



**Comments on Potential Public Health Impacts of Natural Gas
Development and Production in the Marcellus Shale in Western
Maryland Report**

October 3, 2014

Thank you for the opportunity to provide comments on this important piece of research. The Alliance of Nurses for Healthy Environments (ANHE) is a national coalition of nursing organizations and individual nurses who focus on projects related to environmental health nursing research, policy and advocacy, education, and practice. For the past several years, ANHE has been working with nurses in areas where unconventional natural gas development and production (UNGDP) is already occur to educate nurses and other health professionals on potential health impacts, how to assess for exposures, and ways to be advocates for the health of their communities. ANHE, along with other health groups in Maryland, has been closely following this health study as the results may have a significant impact on the health of all Marylanders and may have policy implications for other states where we are working. We also participated in the Symposium held at the University of Maryland School of Nursing on September 12, 2014 and agree with the findings from this meeting.

We would like to commend the Maryland Institute for Applied Health for producing such a valuable study with such limited resources and time. However, it apparent with the MIAEH report that the science on how and if hydraulic fracturing can be done with minimal risk to human health is still emerging. As public health professionals, nurses believe in evidence-based practice. Just as in healthcare, if a method does not have the research to prove it is safe or effective, it should not be utilized. If Maryland proceeds with allowing unconventional oil and gas extraction to come into the state without this research and safety determination, the citizens, workers, and environment of Maryland may be irreversibly harmed.

While this list of our concerns is not exhaustive, we have chosen to highlight several issues of concern with the report and recommendations:

- **Transparency is essential to protect public health** – Companies must be required to report all chemicals and chemical mixtures used during the gas development process. They should not be allowed to hide behind “trade secret” formulas. Concentrations and quantities need to be reported as well.

R 12 recommends creating a website similar to the one developed in California as part of SB 4. There are already issues with this website as companies are not disclosing sites where fracking is occurring and there is limited to no state oversight to make sure all companies are disclosing drilling activities. Without strict oversight from state agencies, a similar website in Maryland will be a failure. We recommend the State issue rules for a strong mandatory program of reporting for all chemicals and hazardous materials used in oil and

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gas exploration and production, including health and safety studies by manufacturers, importers, processors and distributors.

Blowouts, fires, and explosions are all too frequent occurrences at well sites resulting in deaths and injuries to workers on-site and placing the workers, emergency response personnel, as well as health professionals, in jeopardy from exposure to unknown toxic chemical exposures. It is impossible to adequately treat toxic exposures when the details of what the person was exposed to are unknown. Health professionals must know the name and CAS # of the chemical, the concentration of the chemical present, and the circumstances of the exposure without any delay in order to deliver prompt treatment. Emergency response personnel need information immediately in order to handle the incident without exacerbating the incident and to protect themselves. They must not be required to sign non-disclosure agreements in order to get this information.

If exposures and contamination occur, companies must not be allowed to have citizens sign non-disclosure agreements in order to be compensated. This practice in other states has impeded public health data collection and research on health impacts and exposures. We have also seen people unnecessarily exposed and sickened by contaminated water, when their neighbors signed non-disclosure agreements in order to get clean water from the gas companies and were unable to warn their neighbors of risks for exposure.

- **Setbacks to reduce air emission exposures** – There is insufficient data to assume that these setbacks will reduce exposures. Local geography also needs to be taken into account. As highlighted by Dr. Levy, an external reviewer commissioned to review the MIAEH report by DHMH, “...the Colorado study cited as the foundation of the setback recommendation compared samples < 0.5 mile vs. > 0.5 mile, but did not have a strong empirical foundation for the choice of 0.5 miles, used an array of area samples to characterize levels > 0.5 mile, and did not investigate alternative cutpoints. McKenzie et al. state directly that “the actual distance at which residents may experience greater exposures from air emissions may be less than or greater than a 1/2 mile, depending on dispersion and local topography and meteorology”. The authors should be clear that a setback distance adequately protective of air pollution from UNGDP activity has not yet been empirically determined.”

Western Maryland is rich with farmland. ANHE is also concerned about exposures through the siting of wells in close proximity to fields and farm animals. The health impacts to farm animals and of humans and animals consuming produce grown close to UNGDP sites (including pipelines and compressor stations) has not yet been determined.

- **Healthcare capacity** – As nurses, we are very concerned about the capacity of health services in Western Maryland to handle an influx of gasfield workers as well as increased rates of health impacts being seen in states where UNGDP is already occurring – including increases in birth defects such as neural tube and cardiac defects, low birth weight, respiratory issues, rashes, nosebleeds, and headaches. The healthcare systems in Western Maryland already have limited capacity to handle the health care needs of residents. There is also concern about the financial health of the health care system if the gas field workers are uninsured. UNGDP employers should be required to have an insured workforce that will cover health expenses occurring in Maryland.

We are concerned that the cost of treating these illnesses was not included in the health study nor the economic study. These costs are not insignificant and need to be assessed before UNGDP is allowed to come into Maryland. For example, in a 2011 analysis of direct costs to treat asthma in Maryland (does not include indirect costs such as days lost of work or school) showed we are spending over \$1 billion



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per year to treat asthma. The costs to treat new asthma cases or existing cases worsened by UNGDP could result in significant increases in healthcare costs. By not evaluating these potential healthcare costs, the full economic costs and benefits cannot be determined.

Thank you for this opportunity to provide comments. The MIAEH study has highlighted the high potential for significant health impacts if UNGDP is allowed to proceed in Maryland. Without further study and addressing the concerns outlined in these comments and those highlighted in the September 12 Symposium report, UNGDP should not move forward.

Sincerely,

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