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Intervention Externalities due to Limited Attention

Abstract: The potential welfare benefits of motivating people to vaccinate their children, consume healthy foods, or use clean cookstoves are enormous. Recent research has uncovered many interventions that cost-effectively improve such behaviors, as well as many that do not. But most research evaluates one intervention in isolation on target outcomes. As such, we have little understanding of how interventions might interact with one another, or whether they generate spillovers to other behaviors. This paper explores the hypothesis that behavior change interventions might generate negative externalities due to limited attention. I propose a simple framework, focusing on three types of limited attention that have distinct policy implications. I test the predictions of the model using an online experiment in which individuals receive combinations of messages and incentives for two healthy behaviors, meditation and meal tracking, which are measured daily via phone applications. I find that messaging and incentive interventions generate negative spillovers of 2.8 and 2.4 percentage points on base rates of 9.4 and 11.8 for meditation and meal tracking, respectively. Estimating the parameters of the model reveals that effective interventions do not necessarily generate larger negative spillovers than ineffective interventions, all else being equal. Specifically, suppose a low-effectiveness intervention (0.2 SDs) is scaled so that, in the absence of spillovers, it is equally cost-effective to a high-effectiveness intervention (1 SD). In the presence of spillovers driven by limited attention of the observed type, the former intervention is predicted to cost 28% more than the latter. Thus, for policymakers who care about multiple outcomes, small-scale, highly-effective interventions may be preferable to large-scale, less effective ones, once spillovers are taken into account