Perspective

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WIC: Looking Back, Envisioning the Future

Paige DM*

Department of Human Nutrition and Pediatrics, Bloomberg School of Public Health, School of Medicine, The Johns Hopkins University, Baltimore, USA

***Corresponding author**: David M Paige, Professor, Department of Human Nutrition and Pediatrics, Bloomberg School of Public Health, School of Medicine, The Johns Hopkins University, 615 N. Wolfe St. E4547, Baltimore, USA, Tel: 410-502-5445; E-mail: dpaige@jhu.edu

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Introduction

I am delighted to have been invited to participate in the 53% Conference: a critically important meeting to re-imagine the WIC program. Those of us gathered today know that WIC is an extraordinarily successful public health nutrition program. However, while we honor our past and draw inspiration from all we have achieved it is imperative that we continue to sculpt the program to takes advantage of the new technologies that will maximize impact and achieve even greater effectiveness. In this spirit, I would like to briefly address four topics: Talk about the inspiration and origins of the program. The current state of poverty and food insecurity in America, the burgeoning science underpinning the importance of the program and my vision for re-imagining the future of WIC.

The first task, the inspiration for the program: As many of you know the prototype for the National program was conceived, designed and piloted at Hopkins. It was the confluence of multiple historic and somewhat overlapping events in the late 1960's and early 1970's that provided the historical and political background for the WIC Program: the assassination of President Kennedy, President Johnson's War on Poverty, the Civil Rights movement and the TV documentary "Hunger in America" presenting the horror of malnutrition in Appalachia; all struck a raw nerve in the collective psyche of the country and contributed to the political will to improve conditions for those less fortunate.

The Origins

While these events were unfolding, I arrived in Baltimore following two years as a freshly minted physician on the Navajo Reservation to complete my Pediatric Residency at Hopkins as well as attend the school of public health. As an eager public health student I was invited to join the Baltimore Mayor's task force convened to boost enrollment in the School lunch program. I was committed to that objective but convinced that by the time children entered school we had already missed the most important period of nutritional reinforcement, growth, and development. My judgment was based on a number of animal studies reporting high levels of fetal insult with maternal malnutrition as well as long term impact on the neurocognitive development of the children. This view was reinforced at the time by data emerging from a nutrition study I was conducting in an economically disadvantaged predominantly African American area of Baltimore City. The area, not unlike many across the country, had a high proportion of pregnant women with poor or no prenatal care, limited food availability, inadequate diets, poor health and a toxic environment resulting in more than twice the level of low birth rates and pre-term births as well as higher levels of, morbidity and mortality compared to middle income America. We observed an increased number of infants and children below the third percentile for weight and length respectively. Approximately 40% of these infants had severe nutritional anemia. Our observations were echoed in similar reports in the literature. at the time. While the problem seemed daunting, the solution to the problem seemed obvious. We prescribe medicine for a range of health problems; why not simply prescribe food for poorly nourished high risk pregnant women, infants and children?

With the cooperation of clinics throughout Baltimore City and eventually throughout Maryland, selected to provide racial and geographic diversity, we were able to demonstrate the effectiveness of integrating health and nutrition services.

The project caught the attention of the U. S. Senate Select Committee on Hunger and Senators Humphrey and McGovern along with Senator Dole across the aisle. They introduced the Senate bill to establish a national program based on the Hopkins model. The program was funded as a pilot project for a two year period.

However, President Nixon impounded the 20 million dollar first year pilot funding. A successful year long lawsuit challenging the President resulted in the U.S.D.A. being ordered to spend the full two year $40 million pilot authorization in the remaining second year of the pilot program. As a result the program expanded rapidly, our follow up study report to the Senate was positive and Congress passed legislation permanently authorizing the WIC program in 1974.

Current State of Poverty and Food Insecurity in America

I would now like to turn my attention to my second task: The current state of affairs. Today while the rate for poverty remain relatively constant almost 41 million people live in poverty; compared to 25 million in 1974. Approximately 18% are children below 18 years of age. African Americans and Hispanics are approximately two times more likely to be poor and their real median income remains relativity stagnant. A single mother earning a wage of 7.25/hr ($290/week $15,080/year) cannot afford to properly raise and feed her children no matter how hard she tries. As a result food insecurity remains a part of the American landscape.

