



## **Integrating Well Water Testing into Routine Pediatric Care**

The goal of this project is to:

- Understand how best to integrate routine well water testing for arsenic and other important health related contaminants into routine preventive clinical care at pediatric and family medicine practices in at risk regions of northern New England.

Federal drinking water regulations address only public water systems. Northern New England has the highest percentage of residents who rely on unregulated, private water systems, ranging from 20-50% of state residents. Health departments and medical professional organizations such as the AAP recommend routine well water testing, in particular for households with children, due to particular vulnerabilities to water borne contaminants. Of more recent concern is the recognition that Northern New England, in particular Maine and New Hampshire, have elevated levels of natural arsenic deposition in groundwater. Arsenic is a known carcinogen and more recent studies of both cancer and non-cancer health effects led the EPA to decrease the maximum contaminant level of arsenic in public water systems by a factor of 5 (from 50 PPB to 10 PPB). Public water systems had to comply with this standard as of 2006, but well owners remain largely unaware of this change and, because compliance with periodic testing is known to be quite low, they may continue to be exposed at levels that exceed federal safety limits. By incorporating recommendations for well water testing into the health care setting, along with providing pre-paid testing kits, we seek to determine the best practice based mechanism for increasing the number of parents who complete well water testing, and appropriate follow up, if indicated.

Participating practices will be stratified in one of four arms of the study. The two main comparisons will be a "public health " model, based on current practice, and a "medical model" based on other environmental health related screenings in the clinical setting, such as blood lead testing. CEHC & CO-OP staff will work with practices to set up systems for identifying eligible parents, dispensing kits, and devising tracking systems, depending on which arm of the study in which they are stratified.

### **Key steps of the project will:**

- ❖ Provide primary care practices with training and educational resources to enable them to incorporate well water testing recommendations into their practices.
- ❖ Provide practices with tools to assist in interpretation of test results and referrals for follow up, if indicated.
- ❖ Remove barriers to parents for completing well water testing (e.g. cost, inconvenience, confusion)



Practices interested in participating in this project should be located in communities where private water systems are common. Practices located in regions known to have a higher probability for elevated groundwater arsenic based on USGS estimates will be particularly sought (e.g. in New Hampshire, the southeastern counties of Merrimack, Strafford, Hillsborough and Rockingham). Practices should see sufficient well child visits under 12 months of age to accrue 20-30 participants over a 6 month interval.

Participating practices will be asked to:

- ❖ Conduct a brief baseline retrospective chart review of 30 well-child visits to establish baseline estimates of current practice data related to drinking water source and well water testing recommendations. (Stipend provided to staff member.)
- ❖ Designate a practice staff "project contact liaison" and a practice clinician "project leader" who will work with Dartmouth's Children's Environmental Health & Disease Prevention Center (CEHC) and CO-OP staff to establish a system of screening for well water users and assist in coordination of provision of water testing kits and related information and resources.
- ❖ Have clinicians and practice staff participate in an on-site training and web-based seminars conducted by the CEHC to review current information on the topic of well water testing, in particular related to arsenic and fluoride in well water, risk communication best practices and current well testing recommendations.

Interested practices should respond contacting Debbie Johnson by e-mail at [Deborah.J.Johnson@dartmouth.edu](mailto:Deborah.J.Johnson@dartmouth.edu) or call the CO-OP Office at 603/653-3440.