Maine Chapter

INCORPORATED IN MAINE

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®

30 Association Drive, Box 190
Manchester, ME 04351
office: 207-622-3374

www.maineaap.org

Testimony in support of LD 582 by Sydney R. Sewall, MD MPH (Hallowell)

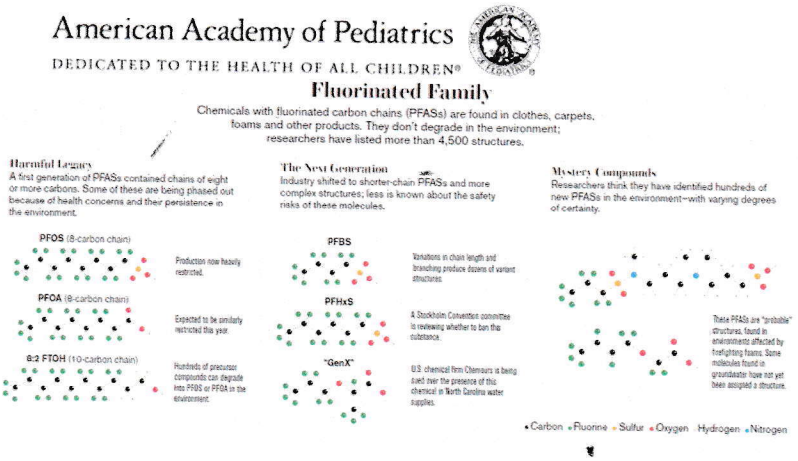
Senator Bailey, Rep. Mathieson and members of the Health Coverage, Insurance & Financial Services Committee --

My name is Syd Sewall, and I am a nearly retired Pediatrician who remains active in Maine AAP. Our organization represents the hundreds of physicians and nurses who promote child health and preventive care in our state. In my decades of practice in the Central Maine area I have witnessed a huge change in the major challenges facing Pediatricians. The most serious and life-threatening infectious diseases have almost disappeared due to new effective vaccines. However, we now contend with an increasing prevalence of life-changing **chronic conditions** in our patients – especially developmental disabilities and obesity. The etiology of these conditions is multifactorial, but exposure to environmental contaminants is likely contributory.

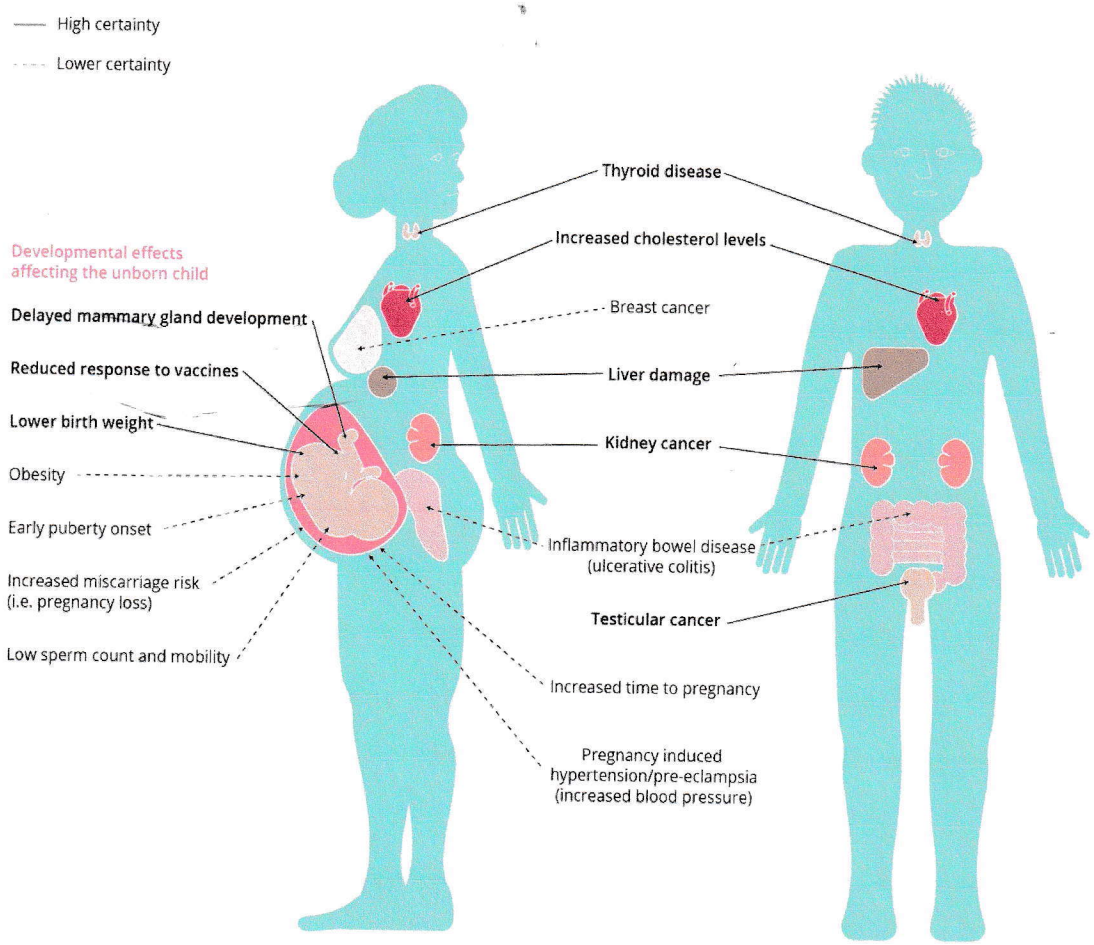
Some of you may remember when the 2007 biomonitoring study titled **Body of Evidence** was distributed to all the members of the legislature. Thirteen Maine citizens (including a state representative) had their body fluids tested for 71 different chemicals. These included PDBE's, phthalates, PFC's, and heavy metals. The volunteers were surprised to find that they ALL had toxins in their bodies – with an average of 36 different substances present in each subject.

