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*****VIA EMAIL****

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Re: 81 FR 58947, Solicitation of Written Comments on the Maternal Immunizations Working Group Phase II's Draft Report and Draft Recommendations for Overcoming Barriers and Identifying Opportunities for Developing Maternal Immunizations for Consideration by the National Vaccine Advisory Committee

Dear Dr. Bok,

The National Vaccine Information Center (NVIC), which is the oldest and largest charitable non-profit organization advocating for the prevention of vaccine injuries and deaths through public education and the inclusion of safety and informed consent protections in the U.S. vaccination system, submits this public comment to express our on-going deep concern about recommendations of the National Vaccine Advisory Committee (NVAC) Maternal Immunization Working Group (MIWG). Our initial concerns relating to the MIWG's recommendations on maternal vaccines was delivered to the NVAC on April 25, 2014.

Upon reviewing the MIWG recommendations for overcoming barriers, NVIC continues to note a lack of serious discussion and full acknowledgment of:

- The lack of pre-licensure clinical data on the safety and effectiveness of administering influenza and pertussis containing Tdap vaccines to pregnant women;
- The fact that ACIP recommendations direct obstetricians and other vaccine providers to engage in off-label use of influenza vaccines and pertussis containing Tdap vaccines when neither vaccine has been licensed by the FDA as safe and effective for routine use in pregnant women during any trimester;¹
- Published statements by vaccine researchers and federal agencies that pertussis containing vaccines are often failing to prevent infection and transmission of infection ² and that influenza vaccines have a low rate of effectiveness in adults and children; ³
- Published reports by the Institute of Medicine confirming gaps in vaccine safety science, including lack of scientific knowledge about the biological mechanisms of vaccine injury and death and lack of scientific knowledge about the different genetic, biological and environmental high risk factors that increase individual susceptibility to suffering vaccine complications; 4 5
- The responsibility of public health officials to apply the precautionary and informed consent principles when recommending standing orders directing that all pregnant women be given influenza vaccines and pertussis containing Tdap vaccines during every pregnancy in any trimester.
- The targeting of this population for vaccine innovation and new vaccine development for disease where benefit is not clearly established.

With regard to each MIWG recommendation, our comments are as follows:

1. Focus Area 1 - Ethical Issues: The main focus of this section appears to be the relaxing of how pregnant women are classified for the purposes of research. The report states that for ethical research purposes pregnant women are not a vulnerable population, but a scientifically complex population with the goal being to create a culture of inclusion for clinical research purposes.

However, the logic used to arrive at this new classification excludes the unborn child. Vulnerable populations are considered to be those that have a compromised ability to protect themselves and that are able to provide informed consent. While pregnant women have the capacity to protect themselves and provide informed consent, their unborn children do not and are a vulnerable population. The MIWG's report acknowledges that there is also little in the way of science to understand what adverse events may result from vaccines used during pregnancy where the unborn child is concerned, yet advocates for aggressive recruitment of pregnant women for this purpose. There is no accompanying statement relating to how informed consent in providing pregnant women with information on the lack of science will be discharged to assure that true informed consent has been obtained. In effect, pregnant women are being asked to subject their unborn child to unknown risk in the name of research and vaccine innovation without clear evidence to demonstrate that vaccines during pregnancy are necessary, safe and effective.

Additionally, while retrospective, observational studies are cited throughout the report, there is no statement on economic feasibility; information on numbers needed to treat (NNT) to prevent disease, mortality, hospitalization, etc.; and information on disease incidence, prevalence, mortality, or the frequency and severity of disease complications included in the discussion on maternal vaccination and/or innovation. This type of information is critical to informing policy-making and the wise use of resources as vaccine innovation is considered versus other possible treatments and interventions for diseases experienced by infants.

