

“Designing for Better Health”

A Discovery Framework

Prepared for the Robert Wood Johnson Foundation

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Introduction

This Discovery Framework investigates how social innovators use “nudges” – small environmental changes within systems – to encourage people to make healthier choices. The Framework is informed by the Ashoka’s Changemakers “Designing for Better Health” competition, a global, online competition, hosted in partnership with the Robert Wood Johnson Foundation. The competition challenged the world’s social entrepreneurs to use their talents to design “nudges” to help people make better choices regarding their own health and the health of others. The competition, which occurred from January 14 through June 3, 2009, sourced over 280 entries from 29 countries around the world. A panel of expert judges evaluated the entries for their innovation, social impact, and sustainability, and selected a group of finalists that represent the future of the field. The Changemakers community, a worldwide group committed to social change, then voted for their favorite solutions. The top three initiatives that received the most votes were declared the winners.

This document summarizes the findings of the “Designing for Better Health” discovery process. It begins with an introduction to the framing question, which delineates the boundaries of the investigation. It then describes barriers to healthy actions in general, design principles of effective nudges, and overall observations in the process of analyzing the data. Complete descriptions of the social innovators studied follow in the appendix.

The opinions reflected in this analysis represent the perspectives and experiences of the innovators, issue experts, community activists, and public health leaders who participated in the competition, are members of the Ashoka global community, and/or fit the Ashoka and Changemakers criteria with their innovative, systems-changing ideas. This analysis is not intended to represent any organizational perspectives of Ashoka.

Framing Question

How do you enable people to act in the best interests of their health and the health of others, while ensuring their freedom of choice?

A nudge is a feature of an environment that affects someone's behavior, for good or bad, while enabling them to make whatever choice they want. For example, the order in which food is placed in a cafeteria line is a nudge: desserts first, anyone? A nudge is a small part of a whole system, and is neither the center nor the axis of it. But nudges can be powerful. Small changes can effect big individual and social changes. Think how eating habits would change if dishware was designed to help people take smaller portions, like the Portion Habit Tool created by Eileen Barreca and Sheila Spiecio of Fit Kid Nation, two of Changemakers' "Designing for Better Health" competition innovators.

According to Richard Thaler and Cass Sunstein (the authors of *Nudge*), a nudge is:

“...any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates.”

Nudges are everywhere and affect everything, including decisions about our health and the health of others. Advertisements – such as those for “fast” food or sugarcoated cereal – are the ultimate nudges and are powerful because they play on people's immediate desires while conveniently ignoring long-term health effects. Nudges cannot be avoided, but they can be consciously designed to improve both individual health decisions (such as the Portion Control Tool mentioned above) and actions and decisions that affect the public good (for example, Diego Garcia Montufar's San Francisco Saludable program which organizes waste recycling and composting for an entire community in Peru).

The purpose of this framing question and the “Designing For Better Health” competition was to see how social innovators are designing nudges that promote people's health, individually and collectively, while still maintaining people's freedom to do other than what the nudge suggests.

Barriers

Barriers are core components of a problem that, if changed, could allow for true systems-change. Barriers are not underlying causes that merely describe a situation. They must be moveable and specific to the problem. The social entrepreneurs that we highlight are addressing these issues at key leverage points with pragmatic, innovative solutions.

1. People will sacrifice their long-term health for short-term rewards.

People often don't consider long-term health effects, or don't know about them, when making short-term choices that might affect their health. For example, few people think about their weight or cardiac health when they drive a car for short trips instead of walking. They don't "add up" cumulative non-healthy practices and calculate potential long-term consequences. Instead, they often color their memories of past behaviors to make a poor short-term choice more palatable; for instance, a person may think she drinks "only a glass" of wine a night when an observer would see that she often drinks more like three or four glasses. Others use skewed cost/benefit analyses to evaluate the importance of preventive measures and justify inaction. (For example, people value the certainty of a day's wages today over the potential cost of colon cancer in the future, so they postpone a simple one-day screening procedure that could save their lives.)

People in general also have little self-control to "suffer" in the short term (e.g. no ice cream) for long-term results (e.g. losing weight), even if the results could save their lives. People caught in denial or addictive behaviors have even less self-control. For example, drop-out trends among adolescents in substance abuse treatment programs often reach rates of 50 percent or more, illustrating that even addicts in recovery programs trade off their long-term health – even survival – in exchange for an exhilarating short-term "high." Social innovator Christopher Branson's the Discovery Center (St. Luke's-Roosevelt Hospital Center, New York) combats this trend by sending regular text messages to remind adolescent clients of their long-term goals, and help them avoid falling prey to their perceived short-term "needs."

