

## Twitter Thread by Roland Baker



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**I'm posting this paper because poor medical communication this year has resulted in a distrust in science. To improve vaccine uptake we need to understand what works and what doesn't.**

### **Increasing Vaccination: Putting Psychological Science Into**

Vaccination is one of the great achievements of the 20th century, yet persistent public-health problems include inadequate, delayed, and unstable vaccination uptake.

Psychology offers three general propositions for understanding and intervening to increase uptake where vaccines are available and affordable. The first proposition is that thoughts and feelings can motivate getting vaccinated.

Hundreds of studies have shown that risk beliefs and anticipated regret about infectious disease correlate reliably with getting vaccinated; low confidence in vaccine effectiveness and concern about safety correlate reliably with not getting vaccinated.

We were surprised to find that few randomized trials have successfully changed what people think and feel about vaccines, and those few that succeeded were minimally effective in increasing uptake. The second proposition is that social processes can motivate getting vaccinated.

Substantial research has shown that social norms are associated with vaccination, but few interventions examined whether normative messages increase vaccination uptake. Many experimental studies have relied on hypothetical scenarios to demonstrate that altruism and free riding

(i.e., taking advantage of the protection provided by others) can affect intended behavior, but few randomized trials have tested strategies to change social processes to increase vaccination uptake.

The third proposition is that interventions can facilitate vaccination directly by leveraging, but not trying to change, what people think and feel. These interventions are by far the most plentiful and effective in the literature. To increase vaccine uptake, these interventions

build on existing favorable intentions by facilitating action (through reminders, prompts, and primes) and reducing barriers (through logistics and healthy defaults); these interventions also shape behavior (through incentives, sanctions, and requirements).

Although identification of principles for changing thoughts and feelings to motivate vaccination is a work in progress, psychological principles can now inform the design of systems and policies to directly facilitate action.