Biomonitoring studies don't have the ability to prove health effects, but they do point out the fact that we ALL are unwilling participants in a somewhat risky experiment, where multiple chemicals with some degree of toxicity have access to our cells and their complex machinery. "Better living through chemistry" was our nation's motto in the 1950's, and pre-marketing testing was not required. The use of products was presumed to be safe until toxic effects became obvious. We are still unsure of all the unintended consequences, but scientists and clinicians increasingly make links between chemical exposure and poor health outcomes – especially in children.

It's not easy to get definitive outcome data regarding toxins like PFAS. They are actually a class of compounds -- not just *one* chemical.



Which ones should you measure? How do you accurately assess exposure? Is there a dose-response curve and a threshold below which exposures are safe? What outcomes should be assessed? Epidemiologic studies in humans are very challenging, with the result that much of the data used to answer these questions is from animal studies. Examining all the evidence, however, toxicologists have had to repeatedly lower the acceptable level in public water supplies, as we have seen. Available data supports an association between PFAS intake and multiple health issues:



European Environment Agency 2019

As we have seen in the Fairfield area and in Brunswick, PFAS has some unique properties that make it difficult to control once it's in the environment. The fluorine-carbon bonds are incredibly stable, resulting in these substances having **long half-lives** ("forever chemicals"). Equally disturbing their **environmental mobility** which allows them to penetrate through geologic barriers and spread contamination. PFAS from the Kennebec, for example, has polluted the aquafer which provides Hallowell's water supply – my hometown, I would guess that 100% of Mainers would test positive if we did a biomonitoring study today.

Should we all be tested? NO, since our ability to definitively interpret blood levels is limited. Some of the family wells near where sludge was spread, however, have had water levels over a **thousand times** higher than the current safety threshold. Individuals with known high or ultra-high exposures are likely to have blood levels that measurably increase their risk for the health conditions described above.

Putting all the data together the **National Academy of Sciences Engineering and Medicine** recommends that testing be done for individuals who live near contaminated areas -- farms where sludge was spread, landfills, incinerators, airports, and military bases – and those with occupational exposures (like firefighters).