Stronger informed consent protection language is needed to assure that pregnant women electing to take part in research are fully informed of the risks, both known and unknown. Honest communication by federal health agencies requires that pregnant women and their health care providers have access to information related to the scope of all risks or harm - both known and unknown - as well as any benefits associated with the use of vaccines during pregnancy. While the report puts forward observational data supporting benefits of vaccination during pregnancy, risk information should include information on:

- lack of credible scientific evidence to demonstrate safety,^{7 8}
- lack of credible epidemiological and biological mechanism evidence to demonstrate influenza vaccines and pertussis containing Tdap vaccines are *effective* or *necessary* ⁹ ¹⁰ ¹¹ ¹² ¹³ for *every* pregnant woman in any trimester during *every* pregnancy;
- research deficits, such as limited biological mechanism research and gaps in vaccine safety science repeatedly acknowledged in reports published by the Institute of Medicine over the past 25 years;¹⁴
- lack of published biological mechanism studies that assess pre-vaccination health status and measure changes in brain and immune function and chromosomal integrity after vaccination of pregnant women or their babies developing in the womb; ¹⁶
- lack of prospective, placebo controlled pre-licensure trials conducted by drug companies evaluating safety and effectiveness of giving influenza vaccine or pertussis containing Tdap vaccine to pregnant women before the vaccines were licensed in the U.S. ^{17 18}
- lack of data on inflammatory or other biological responses to influenza vaccines and pertussis containing
 Tdap vaccines that could affect pregnancy and birth outcomes. ¹⁹
- Food and Drug Administration (FDA) listing of influenza vaccines and Tdap vaccines as either Pregnancy
 Category B or C biologicals,²⁰ which means that adequate testing has <u>not</u> been done in humans to
 demonstrate safety for pregnant women and it is not known whether the vaccines can cause fetal harm or
 affect reproduction capacity.
- manufacturer product inserts which state that for influenza vaccines and pertussis containing Tdap vaccines human toxicity and fertility studies are inadequate and that both vaccines should "be given to a pregnant woman only if clearly needed." ²¹ ²² ²³
- lack of well designed prospective case controlled studies comparing the health outcomes of large groups of women who get influenza vaccines and pertussis containing Tdap vaccines during pregnancy either separately or simultaneously compared to those who do not get the vaccines, as well as no similar health

