

Three crucial years: A thousand days of child nutrition

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In the western highlands of Guatemala, Yolanda and Maria Estella participate in an interactive nutrition lesson, filling up a bowl with nutritious foods. (Below: Esther and her son Rodgers, in Uganda; Quintana with her three children, from left, Alex, ShaLawn, and MJ, in Chicago.) All photos courtesy of Roger Thurow.

Apples have become a universal symbol of good health. The saying, “An apple a day keeps the doctor away,” echoes around the world.

I heard it in various settings and in myriad languages as I traveled to India, Guatemala, Uganda, and Chicago reporting on the first 1,000 days in the lives of children around the world. Apples were front and center in the nutrition classes I observed. Apples were on posters, in books, and at the core of discussions. Apples were a prime example of the nutritious foods that pregnant and breast-feeding moms should be eating to get the essential vitamins and minerals they and their children need.

The moms of my narrative learned that proper nutrition during the first 1,000 days—from the beginning of pregnancy to the second birthday of the baby—can profoundly influence their child’s lifelong ability to grow, learn, earn, and thrive and, in turn, determine a society’s long-term health and prosperity. The moms listened with wide-eyed attention; those who could write took notes about how to balance diets with fruits and vegetables and protein from plant and animal sources. The teaching material—basically the same everywhere—featured colorful pictures of healthy foods, including bananas, oranges, sweet potatoes, eggs, milk, beans, peas,

lettuce, meat, and apples. At every session, the moms applauded the information and thanked their teachers.

“Now I’m aware of nutritious foods,” Seema, one of the moms in India, told me. “We know to take milk, beans, vegetables, be diverse in our diet. That’s important. We know we should eat fruit. But . . .”

Here, the symbolism of apples changed from good health to sour frustration.

“But we can’t afford them,” she said. Seema turned to the community health worker providing the nutrition advice and asked, “Do you know how expensive apples are?”

At the time, apples were costing as much as 150 rupees for one kilogram (2.2 pounds). Seema’s husband was paid about 100 rupees a day for his manual labor, so a kilo of apples would eat up one and a half days’ wages. Who could afford that?

The price of apples was a global lament that applied to many nutrient-rich foods. The market experience of these moms in the Indian state of Uttar Pradesh was confirmed by a report from the International Food Policy Research Institute in Washington, D.C., that chronicled how quickly food prices in India were rising, “especially for high-nutrient foods.” IFPRI’s food price index for India had been climbing steadily, going from a base of 100 in 2007 to nearly 160 by the middle of 2013. India’s vegetable price index spiked even more dramatically in 2013, nearly tripling in the course of one year. Fruit prices were soaring too.

In the United States, while hearing similar price complaints from moms in Chicago, I saw a report from the U.S. Department of Agriculture noting that the price of fruits and vegetables had increased by about 16 percent over the previous decade. Meanwhile, prices for sugar and sweets had decreased by more than 7 percent. Calories were getting cheaper, nutrients more expensive. This can be confirmed by strolling the aisles of a grocery store or looking up at a fast-food menu board.

“I often see my moms eating at McDonald’s or Burger King,” said a doula who works with one of the Chicago moms. “I ask them, ‘Do you at least pick the healthy options?’ The mom says, and we hear this often, ‘The salads are more than \$5. The cheeseburger is \$1. What’s the choice?’”

Perhaps the most common craving among pregnant mothers worldwide is knowledge,



particularly about nutrition. Knowledge, as has often been said, is power. But absent the ability to act on it, knowledge becomes a burden. And poverty is the biggest obstacle. Whether in low-caste villages in India, or on the smallholder farms of Uganda, or on the hillsides of Guatemala, or in the Chicago homes of families on food stamps, the knowledge of what to eat became a heavy weight when the foods were unavailable or unaffordable.

And that burden is exacting a heavy toll around the world. More than half the people on our planet are malnourished in some way, either undernourished, micronutrient deficient, or overweight or obese. Malnutrition has not only gone big, it has gone global; no country in the world escapes the toll. Every year, malnutrition contributes to the deaths of 3 million children under the age of five. And of those children who do survive, one in four is stunted.

Physical and cognitive stunting, which usually occurs in the first 1,000 days, is a life sentence of underperformance. According to the World Bank, a stunted child spends less time in school, learns less in the classroom, and later earns less on the job. Stunted children become stunted adults who are more prone to obesity and chronic disease.

The costs reverberate and multiply around the world: from the impact on the individual and the family to the burden on national and global economies. Sub-Saharan Africa and southern Asia lose about 11 percent of their GDP every year because of childhood malnutrition. Lost productivity and health-care expenses related to the cumulative toll of childhood malnutrition cost the global economy several trillion dollars annually.

