House Bill 2015

Sponsored by Representative KOTEK, Senator STEINER HAYWARD and others

I am Kent L. Thornburg, PhD. I hold the M. Lowell Edwards Endowed Chair in the Department of Medicine, Knight Cardiovascular Institute at OHSU. I serve as the director of the OHSU Bob and Charlee Moore Institute of Nutrition and Wellness. I also hold professorial appointments in the Departments of Obstetrics & Gynecology, and three other departments. I have served on expert panels on pregnancy and health for the National Institute of Child Health and Development, the National Academy of Medicine, the American Heart Association, the New York Academy of Science and the Indian National Science Academy.

We scientists at the OHSU Moore Institute are greatly concerned about the health of Oregonians which has been rapidly deteriorating over the past 25 years. Oregon Health Authority has shown that obesity has doubled over that period of time and that diabetes has tripled. The OHA statistics of worsening health of Oregonians suggest that the State will face a sharp increase in heart disease from the present ~250,000 to over 1,000,000 by 2030. Because heart disease treatment is very expensive, costs to Oregonians will increase dramatically.

It is now clear that these adult chronic diseases arise mostly in people who had a poor prenatal and infant **environment.** Poor maternal nutrition and high levels of maternal stress are associated with reductions in

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104 Nutrition or Emotional Stress

100 96 99 99 99 5 6 8 9 10lb

2.0- 2.5- 3.0- 3.5- 4.0- >=4.5

Birth weight (kg)



I.Q. is lower in Small Babies

offspring cognitive function (See figure) and greatly elevated risks for high blood pressure, diabetes and heart disease in adulthood.

Poor maternal nutrition and maternal stress inhibit fetal growth and lead to risks for preterm birth, poor organ development and poor brain function. Once established, this tendency is passed on to future generations. Babies who develop in an environment of low stress, good nutrition and consistent breast feeding are unlikely to suffer debilitating childhood diseases and psychological or psychiatric illnesses.

Rigorous studies show a clear benefit to mothers

and babies if they are attended by a professional doula during the pregnancy, during labor and in the early days of motherhood. Women who receive the assistance of a doula are less likely to have pregnancy complications like preterm birth and to need a cesarean section and are more likely to breast feed. Thus, care from professional doulas reduces the cost of pregnancy and alleviates the health care system.

Shenkin S et al. Birth weight and cognitive ability in childhood: a systematic review. *Psychological Bulletin*. 2004; 130(6):989-1013.

Mulder EJ et al. Prenatal maternal stress: effects on pregnancy and the (unborn) child. *Early Hum Dev.* 2002 Dec;70(1-2):3-14.

Kozhimannil KB, et al. Modeling the Cost-Effectiveness of Doula Care Associated with Reductions in Preterm Birth and Cesarean Delivery. *Birth*. 2016;43(1):20-7.