

# Behaviorally-motivated Innovation for Hand Hygiene and Infection Control

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#### Technology description

Researchers at Princeton University, departments of psychology and public affairs, along with researchers at Sunnybrook Health Sciences Centre, Toronto, have co-developed a behaviorally motivated innovation for infection control and hand hygiene.

Clinician failure to wash hands before interacting with patients is a well-recognized problem in the healthcare environment. Overall, hospital-acquired infections in the United States cause patient mortality and morbidity equating to about 100,000 deaths per year. Inadequate hand hygiene by health care workers is an important contributing factor. Despite the research and funds that have been devoted to promoting greater hand washing, hand hygiene failure rates as high as 60% are reported in some studies, sometimes 80% of interactions in emergency departments. Behavioral research reveals that distracting circumstances, the lack of enforceable norms, a momentary preoccupation with other concerns, simple forgetfulness, or a failure to recall whether one has performed the intended action can lead to poor hand hygiene by clinicians.

Hand washing behavior is easily modifiable by a simple, safe, repeatable, affordable, and effective behavioral intervention. A simple, behavioral modification technique has been proposed: a soap that has the convenience and function of standard soap and leaves a mark on washed hands, which will disappear over a brief time. Use of the soap will immediately distinguish hands that have recently been washed, and thereby serve as a visible affirmation to healthcare workers, patients, and others. Eldar Shafir, William Stewart Tod Professor of Psychology and Public Affairs

Eldar Shafir is the William Stewart Tod Professor of Psychology and Public Affairs at Princeton University, the Inaugural Director of Princeton's Center for Behavioral Science and Public Policy, and co-founder and scientific director at ideas42, a social science R&D lab. He studies cognitive science, decision-making, and behavioral economics, with an emphasis on descriptive studies of how people make judgments and decisions in situations of conflict and uncertainty. He is Past President of the Society for Judgment and Decision Making, a member of the Russell Sage Foundation Behavioral Economics Roundtable, a Senior Fellow of the Canadian Institute for Advanced Research, and Vice-Chair of the World Economic Forum's Global Agenda Council on Behavior. In January of 2012, President Barack Obama appointed him to the President's Advisory Council on Financial Capability. He has received several awards, most recently a Guggenheim Fellowship, and the William James Book Award. He was named one of Foreign Policy Magazine's 100 Leading Global Thinkers of 2013. He

recently edited a book called "The Behavioral Foundations of Public Policy," (2012), and co-authored, with economist Sendhil Mullainathan, the book, "Scarcity: Why Having Too Little Means So Much," (2013). He received his Ph.D. from MIT.

Donald Redelmeier, Professor of Medicine at University of Toronto, Staff Physician at Sunnybrook Health Sciences Centre

Donald Redelmeier is a Professor of Medicine at the University of Toronto, the Canada Research Chair in Medical Decision Sciences, the Director of Evaluative Clinical Sciences at Sunnybrook Health Sciences Centre, a Staff Physician in the Division of General Internal Medicine at Sunnybrook Health Sciences Centre, and a Senior Scientist at the Institute for Clinical Evaluative Studies in Ontario. His research spans a variety of areas, emphasizing the psychology of decision making and the epidemiology of lifethreatening trauma. His areas of interest include clinical effectiveness, clinical economics, medical decision-making, health services delivery, pre-hospital/emergency care, and public and population health. He received his MD degree from University of Toronto, completed postgraduate training in Internal Medicine at Stanford University, and obtained a Master's degree in Health Services Research as a Robert Wood Johnson Scholar at Stanford University.

#### Application area

- Infection control
- 1. Promotion of hand washing
- 2. Monitoring adherence

#### Advantages

- Simple
- Safe
- Low cost

#### Institution

**Princeton University** 

#### Inventors

Donald Redelmeir
Department of Medicine
Eldar Shafir
Psychology

## 联系我们



### 叶先生

电话: 021-65679356 手机: 13414935137

邮箱: yeyingsheng@zf-ym.com