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Can Iron-Forti ed Salt Control Anemia?

Evidence from Two Experiments in Rural Bihar

Abhijit Banerjee, Sharon Barnhardt, Esther Du o

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Abstract

Iron de ciency anemia is frequent among the poor worldwide. While it can be prevented with the appropriate supplement or food forti cation, these programs struggle to reach the poorest, out-of-school children, men and the elderly. This paper reports on the impact of a potential strategy to address iron de ciency anemia in rural areas: salt forti ed with iron and iodine (DFS). We conduct a large-scale experiment in 400 villages in Bihar to test the impacts of both selling DFS and giving it away for free. At baseline, 45% of the sample is anemic. In 200 randomly assigned villages, we introduce DFS for the rst time at half the normal retail price and sell it for roughly 30 months. In 62 of those sales villages, we deliver DFS for free directly to 7 randomly assigned households over nearly 24 months. We nd no evidence that either selling DFS or providing it for free has an economically meaningful or statistically signi cant impact on hemoglobin, anemia, physical health, cognition or mental health. For the sales experiment, we can reject a reduction of 2.4 percent in the fraction anemic in the entire sample, and 1 percent among those who were previously anemic. Using an IV strategy, we nd a statistically signi cant, though relatively small, increase in hemoglobin and reduction in the fraction anemic for adolescents, a subgroup that responded well to supplements and forti cation in earlier studies. These disappointing results are explained both by modest purchases and low impact of DFS for the majority of the population, even when consumed somewhat regularly.

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