STATE OF NEW HAMPSHIRE

DEPARTMENT OF HEALTH AND HUMAN SERVICES

DIVISION OF PUBLIC HEALTH SERVICES

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Dear Health Care Provider:

This letter is to provide you with more information about perfluoroalkyl substances (PFAS), formally called perfluorochemicals (PFCs). PFAS are a group of synthetic chemicals that have been used for decades to manufacture household and commercial products that resist heat, oil, stains, grease, and water. As you may already be aware, a number of New Hampshire communities, such as the Seacoast, Merrimack, Litchfield, and other southern NH communities, have identified PFAS contamination in drinking water. This has raised concerns about possible health impacts and questions about how to monitor an exposed individual's health.

Studies in humans and animals have examined a large number of health problems possibly associated with PFAS exposure. The science is still developing, and further research is underway by academic and governmental agencies to confirm how PFAS may impact a person's health. The research suggests that high levels of certain PFAS may contribute to:

- Increases in liver enzyme levels
- Increases in cholesterol levels
- Increases in uric acid levels
- Changes in sex hormone levels that could impact reproductive development and puberty
- Changes in thyroid hormone levels
- Lower immune function (i.e. lower antibody response to immunization)
- Effects on growth and development, including lower birth weight in infants
- Occurrence of certain types of cancers, in particular kidney and testicular cancer

More information about PFAS can be found at:

- https://www.atsdr.cdc.gov/toxfaqs/tfacts200.pdf.
- https://www.atsdr.cdc.gov/pfas/docs/pfas_fact_sheet.pdf

For individuals with drinking water containing PFAS above the Environmental Protection Agency's (EPA's) Lifetime Health Advisory, it is recommended that individuals identify an alternative or treated water source for any activity in which a person might consume water (e.g. drinking, cooking, brushing teeth, preparing infant formula). The range of health impacts currently under investigation, has led to broad community concern about individual and community health impacts. Understandably, some individuals have sought to have their blood tested for PFAS levels. The NH DHHS has been conducting blood testing (i.e. biomonitoring) in affected communities over the last several years, but we are no longer able to continue to offer PFAS blood testing. Because PFAS blood testing is not a medical test, it is not widely available at most clinical reference laboratories. We have identified two laboratories (NMS and Vista) that offer PFAS blood testing to individuals through their health care providers. The information about these two laboratories and their respective panel of PFAS analytes are included in the table on page 3. These are blood tests that providers can order directly for

their patients. The chart compares the two commercially available tests with the testing that was previously performed through the New Hampshire biomonitoring exposure assessments [comparing analyte panel and reporting limits (RL)]. If you decide to order a PFAS blood test for your patient, please check with the patient's insurance carrier to clarify if this service is covered by insurance. It is also important to note that there are not currently blood PFAS levels which are considered safe vs. unsafe, and interpretation of blood test results as it relates to a person's health is difficult. Blood test results will not predict or rule-out the development of future health problems related to PFAS exposure.

Because of the health concerns from finding PFAS in drinking water or during blood testing, many affected community members have asked how health care providers should best monitor their health and if there is a way to look for possible health impacts from PFAS exposure. We recommend maintaining regular healthcare visits, conducting routine health screenings, monitoring for symptoms of illness, and basing further testing on a thorough history, physical exam, and assessment of a patient's presenting issue or concern. Listed below is guidance from CDC (specifically their Agency for Toxic Substances and Disease Registry) along with continuing medical education (CME) for health care providers that was developed to help health care providers address patient questions and concerns:

- https://www.atsdr.cdc.gov/pfas/docs/pfas_clinician_fact_sheet_508.pdf
- https://www.atsdr.cdc.gov/emes/pfas_clinicians_training.html

We hope the above information and resources are informative and helpful to providers. We have also been working with the Northern New England Poison Center (NNEPC) to provide phone consultation services to answer questions health care providers may have when seeing patients with specific concerns about PFAS exposure. For PFAS-related questions, health care providers can call the NNEPC at 1-800-562-8236.

Sincerely,

Lisa Morris
Director

Benjamin Chan, MD, MPH
State Epidemiologist

NH DIVISION OF Public Health Services
Improving health, preventing disease, reducing costs *for all*
Department of Health and Human Services

Analyte	Abbr.	NH State Testing Reporting Limit	NMS (test # 3427SP)[1] Reporting Limit	Vista Analytical Reporting Limit[2]
Perfluorooctanoic acid	PFOA	0.5 µg/L	0.5 ng/mL	0.4 ng/mL
Perfluorooctane sulfonic acid	PFOS	0.5 µg/L	0.5 ng/mL	0.4 ng/mL
Perfluorononanoic acid	PFNA	0.5 µg/L	0.05ng/mL	0.4 ng/mL
Perfluorohexane sulfonic acid	PFHxS/linear isomer	0.5 µg/L	0.05 ng/mL	0.4 ng/mL
Perfluorobutane sulfonic acid	PFBuS/PFBS	0.5 µg/L	0.05 ng/mL	N/A
Perfluoroheptanoic acid	PFHpA	0.5 µg/L	0.05 ng/mL	N/A
Perfluorodecanoic acid	PFDeA/PFDA	0.5 µg/L	N/A	0.4 ng/mL
Perfluoroundecanoic acid	PFUA/PFUnA	0.5 µg/L	N/A	0.4 ng/mL
Perfluorododecanoic acid	PFDoA	0.5 µg/L	N/A	N/A
Perfluorooctane sulfonamide	PFOSA	0.5 µg/L	N/A	0.4 ng/mL
2-(N-methyl-perfluorooctane sulfonamido) acetic acid	Me-PFOSA-AcOH	0.5 µg/L	N/A	N/A
Perfluorodecanesulfonate	PFDS	N/A	N/A	0.4 ng/mL
N-Ethyperfluoro-1-octanesulfonamidoacetic acid	N-EtFOSAA (combined with N-MeFOSAA)	N/A	N/A	0.4 ng/mL
N-Methylperfluoro-1-octanesulfonamidoacetic acid	N-MeFOSAA (combined with N-EtFOSAA)	N/A	N/A	0.4 ng/mL
Cost per test: (lab testing/kit order ONLY)			**$599**	**$800 ($150 for test kit, $650 for testing)**

Please Note: µg/L = ng/mL. Units left as they were taken from the lab websites

[1]3427SP is the order number for NMS Laboratories needed to have this panel of PFAS analytes tested for with the respective reporting limits (please note, NMS laboratories has various PFAS tests that can be ordered).

[2]Vista Analytical is NOT accredited for analyzing clinical specimens, but does have NELAP/ISO accreditation and can provide non-diagnostic testing of serum.

NMS Laboratories: 1-866-522-2206 http://www.nmslabs.com/tests/Perfluoroalkyl-Substances--PFAS---Serum-Plasma/3427SP

Vista Analytical: 916-673-1520 http://www.vista-analytical.com/