a reminder letter
    - Invitation letters then sent to 250 households
  - 600 total households
  - 276 returned forms expressing interest
  - 584 eligible participants in project
Project information

- Why not test EVERYONE in the community?
  - Can only do 500 per the pilot grant funding
  - We need a sample of respondents representing the entire community
  - This gives a “snapshot” of the community
- Why not accept volunteers?
  - Likely to bias the study findings
Progress so far...

• As of September 11th...
  ▪ Received consent forms from 302 participants
  ▪ 213 participants have given blood samples
  ▪ 80 participants still need to provide blood samples
  ▪ NO questionnaires or informed consents will be accepted after September 15th
  ▪ Testing will END on September 30th
  ▪ ALL CLINIC APPOINTMENTS must be scheduled prior to September 30th
Laboratory Analysis

- Serum samples being analyzed by New York State Public Health Department Laboratory
  - Check each sample reading for accuracy
  - Sometimes run samples twice

- Results sent to PA DOH
Laboratory Analysis

• We communicate individual results by U.S. mail
• Participants receive a packet- results and PFAS information
  ▪ Parents receive results for children under age 17
  ▪ Teenagers age 18 and 19 receive own results

• We help to interpret the results and compare them to the national readings
• Results Table in Letter
• Will show individual levels
  ▪ Can compare to national average in age category
  ▪ Individual result **BOLD** if higher than 95th percentile for age category nationally
Reading Your Results

For an ADULT age 20 or older (unit: microgram/L)

<table>
<thead>
<tr>
<th>PFAS chemicals measured in your blood</th>
<th>Concentration found in your blood</th>
<th>US Population - Age groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Geometric mean</td>
<td>95th percentile</td>
</tr>
<tr>
<td>Perfluorooctanoic acid (PFOA)</td>
<td>3.52</td>
<td>1.92</td>
</tr>
<tr>
<td>Perfluorooctanesulfonic acid (PFOS)</td>
<td>9.60</td>
<td>3.88</td>
</tr>
<tr>
<td>Perfluorohexane sulfonic acid (PFHxS)</td>
<td><strong>8.37</strong></td>
<td>0.84</td>
</tr>
<tr>
<td>Perfluorononanoic acid (PFNA)</td>
<td>0.80</td>
<td>0.79</td>
</tr>
<tr>
<td>Perfluorobutanesulfonic acid (PFBuS)</td>
<td>ND</td>
<td>*</td>
</tr>
<tr>
<td>Perfluorodecanoic acid (PFDeA)</td>
<td>ND</td>
<td>*</td>
</tr>
<tr>
<td>Perfluorodecanoic acid (PFDoA)</td>
<td>ND</td>
<td>*</td>
</tr>
<tr>
<td>Perfluoroheptanoic acid (PFHpA)</td>
<td>ND</td>
<td>*</td>
</tr>
<tr>
<td>Perfluorooctane sulfonamide (PFOSA)</td>
<td>ND</td>
<td>*</td>
</tr>
<tr>
<td>2-(N-Methyl-perfluorooctane sulfonamido)acetic acid (MeFOSAA)</td>
<td>ND</td>
<td>*</td>
</tr>
<tr>
<td>Perfluoroundecanoic acid (PFUA)</td>
<td><strong>0.95</strong></td>
<td>*</td>
</tr>
</tbody>
</table>

This is the national average
95% of population is below this number

ND or * means “non detect”- levels are so tiny they cannot be detected (<0.01)

Match the colored columns
Your number will be in italicized bold if you exceed the 95th percentile
PFAS Health Risks

• Studies are inconsistent in determining health effects from PFAS exposure.

• Most studies involve animals.

• Human population studies show evidence of association between PFAS and:
  - Altered serum cholesterol (i.e. increased cholesterol levels)
  - Developmental defects and low birth weights
  - Liver damage
  - Endocrine disruptions
  - Cancer

• Our studies in the area did not show a consistent pattern for cancers.
Summary of prior cancer studies in the area

Zip code based (18974, 18976, & 19044) cancer data review (1985-2013) provided an inconclusive picture

- Increases in some cancer types and decreases in others
- Results were not consistent across time periods, genders, or zip codes
- Estimates were based on small numbers – low reliability
Summary of prior cancer studies in the area

A refined, water service area based review (1995-2014) using geocoded cancer incidence data also did not provide any consistent result.

- Results did not indicate consistently higher incidence rates in all water service areas for any cancer type.
- No consistently higher incidence rates for a given cancer in both sexes.
• [www.health.pa.gov/My%20Health/Environmental%20Health/Pages/default.aspx](http://www.health.pa.gov/My%20Health/Environmental%20Health/Pages/default.aspx)

  - PFAS Exposure Assessment Technical Tools Pilot Program
  - Cancer Data Review (1985-2013)
  - Addendum 1 to Cancer Data Review (1985-2013)
  - Addendum 2 to Cancer Data Review
  - Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Fact Sheet
  - Family Tree of perfluoroalkyl and polyfluoroalkyl substances (PFAS)
Contact Information

Should you have any questions or concerns, feel free to contact us at env.health.concern@pa.gov or by phone at 717-787-3350 (ask for Susan Schrack Wood)
• Dr. Sharon Watkins
• Dr. Anil Nair
• Dr. Farhad Ahmed
• Dr. Marshal Ma
• Susan Schrack Wood
Questions?