Empowering nutrition knowledge in the first 1,000 days enriches us all.

In the highland villages of Guatemala's Palajunoj Valley, under the dormant Santa María volcano, malnutrition and childhood stunting rates are upward of 70 percent. The moms were desperate for their children to beat the odds. In a class organized by the local Primeros Pasos clinic, they had just finished an exercise where they filled up a cardboard bowl with food-shaped stickers.

"Where do you get iron?" the nutritionist asked.

"Meat. Green vegetables. Spinach. Beans," the women replied as they added each ingredient to their bowls.

“Why do you need iron?” the nutritionist asked.

“So we don’t get anemic,” the women answered in unison. There was spirited participation and laughter as the bowls filled. The moms applauded their teacher, and themselves.

“Thank you for all you are teaching us,” said Yolanda, one of the moms. Then she turned somber. “We now know the foods to eat so our children can be healthy, but often we can’t afford them,” she said.

Reality crashed the gathering. The moms talked about how meat was a rare treat in their homes, how milk, eggs, carrots, and apples—apples again—strained their budgets. Most of them worked in fields owned by other families, cultivating all manner of vegetables. The produce was destined for big city markets or for export. The women of the Palajunoj Valley needed to buy the vegetables they harvested, but they couldn’t afford much.

“My husband doesn’t earn enough, and the job he has is about to end,” said Gabriela, who was 20 years old and five months pregnant with her first child. Their household income was about \$40 a week. “It all goes to food and soap,” she said. It wasn’t nearly enough, even by the government’s estimate that the monthly cost for sufficiently nutritious food for a family of four was about \$400. Few families in the valley could even come close to spending that much.

Maria Estella was due to deliver her second child any day; she was worried that her first child, a daughter, was malnourished because she was so small and often sick. “And the fruit that comes from the coast is too expensive to buy.”

None of the women had fruit in their houses at the time.

Maria Estella said that even if their houses were well stocked with the foods in their pretend food bowls, the moms would be last in line to eat them, behind their husbands and children, as is the social custom.

In northern Uganda, new moms and moms-to-be gathered on the veranda of the local clinic laughed and clapped as a midwife unfurled a colorful poster featuring pictures of luscious foods and lists of the nutrients within them. “Vegetables, fruits, proteins, carbohydrates. Eggs, green vegetables, pumpkin, and bananas. Do you have these things at home?” the midwife asked. “You and your children need a mix

of everything. Proper nutrition helps the body and the brain grow. It prevents stunting.”

The moms understood, but they also understood that another drought was on its way. And with it, perhaps, a prolonged hunger season when ever-scarcer food is rationed and meals shrink. These moms were all farmers. They knew what they and their children needed to plant and eat, and that the weather would have to cooperate so they could do so. The threat of a drought had them more stooped than usual as they bent over their hoes tending to the crops in their fields.



Moms in the United States were as sensitive to nutrient-rich food prices as were women in India, Guatemala, and Uganda. In Chicago, when a doula explained the imperative of healthy eating to pregnant women, one woman asked, “Have you seen the price of apples?”

Poverty was a common trump card against knowledge; it’s rare that a family in Chicago or elsewhere in the United States could make food stamps stretch through the month. The cheapest foods fit the budget, and the cheapest foods were often the least nutritious. An upsurge of neighborhood violence also undermined the power of nutrition knowledge—even if fresh fruits and vegetables would be affordable, would they be accessible?—as did a raft of cultural counterweights. While the doula was talking to moms, a rap video hailing the virtues of gobbling up Flamin’ Hot Cheetos was going viral, viewed by more than 11 million people.

Chicago mayor Rahm Emanuel worries about what all this is doing to the health of children. At a meeting of the organization Scaling Up Nutrition, a global initiative, he said that food deserts—areas with a paucity of fresh foods—were also “opportunity deserts.” Where there is a nutrition desert, there is also likely an education desert, job desert, security desert, and health desert. “There’s an economic aspect to this problem that’s more than just food. Food is a manifestation of the problem.”

It was in the first 1,000 days of life, he noted, that the city’s social problems began: failing health of moms and children and, by extension, failing schools, a weakened labor force, and higher crime rates. His vision of a Healthy Chicago, as his plan of renewal is called, depends on progress on a wide socioeconomic front.

The ability to act on this knowledge in the first 1,000 days of a child's life is as important for the future of Chicago as it is for the futures of Uganda, India, Guatemala, and everywhere else.

The greatest costs of malnutrition and stunting are immeasurable: A poem not written. A song not sung. A novel not imagined. A building not designed. A mystery not solved. An inspiration not shared. A cure not discovered.

What might a child have contributed to the world if he or she hadn't been stunted in the first 1,000 days of life? A lost chance for one is a lost chance for all.