"People have a hard time matching up the choices today and what they mean in the future."

– John Balz, Nudge contributor and "Designing for Better Health" Featured Commentator

2. The health care industry and consumers approach health care with a market mentality.

Health care companies and institutions get more financial rewards when they promote their profit over people's health. While no hospital administrator consciously wants people to be unhealthy, hospital profits in the US often focus on high-tech, high-cost services. Simple, cheap, preventative health solutions (such as increasing exercise or drinking more water) that may help people live more healthy lives are rarely the focus of hospital programs or research. While individual doctors say they want to prevent illnesses, their hospitals thrive economically when people don't practice prevention and then suffer from crises that result from long-term conditions such as asthma or diabetes. Health insurance companies gain more customers by promising larger payout

percentages, even though for the consumer, it means they don't get their "money's worth" out of their insurance policy unless they experience a serious illness. At the same time, health-related advertising builds consumer demand for treatments (such as demanding a shot – even if it's a placebo – during a doctor visit), which affects how practitioners care for patients.

The "market mentality" influences other health-related areas as well. The profit from the consumption of processed foods fosters corporate advertising that pressures people, especially children, to eat non-healthy foods; fast food and sugary cereal advertisers are a case in point. Social entrepreneur Veronica Miller focused her "Fridge Fun" tool on combating those pressures by making it more fun to eat healthily. In the field of pharmaceuticals, when expensive new or popular drugs emerge, the black market responds with fake pharmaceuticals. Bright Simons, social innovator and founder of Mpedigree, developed his cell phone-based service to help people in Ghana spot counterfeit medicines before they bought them, to undercut such a black market and encourage knowledge to support healthy decisions in the purchase of reliable medicines. In many inner-city neighborhoods around the U.S., market pressures have eliminated or prevented the establishment of grocery stores, forcing residents to shop at convenience stores, liquor stores, and fast-food outlets – often devoid of fresh fruits and vegetables – for basic access to food. Amy Klein's Veggie Mobile travels to these urban food deserts to provide communities with access to affordable and fresh fruits and vegetables.

On the impact of supermarkets not seeing inner-city markets as profitable:
"None of the neighborhoods now served by the Veggie Mobile had access to a full-service supermarket where fresh produce was sold."

- Laura Whalen, Veggie Mobile, USA ("Designing for Better Health" finalist)

3. The media conveys contradictory information about healthy practices.

Scientific research on diet, lifestyle, and longevity is progressing. But as new research emerges, the media sends out conflicting information about healthy practices. Sometimes, even when research is inconclusive, results are reported widely by the media as conclusive. For example, many people trying to lose weight have embraced the Atkins Diet, a no-carbohydrate, high protein and fat diet, even though it is still controversial in both its weight-loss effects and impact on long-term health. When media coverage builds public controversy, people don't trust "new" health information, especially when the message changes rapidly. For example, until the mid-1990s, margarine was supposedly more "healthy" than butter; then research indicated the opposite. Now, "new" margarine formulas are again being touted as more healthy than butter, especially for lowering cholesterol. As a result of all this confusion, people have trouble changing their habits to correspond with the constantly changing "health advice" conveyed in the media.

However, people depend on the media, especially entertainment-oriented media, for health-related information, and seek clear answers to problems where no such answer may yet exist. The "butter-versus-margarine" wars are a case in point. Most people don't have time, inclination or resources to research health issues; they don't know how to evaluate new information or calculate probabilities. A new heart cancer intervention may prove to increase life expectancy by five percent, but few people can actually calculate what that means in terms of actual years added to average life expectancy – or even

what “average life expectancy” means. Beyond providing controversial health advice, the media inadvertently reinforces public prejudices about specific illnesses and conditions. For example, fashion media promote bone-skinny women, a practice that denigrates heavier women and celebrates potential bulimia or anorexia sufferers, providing a dangerous nudge toward eating disorders and unhealthy habits.

On the influence of the media on health and public perception:

“One of the root causes of mental illness stigma is believed to be the news media’s disproportionate coverage of individuals with mental illness involved in violent acts and the media’s use of dehumanizing language (e.g., the schizophrenic) as opposed to other news stories where people with mental illness are treated successfully and are leading fulfilling lives.”