- outcome comparisons of their newborns at birth or in the first year of life post licensure of use in U.S. and use of unpublished safety and effectiveness evaluations conducted, that are small,²⁴ retrospective, ^{25 26} comparing vaccinated women to vaccinated women ²⁷ and performed by drug company or government health officials;²⁸
- incomplete evaluation of ingredients in influenza vaccines and pertussis containing Tdap vaccines for potential genotoxic ²⁹ or other adverse effects on the human fetus developing in the womb that may negatively affect health after birth, including aluminum adjuvants, mercury containing (Thimerosal) preservatives and many more bioactive and potentially toxic ingredients; ³⁰ ³¹ ³² ³³ ³⁴ ³⁵ ³⁶ ³⁷ ³⁸ ³⁹
- significant problems with outdated testing procedures for determining the potency and toxicity of pertussis
 containing vaccines that have prompted some scientists to call for limits to be established for specific toxin
 content of pertussis-containing vaccines;⁴⁰
- injuries and deaths from pertussis-containing vaccines are the most compensated claims in the federal Vaccine Injury Compensation Program (VICP) and influenza vaccine injuries and deaths are the second most compensated claim.⁴¹
- admission by the CDC that federal health officials do "not know exactly how many people die from seasonal flu each year" ⁴² and that influenza vaccine is at best less than 70 percent effective in preventing influenza,⁴³ and influenza studies are poorly designed and have failed to demonstrate that influenza vaccine is effective or safe;^{44 45}
- findings from a 2013 published study evaluating reports of acute disseminated encephalomyelitis (ADEM) following vaccination in the U. S. Vaccine Adverse Events Reporting System (VAERS) and in a European vaccine reaction reporting system revealing that seasonal influenza vaccine is the most frequently suspected cause of brain inflammation after 18 years old, representing 32 percent of the total cases reported, and that pertussis containing DTaP was among the vaccines most frequently associated with brain inflammation in children between birth and age five.⁴⁶
- 2. Focus Area 2 Policy Issues: In the absence of pre-licensure clinical trial data presented by vaccine manufacturers to the FDA to demonstrate that influenza vaccines and pertussis containing Tdap vaccines are safe and effective for routine use in all pregnant women in any trimester, this section inappropriately focuses on how to lift product liability from vaccine manufacturers to increase the production of maternal vaccines.
 - Due to lack of enough credible scientific data regarding the safety and effectiveness of giving vaccines to pregnant women during pregnancy, NVIC does not support giving vaccine manufacturers or vaccine providers a civil liability shield under the federal vaccine injury compensation program when vaccines given during pregnancy harm a pregnant woman or her unborn or newborn baby. High standards for proof of safety and effectiveness for vaccines given to pregnant women should be maintained by federal health agencies. The best way to accomplish this is to hold vaccine manufacturers, vaccine providers and vaccine regulators and policymakers accountable in a civil court of law for maternal, fetal and newborn injuries and deaths that can be proven to be caused by vaccination during pregnancy.
- 3. Focus Area 3 Pre-Clinical and Clinical Research Issues: While electronic health records (EHs) have the potential to facilitate provider understanding of a patient's health history and medical care needs, we oppose their utilization as a mechanism to secure vaccine provider or vaccine recipient adherence to ACIP recommendations.
 - However, vaccine provider failure to record adverse health outcomes following vaccination in the medical record or to report vaccine adverse events to VAERS can result in failure to properly identify, treat and acknowledge vaccine-related health problems appropriately, which often results in re-vaccination that leads to more severe injury. This is especially relevant to the ACIP recommendation that all pregnant women receive influenza and pertussis containing vaccines during every pregnancy because it is very important for vaccine adverse reaction data to be collected for women having more than one child.
 - Where EHs are in use, NVIC would encourage utilization to increase vaccine provider recording of adverse health outcomes following vaccination, including adverse health outcomes that occur after vaccination during pregnancy, to VAERS.⁴⁷ The creation and utilization of EHs must be by consent of the individual via a voluntary opt-in mechanism to respect the expectation of privacy in the provider-patient relationship and the highly sensitive nature of this information. NVIC supports the right to the individual to determine what health information is shared with government and public health officials in surveillance efforts.
- 4. Focus Area 4 Provider Education & Support Issues: With enactment of the Affordable Health Care Act, access to health care for Americans has rightfully become a priority. NVIC supports access to health care, including preventive health care. However, we recognize the difference between access to health care and creation of institutional mechanisms which compel use of health care, including use of vaccines during pregnancy, without regard for individual genetic, biological and environmental risk factors or respect for deeply held values and beliefs.

While vaccine access presents logistical challenges that should be appropriately addressed by federal and state health agencies, we reiterate concerns outlined in comments above and support the consumer's right and ability to exercise informed consent to vaccination without sanction. Lack of biological mechanism information and prelicensure clinical trial data demonstrating that it is safe and effective to give pregnant women influenza and pertussis containing Tdap vaccines during every pregnancy is at odds with ACIP recommendations, especially when FDA has not licensed either vaccine for routine use during every pregnancy and during any trimester of pregnancy.

Communications with professional societies to update professionals who care for pregnant women of changes in definitions that allow for their inclusion in clinical research is reasonable. Obstetricians and other vaccine providers should also be made aware of ACIP recommendations.

However, these communications should in no way undermine that obstetricians and other vaccine providers should be recognized and trusted as health care professionals to exercise their best professional judgment in recommending vaccination to a patient based on assessment of individual needs and risk factors, and not solely based on public health policies and routine implementation of federal agency recommendations. As such, obstetricians and all vaccine providers should be required to continue to provide health care to pregnant women regardless of vaccination decisions that do not conform with ACIP and/or provider recommendations. They should also be required to report all potential vaccine-related complications to VAERS rather than the vaccine manufacturer, including reporting development of brain and immune system dysfunction or death in the mother or fetus following vaccination during pregnancy.