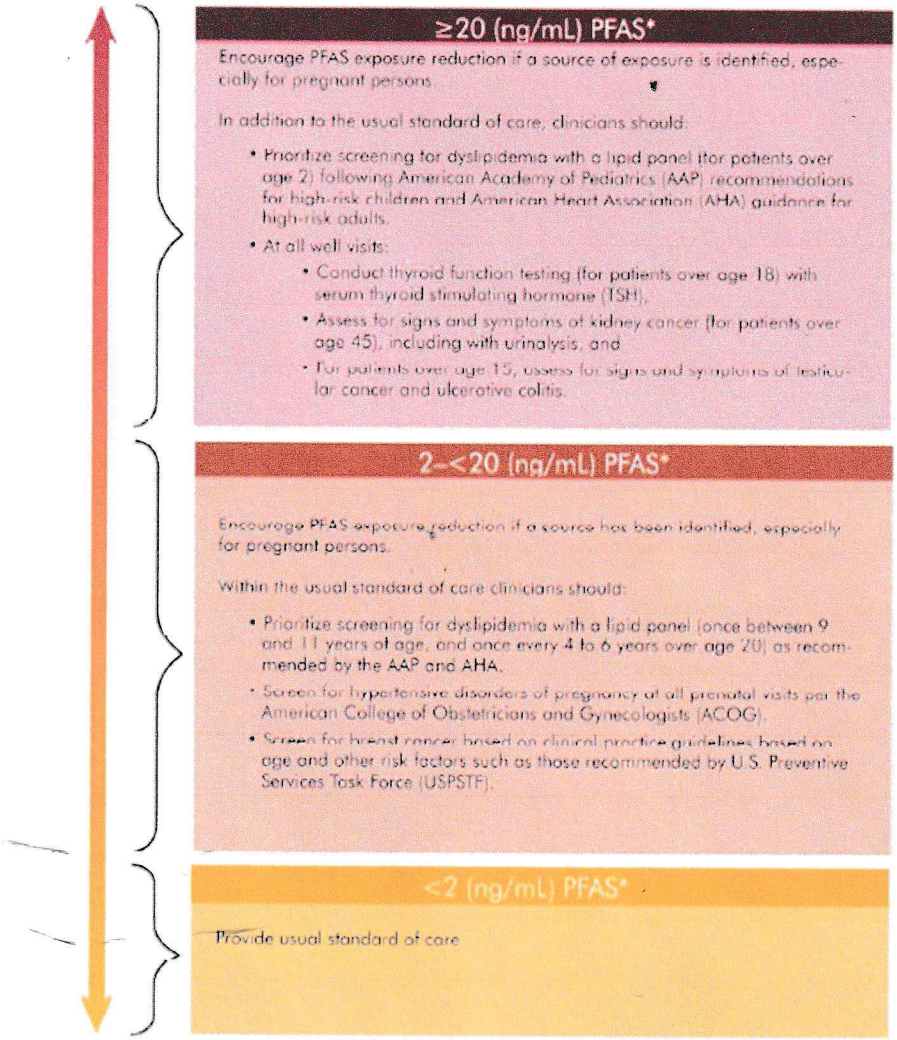
The **NAS** guidance goes on to provide clinicians with a guide for interpreting the results (see attached). These chronic health conditions are all multifactorial, with PFAS being an added risk factor – very much like having a positive family history. Possessing this knowledge should result in more proactive screening and the prevention of negative outcomes.

Hopefully, ongoing human epidemiologic studies will improve our ability to interpret blood levels and help guide our clinical approach. We already have enough data, however, to support the need for testing individuals suspected of having high exposures – and to justify insurance coverage of PFAS blood levels. . The Maine AAP urges you to recommend passing LD 582.

Sincerely,

Sydney R. Sewall, MD MPH
Instructor in Pediatrics, Maine-Dartmouth Family Medicine Program

Attachment – NAS Guidance



* Simple additive sum of MeFOSAA, PFHxS, PFOA (linear and branched isomers), PFDA, PFUnDA, PFOS (linear and branched isomers), and PFNA in serum or plasma

FIGURE S-6 Clinical guidance for follow-up with patients after PFAS testing.
NOTE: MeFOSAA = methylperfluorooctane sulfonamidoacetic acid; PFDA = perfluorodecanoic acid; PFHxS = perfluorohexane sulfonic acid, PFNA = perfluorononanoic acid; PFOA = perfluorooctanoic acid; PFOS = perfluorooctanesulfonic acid; PFUnDA = perfluoroundecanoic acid.