

Jennifer Flatow **Culhane** (Ph.D., Public Health, Temple, 1998) is Associate Professor of Obstetrics and Gynecology at Drexel University College of Medicine and Associate Professor of Epidemiology and Biostatistics at Drexel School of Public Health, as well as a Research Associate of the PSC at Penn. She has been a member of the Committee on Understanding Premature Birth and Assuring Healthy Outcomes of the Institute of Medicine.

Scientific Accomplishment. J Culhane's research interests include the interaction of stress, infection and pregnancy outcomes. She studies the causes of preterm birth and particularly the associated racial and ethnic disparities. She has co-authored 2 dozen peer-reviewed articles within the last 36 mos. E.g.: (1) An editorial in the *NEJM* considers why an intervention in the treatment of periodontal disease in poor pregnant women did not have an effect on low birth weight outcomes, Periodontal disease may not be in the causal pathway to preterm birth, and even if it is, treatment of periodontal disease during pregnancy simply may not reduce the rate of preterm birth. This follows from (2) a paper in the *Arch Pediatr Adolesc Med*, where it was hypothesized that once the inflammatory cascade is activated during pregnancy, interventions targeting this pathway may be ineffective in reducing the rate of preterm birth. This article considered why attempts to reduce pre-term births by attacking 1 risk factor during pregnancy often fail; it further suggested that a successful reduction in pre-term births might require a reduction in several risk factors preconceptionally. Reducing smoking, depression, and stress; treatment of periodontal disease and genital tract infections; and attainment of normal weight might all be necessary to substantially reduce the risk of pre-term births. (3) In the *Am J Clin Nutr*. Adverse pregnancy outcomes are generally more common in the US than in other developed countries. Low-birth-weight infants, born after a preterm birth or secondary to intrauterine growth restriction, account for much of the increased morbidity, mortality, and cost. Wide disparities exist in both preterm birth and growth restriction among different population groups. Poor and black women have 2x the preterm birth rate and higher rates of growth restriction than do most other women. The improvement in newborn survival in the US over the several decades is mostly due to better access to improved neonatal care for low-birth-weight infants. And a collaboration with **Elo** and others, in *Am J Orthopsychiat*. Latina immigrants with limited English proficiency face significant obstacles to the utilization of maternal health services, but it also turns out that Latinas with low *Spanish* literacy had >2x the adjusted risk of depressive symptomatology, This association should be considered when designing health services for this vulnerable and growing population.

Present and Future. With former PSC student and research assistant H. Lee (NICHD R01, **Elo**, PI) and **Elo**: Despite the promotion of breastfeeding as the "ideal" infant feeding method by health experts, breastfeeding continues to be less common among low-income and minority mothers than among other women. Using data from a community-based, longitudinal study of women in Philadelphia (N=965), this paper investigates factors associated with breastfeeding initiation and duration among low-income, inner-city mothers with a focus on race/ethnic and nativity differences in breastfeeding behavior. In contrast to previous studies, we also find that native-born African American women had similar breastfeeding behavior to non-Hispanic white women. When poor whites and African Americans are similarly situated in an inner-city context, the disparity in their behavior with respect to infant feeding is not as distinct as documented in national surveys.

PSC and Research. J Culhane is PI of a DHS grant on targeting programs for reducing racial, ethnic, and geographic health disparities; is the Drexel PI of an NICHD N01 (**Elo** and **Smith**, Demographers) for the Montgomery County, PA Vanguard Site of the National Children's Study; and is the PI on a grant from the PA Dept. of Health (**Elo**, Co-Investigator). In the previous 36 mos. she has been the PI on 6 and Co-PI on 2 other externally funded grants. J Culhane is the only program associate on the current application who does not have their primary appointment at Penn. She has, however, collaborated for many years with researchers at Penn's PSC, where she benefits from access to demographic, social science, and statistical resources not routinely available to her at Drexel. For example, her projects employ I. Kohler, a PSC researcher; and she has access to PSC programmers and PSC research assistants. Her affiliation with the Penn PSC was especially helpful when she was moving laboratories and her research program at the time of the collapse of Allegheny, a previous employer. Although we are in the process of moving away from keeping as PSC research associates (hence R24 program scientists) researchers without Penn appointments, we plan to retain J Culhane because of her many active associations with the PSC, as well as her physical proximity (Drexel is adjacent to the Penn campus.)