NVIC supports the removal of barriers that prevent pregnant women and providers from having access to vaccines the ACIP has recommended for use during pregnancy. However, NVIC strongly opposes adoption of any government performance measure gauging vaccine distribution by obstetricians or other vaccine providers as an incentive to pressure providers and pregnant women to conform to ACIP recommendations to meet federal health agency goals of achieving higher vaccine uptake among pregnant women.

Furthermore, because obstetricians and other vaccine providers cannot predict whether or not a vaccine they administer to a pregnant woman will protect and not harm her or her unborn child, federal agency strategies to incorporate ACIP recommendations as a "standard of care" or "standing orders" to increase vaccine uptake interferes with the physician-patient informed consent dialogue that pregnant women expect and deserve when making important health care decisions for themselves and their unborn child.

In closing, for over three decades, NVIC has supported consumer access to risk and benefit information for diseases and vaccines and their right to make voluntary decisions to accept, delay or decline any vaccine without sanction. We strongly opposes a one-size-fits all approach to federal vaccine policy implementation because it compromises the physician-patient relationship and the informed consent ethic, as well as sacrifices quality of health care for individuals who may be more susceptible to complications from vaccination.

NVIC appreciates the opportunity to provide the NVAC these comments and we respectfully reiterate that the MIWG's report as a whole would benefit from in the inclusion of stronger informed consent language to assure that that focus areas outlined in the report also conform to the healthcare professionals obligation to discharge informed consent duties with the public.

Respectfully submitted,

/s/ Barbara Loe Fisher Barbara Loe Fisher Co-founder & President

Theresa K. Wrangham Theresa K. Wrangham Executive Director

References

¹ Infectious Diseases in Children. <u>ACIP recommends Tdap vaccine during each pregnancy</u>. *Healio.com* November 2012.

² CDC Statements on Pertussis Outbreaks - Sources <u>WebMD</u> and <u>U.S. HHS National Vaccine Advisory Committee (NVAC) Feb. 2013 Certified Minutes</u>

³ Ohmit SE, Petrie JG, Malosh RE, et al. <u>Influenza Effectiveness in the Community and the Household</u>. *Clinical Infectious Diseases* Feb. 14, 2013.

⁴ HHS National Vaccine Advisory Committee White Paper on the U.S. Vaccine Safety System. U.S. HHS-NVPO IOM Causality Assessments. Sept. 2011. pgs 17 & 43

⁵ Adverse Effects of Vaccines: Evidence and Causality Committee to Review Adverse Effects of Vaccines, Institute of Medicine "Summary." Adverse Effects of Vaccines: Evidence and Causality. Washington, DC: The National Academies Press, 2012.