- Jennifer Stuber, University of Washington School of Social Work

4. Public health is not a criterion in the design of physical infrastructure.

People think of health influences in nutritional or medical terms, not in terms of their physical or mental environments. They disassociate lifestyle habits (such as driving short distances) from their long-term health effects. Yet “non-health” environmental factors have a profound impact on people’s health. Social innovator Lois Saboe found this to be true for patients with depression when she founded Creative Strokes Room Makeovers, linking physical and mental wellbeing by empowering people to simply clean, repaint, and redecorate their rooms.

Most urban and rural infrastructures are not designed with positive public health outcomes in mind. The focus of many designs is efficiency, speed of movement, and population management, not what the resulting structure or infrastructure does to society’s health. For example, walking is very inconvenient in rural, sub-urban, and even many urban environments because of dangerous or exhaust-emitting traffic, a lack of sidewalks, and negative experiences associated with walking along certain routes. The purpose of these streets’ design was to move automobile traffic, not foot traffic. Walking is even discouraged indoors, as innovator Adam Grealish of “Office StairMaster” discovered, because multi-floor buildings often nudge people to use elevators, when simple signs leading to well-lit, clean stairs would prompt many people to alter their routines and walk the stairs for the exercise. Until recently, buildings have traditionally been designed to meet utilitarian or creative architectural standards, not standards of usability, health, or sustainability.

On the importance of the links between public health and physical infrastructure:

“People with chronic and severe mental health challenges are largely on their own to create a healthy “home” in the face of homelessness, shelters, jails and otherwise inadequate housing.”

- Lois Saboe, Education and Community Resource Associates, USA (“Designing for Better Health” finalist)

Design Principles

Design principles are insights and strategies we distill from the work of leading social entrepreneurs. They do not encompass tools (like technology or education) nor do they name specific organization-level approaches. They are clarifying ideas and insights that identify levers of change.

1. Interrupt habitual behaviors and enable people to think and feel.

Unconscious, habitual actions can be at the heart of an unhealthy lifestyle. Especially in the US, where the “service” and “information” economies employ the most people, most individuals’ lives entail driving to work, sitting at a desk all day, and then driving home via a takeout fast-food restaurant to purchase dinner before the family sits down in front of the television for the evening. These lifestyle habits are often lived and taught by parents and reinforced by tradition. A good nudge prompts people to stop and rethink these previously unconscious decisions. A simple indication of the time it takes to walk a certain distance on innovator Wendy Landman’s WalkBoston maps indicates to residents and visitors how quickly and easily they can walk to landmarks and communities in their city.

When habitual behavior is tied to emotional or addiction issues, an effective nudge helps people access the emotions that drive healthy choices. For example, Christopher Branson’s The Discovery Center sends a cell phone text message detailing negative statistics on drugs to encourage recovering young addicts to avoid drugs. Sometimes, the impulse to unhealthy behavior may be denial or overwhelming aspects of people’s lives. Sylvia Johnson’s innovation uses pre-programmed reminders on wristwatches to interrupt parents’ busy days to remind them about administering their child’s asthma medication, a practice critical to managing the condition.

On sending text-messages with information about the hazards of drug use to revering teen addicts:

“Our primary goal is to influence adolescents’ drug seeking and drug using behavior, by providing motivational and supportive messages as they face high-risk situations in their daily lives.”

- Christopher Branson, The Discovery Center, USA, “Designing For Better Health” entrant

2. Provide relevant information or tools right at the moment of choice or action.

The timing of information is critical when people are making choices about health, especially when the decision is a rare or complex one. However, a flood of information is more detrimental than helpful. A successful nudge provides exactly the information needed for the person to make a healthy choice at the critical moment of the decision or action. For example, Bright Simons’s Mpedigree service enables consumers to easily check that pharmaceuticals they are purchasing are genuine, and not from black-market

sources, using a text message on their cell phone. Louis Othieno's VCT Online enables people to determine a potential partner's HIV status with a simple text message. If the individuals HIV statuses are different, they know to use protection during intercourse to avoid the disease. Because of the ease of accessing the information, and the relative privacy of the information – the message only reveals whether the two people's status is the same or different, not if a person is infected with HIV – the service has been accepted and used, reducing rates of HIV infection among its clients.

Sometimes, the information can be a simple reminder for an occasional decision, such as a reminder on a woman's birth control pill dispenser to complete a breast exam on the day it will be most effective, as suggested by competition finalist Karla Robinson, a mother with "just an idea." An effective nudge can also link the healthy choice to an everyday action, prompting a person to make the choice in the context of daily life. For example, there is growing evidence that New York City's mandatory calorie labels in restaurants influence what and where people choose to eat. Even medical professionals benefit from effective nudges: Dr. Peter Pronovost cut Johns Hopkins Hospital's ten-day IV line infection rate from 11 percent to zero with a simple checklist for the ICU, used by professional team members before the procedure began.