As reported by the USDA, Economic Research Service in December 2016 Approximately 12% of American households were food insecure. The prevalence of food insecurity in single women with children households was over 30% and in black non-hispanic households over 20% some time during the year in 2016. It is no wonder that two thirds of our WIC clients are below the federal poverty level and one third below 50% of the poverty level

The Science

Food insecurity and its resulting impact on maternal and early childhood nutrition results in a cascading series of short, intermediate and long term consequences resulting in maternal health issues, fetal death, congenital anomalies, neonatal mortality low birth rate, preterm births, high morbidity rates as well as neurodevelopmental delay, stunted growth and poor school performance. An unrecognized outcome until recently is the fetal origin of adult disease. Diabetes, cardiovascular disease, hypertension, renal disease and metabolic disorders are but examples of a number of chronic diseases that can have a fetal origin. Paradoxically, even obesity may be linked to compromised fetal growth. The individual burden is lifelong, the cost is enormous and the loss to society incalculable.

The problem is further compounded by the recently exploding science of epigenetics, further revealing and emphasizing the role of nutrition and the environment singly or in combination impacting and modifying genetic expression hitherto considered inviolate during critical periods in embryonic, fetal and early childhood growth and development. Think about it for a moment: our genes actively modified by diet, by a toxic perinatal environment, maternal stress or a combination of these and other factors. While often unrecognized; the insults during these periods resulting in gene modification will impose a health related burden over the lifespan: a lifelong burden to the individual, an economic burden on the health system and society as well. We now realize that chronic disease prevention for what has long been considered “adult diseases” requires that we optimize nutrition during the embryonic period, and the period of fetal growth and development and early childhood. We therefore need to sculpt our program to reflect the emerging science and technology, while responsive to fiscal constraints.

Re-imagining WIC and Plan for the Next Decade

Finally, I would like to share some thoughts on re-imagining the WIC program. The program can be streamlined by modifications to eligibility requirements and screening and the elimination of duplicative services. Appointments, applications and eligibility criteria can be completed prior to the visit. Cost savings can be realized through integration of services, co-ordination and co-location with health services, resulting in increased program penetration at reduced cost while minimizing client burden. Targeted nutrition education needs to be emphasized, the obesity epidemic addressed and reversed through social media, ethnic preferences supported and the best technology employed to convey and reinforce our educational message. WIC and health care in general has been slow to embrace information technology and the advanced methods of communication, adult education and the shift in the millennial preferred forms of communication. WIC needs to reposition itself to be tech savvy. The result will be a reduction in client burden, staff time, and improved education. A reduction in duplicative services and client burden can serve to stem the decline in the early exit of eligible toddlers and pre-school children in need of the program. Streamlining will result in WIC program efficiency and cost saving can be substantial.

The innovative approaches coupled with the use of electronic benefit transfer smart cards will be a critical part of the program. A smart card will store data, inform decisions, guide care and serve to target as well as personalize nutrition education. Links to social media messaging can address diet and weight control, food choice and other behaviors. At Hopkins we are already exploring that future. We have completed a study using smart phone nutrition messaging to overweight and obese pregnant women up to six months following delivery with the aim of adoption and maintenance of breast feeding, the reduction in post –partum weight retention and long term weight control. Moreover, we have been exploring a common record that integrates health and WIC data. A common health record will eliminate redundant screening, blood tests, nutrition interviews and the time required to update health information. Referrals can be made electronically and provider- client burden reduced. In addition we can explore linking with Medicaid records, home visiting, and emergency room use and hospitalization records. Income eligibility information nested in the EBT card can establish eligibility for additional federal, state and local programs without unnecessary redundant qualifying requirements for each program. The EBT card can serve as a nutrition and social service passport.

In addition, the EBT smart card will contain a wealth of data that can be used administratively as well as to inform policy decisions. Examples include: Client redemption patterns; foods purchased; calories consumed; education, vendor compliance;

redemption patterns; grocery stocking information and the behavioral economics' of vendor and client patterns. WIC agencies will benefit by obtaining data driven decisions to: inform how best to deliver services; plan outreach; target nutrition education; drive fiscal decisions; guide outreach by zip code and demographics. The possibilities are as endless as our imagination and the will to transform the program to optimize its impact while reaping efficiencies and economies that are responsive to budgetary considerations.

The future of WIC and its continued support and success is tied to the emerging technology. Yes, WIC is as important today as it was in 1974. The emerging science suggests it may be even more important than originally envisioned. Clearly the data is solid; the need is great and our commitment as strong as ever. While we hope and pray that the time will come when our mission will have been fulfilled and the need will be no more, for now, millions of economically disadvantaged women, infants and children need us! WIC is more important than ever!