- ⁶ The American College of Obstetricians and Gynecologists (ACOG). <u>Ethical Considerations for Including Women as Research</u> Participants. Committee Opinion 646. Nov 2015.
- ⁷ CDC. <u>Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid, and Acellular Pertussis Vaccines (Tdap) in Pregnant Women Advisory Committee on Immunization Practices (ACIP), 2012.</u> Safety of Repeat Tdap Administration to Pregnant Women. *MMWR* Feb. 22, 2013; 62(07): 131-135.
- ⁸ Skowronski DM, DeSerres G. <u>Is routine influenza immunization warranted in early pregnancy?</u> Abstract. *Vaccine* 2009; 27(35): 4754-4770.
- ⁹ Black SB, Shinefield HR, France EK et al. <u>Effectiveness of influenza vaccine during pregnancy in preventing hospitalizations and outpatient visits for respiratory illness in pregnant women and infants</u>. Abstract. *Am J Perinatol* 2004; 21(6): 333-339.
- ¹⁰ France EK, Smith-Ray R, McClure D, et al. <u>Impact of maternal influenza vaccination during pregnancy on the incidence of acute respiratory illness visits among infants. *Arch Pediatr Adolesc Med* 2006;160:1277–83.</u>
- ¹¹ CDC. <u>Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid, and Acellular Pertussis Vaccines (Tdap) in Pregnant Women Advisory Committee on Immunization Practices (ACIP), 2012.</u> A Dose of Tdap During Each Pregnancy and Potential Impact of Tdap During Pregnancy. *MMWR* Feb. 22, 2013; 62(07): 131-135.
- ¹² Hartert TV, Neuzil KM, Shintani AK, et al. <u>Maternal morbidity and perinatal outcomes among pregnant women with respiratory hospitalizations during influenza season</u>. *Am J Obstet Gynecol* 2003;189:1705–12.
- ¹³ U.S. Food and Drug Administration. <u>FDA Study Helps Provide An Understanding of Rising Rates of Whooping Cough and Response to Vaccination</u>. FDA Press Release: Nov. 27, 2013.
- 14 Ibid endnote 3
- 15 Ibid endnote 4
- ¹⁶ Food and Drug Administration (FDA). <u>Guidance for Industry: Consideration for Developmental Toxicity Studies for Preventive and Therapeutic Vaccines for Infectious Disease Indications (Non-Binding Recommendations).</u> Design of Developmental Toxicity Studies: General Considerations and Recommendations. *Centers for Biologics Evaluation Research (CBER)* February 2006. (Webpage updated April 19, 2012).
- ¹⁷ Gruber MF. Maternal Immunization: US FDA Regulatory Considerations (Abstract). Vaccine 2003; 21(24): 3487-3491.
- ¹⁸ CDC. <u>Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis (Tdap) in Pregnant Women and Persons Who Have or Anticipate Having Close Contact with an Infant Aged Under 12 Months ACIP, 2011. Safety of Tdap Vaccine In Pregnant Women. *MMWR* Oct. 21, 2011; 60(41): 1424-1426.</u>
- ¹⁹ Christian LM, Iams JD, Porter K, Glaser R. <u>Inflammatory Responses to Trivalent Influenza Virus Vaccine Among Pregnant Women.</u> *Vaccine* 2011; 29(48): 8982-8987.
- ²⁰ Drugs.com. <u>FDA Pregnancy Categories</u>. *Drugs.com* October 2013.
- ²¹ NVIC.org. Influenza Vaccine Package Inserts (2013-2014): Important Information from Manufacturers. NVIC 2013.
- ²² Sanofi Pasteur. <u>Adacel (Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine, Adsorbed) Full Prescribing Information</u>. Use in Specific Populations: 8.1 Pregnancy Category C. *Sanofi Pasteur* April 2013.
- ²³ Glaxo-Smith Kline. <u>BOOSTRIX (Tetanus Toxoid, Reducated Diphtheria Toxoid and Acellular Pertussis Vaccine, Adsorbed) Full Prescribing Information</u>. Specific Populations: 8.1 Pregnancy Category B.
- ²⁴ Zeteyeva YA, Moro PL, Tepper HK et al. <u>Adverse event reports after tetanus toxoid, reduced diphtheria toxoid and acelullar pertussis vaccines in pregnant women.</u> *Am J Obstet Gynecol* 2012 207(1).
- ²⁵ Mak TK, Mangtani P, Leese J et al. <u>Influenza vaccination during pregnancy: current evidence and selected national policies</u>. *The Lancet* 2008; 8(1): 44-52.
- ²⁶ Munoz FM, Greisinger AJ, Wehrmanen DA. <u>Safety of influenza vaccination during pregnancy</u>. *Am J Obstet Gynecol* 2005; 192(4): 1098-1106.
- ²⁷ Zaman K, Roy E, Arifeen SE et al. <u>Effectiveness of maternal influenza immunization in mothers and infants.</u> *N Engl J Med* 2008; 359: 1555-1564.
- ²⁸ CDC. <u>Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis (Tdap) in Pregnant Women and Persons Who Have or Anticipate Having Close Contact with an Infant Aged Under 12 Months ACIP, 2011.</u> Safety of Tdap in Pregnant Women. *MMWR* Oct. 21, 2011; 60(41): 1424-1426.
- ²⁹ Schmidt CW. <u>Uncertain Inheritance: Transgenerational Effects of Environmental Exposures</u>. *Environmental Health Perspectives* October 2013;12(10).
- ³⁰ CDC. <u>Vaccine Excipients & Media Summary (Vaccine Ingredients)</u>. Appendix B. *The Pink Book*, 12th Edition, Second Printing 2012. Webpage last updated February 2012.
- 31 Tomleienovic L. Shaw CA. Aluminum Vaccine Adjuvants: Are They Safe? Current Medicinal Chemistry 2011: 19(17): 2630-2637.
- ³² Krewski D, Yokel RA, Nieboer E et al. <u>Human Health Risk Assessment for Aluminum, Aluminum Oxide, Aluminum Hydroxide</u>. *J Toxicol Environ Health B Crit Rev* 2007; 10(Suppl 1); 1-269.
- ³³ Ayoub D Yazbak FE. <u>Influenza vaccination during pregnancy: A critical Assessment of the Recommendations of the Advisory Committee on Immunization Practices (ACIP).</u> *Journal of American Physicians & Surgeons* 2006; 11(2): 41-47.

