Innovations in Medical Care and Socioeconomic Health Disparities in Childhood

Abstract

Socioeconomic gradients in health during childhood are well documented, and the role of medical innovation is theoretically unclear. We use the rollout of insulin pumps for children and adolescents with Type 1 Diabetes in Denmark and Danish administrative data to document insulin pump adoption patterns suggestive of crowd out even though price is not the allocation mechanism. Being from a more socioeconomically advantaged family increases adoption, while being in a diabetes center catchment area with more socioeconomically advantaged families decreases adoption. We first reproduce the estimated effect of insulin pump adoption on glucose control (a key predictor of diabetes-related complications and mortality) from meta-analyses of RCTs. We then document larger improvements in glucose control for those in the lowest disposable income quartile using both a DiD and IV method. A back-of-the-envelope calculation suggests that the socioeconomic gradient would have been 23% larger in the absence of the insulin pump rollout.

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