- ³⁴ Elce D, Celik A. <u>Genotoxicity of thimerosal in cultured human lymphocytes with and without metabolic activation sister chromatid exchange analysis proliferation index and mitotic index. *Toxicology in Vitro* June 2008; 22(4): 927-934.</u>
- ³⁵ Speit G, Neuss S, Schutz P et al. <u>The genotoxic potential of gluteraldehyde in mammalian cells in vitro in comparison with formaldehyde</u>. *Mutation Research* 2008: 649: 146-154.
- ³⁶ Toxicology Data Network. 2-Phenoxyethanol. National Library of Medicine. Webpage last reviewed Jan. 19, 2012.
- ³⁷ ScienceLab.com. Material Safety Data Sheet: Polysorbate 80 (Tween 80). ScienceLab.com. Webpage last updated May 21, 2013.
- ³⁸ Gajdova M, Jakubousky J, Valky J. <u>Delayed effects of neonatal exposure to Tween 80 on female reproductive organs in rats</u>. Abstract. *Food Chem Toxicol* 1993; 31(3): 183-190.
- ³⁹ FDA. <u>Summary: Potential for contamination of biological products with the agent of bovine spongiform encephalopathy (BSE).</u>
 Transmissable Spongiform Encephalopathies Advisory Committee (TSEAC) and Vaccines & Related Biological Products Advisory Committee (VRBPAC). July 27, 2000.
- ⁴⁰ Corbel JJ, Xing DKL. Toxicity and potency evaluation of pertussis vaccines. Expert Rev. Vaccines 2004; 3(1): 89-101.
- ⁴¹ Health Resources Services Administration (HRSA). <u>National Vaccine Injury Compensation Program Statistics Report: Claims Filed and Compensated or Dismissed by Vaccine.</u> *DHHS:* Oct. 17, 2013.
- ⁴² CDC. Estimating Seasonal Influenza-Associated Deaths in the United States: Questions and Answers. June 24, 2011.
- ⁴³ Osterholm M, Kelley N, Sommer A, Belongia E, <u>Efficacy and Effectiveness of Influenza Vaccines: a Systematic Review and Meta-Analysis</u>, The Lancet Infectious Diseases, Early Online Publication, 26 October 2011, doi:10.1016/S1473-3099(11)70295-X
- ⁴⁴ Jefferson T. 2006. Influenza vaccination: policy versus evidence. British Medical Journal.
- ⁴⁵ Jefferson T., Debalini MG et al. 2009. <u>Relation of study quality, concordance, take home message, funding, and impact in studies of influenza vaccines; systematic review. *British Medical Journal*.</u>
- ⁴⁶ Pellegrino P, Carnovate C, Perrone V et al. <u>Acute Disseminated Encephalomelitis Onset: Evaluation Based on Vaccine Adverse</u> Events Reporting Systems. *PLOS One* October 2013; 8(10).
- ⁴⁷ Hinrichsen VL, Kruskal B, O'Brien MA, Lieu TA, Platt R and Vaccine Safety Datalink Team. <u>Using Electronic Medical Records to Enhance Detection and Reporting of Vaccine Adverse Events</u>. JAMIA 2007 Nov-Dec; 14(6): 731-735.