On how VCT Online offers information about a potential partner's HIV status at the moment of choice:

"VCT Online enables clients to find out easily and at short notice if potential sex partners are of similar or different HIV status than they. They are thereby able to avoid infective contacts, whatever their behavior in other respects."

- Louis Othieno, VCT Online, Kenya, "Designing For Better Health" entrant

3. Build immediate, automatic positive reinforcement mechanisms to reward healthy decisions.

Many healthy choices provide long-term reinforcement, but few give an immediate reward outside of personal satisfaction. A simple, immediate or short-term reward system is often enough to prompt people to do the "healthy thing." For example, innovator Rob Nagler's Freiker rewards kids both with peer recognition and prizes when they bike or walk, instead of riding in a car, to school, which encourages many more kids to exercise on their way to school. Students' trips are recorded electronically and automatically, so once the kids sign up and bike or walk to school, the rewards come without further effort on their part.

In situations where many people are hesitant to risk what they have in order to potentially gain more, a positive reinforcing nudge can prompt them to take the risk. When Berkshire Medical Center offered paid leave for both employees and their spouses to miss a day of work in order to be screened for colon cancer – a program created by innovator Jacqueline Sciola – they removed the "loss" of a day's pay while acknowledging the importance of the screening process. Offered this incentive, people were more likely to screen themselves and their loved ones and take preventative action for their health.

On Berkshire Medical Center's employee benefit of a paid day off to screen for color cancer and four hours paid leave to help a spouse do the same:

“There have been well over 100 employees who have taken advantage of this benefit, and many had findings that, if left undetected, may have become colon cancer in the future.”

- Jacqueline Sciola, Colon Screening Benefit, USA, “Designing For Better Health” entrant

4. Focus the details of a nudge around a specific context, audience, and healthy decision.

Nudges work best when they are specific to a context, audience, decision-making process, and end result. Nudge designers must understand the essence of the situation, its history, the decision, and the audience. Within the context of the decision, the nudge is more effective when it leans on people’s natural impulses and interests. For example, people enjoy surfing the Internet, so Joe and Lisa Mullany created Simplicious’s online recipes and shopping lists, which are fun to access, easy to use, and encourage healthier meals. Effective nudge designers, such as Dr. Connie Kohler’s BodyLove Radio Show, understand the challenge, are involved in the choice, and build on the essence of the context. They focus on essential qualitative aspects of the decision, and link the nudge to emotional responses. BodyLove does this through a dramatic radio show about (and designed for) an African-American community, where characters face health issues similar to those of their audience, and address them in various ways to which the audience relates.

On the targeted goals and audience of the BodyLove radio show:

“BodyLove is a health-promotion serial radio drama written for African American adults.”

- Dr. Connie Kohler, BodyLove Radio Show, USA, “Designing for Better Health” entrant

5. Leverage the power of peers, family, youth and community to promote public health.

Peers, family, friends, and community can be a tremendous influence in supporting healthier choices. When people believe a majority of their peers are making a specific healthy choice, they are more likely to do the same. For instance, the State of Illinois’s First Person Consent registry uses social norms (“87 percent of adults in Illinois feel that registering as an organ donor is the right thing to do”) to encourage people to register themselves as organ donors.

Opening communication among groups accesses this social power among communities. Innovator Anshu Gupta realized this when he involved urban Indian women in his GOONJ program to build on their compassion for poor women who had no cloth for menstruation. Shocked by this basic need of their sisters, wealthier women donate clothing and cloth to be repurposed for the poor women. In another example of the power of community support for health, many “12-step” programs that involve peer-to-peer support and group counseling, like Alcoholic Anonymous or Narcotics Anonymous, use this principle to help addicts change their lives and reject their addictions.

Communities also have significant power to alter non-health elements to provide a better place to live. Urban planning initiatives that build local parks and support public

recreational equipment, such as those promoted by Playful City USA, not only beautify the community but also provide access to resources that make for healthier living. Virtual communities can promote health as well: Dean Karlan's stickK.com helps online users build a private community of supporters to help them reach personal goals.

Within the family, children have a powerful influence in teaching and influencing healthy behaviors of parents and siblings. Children harbor fewer previous conclusions than adults, and can focus laser-like attention on a specific issue. They are empowered by teaching others and sharing knowledge. Ashoka Fellow Francesco Cammarano Pellegrino's Boca Sana, in Venezuela, built on children's enthusiasm and rapid learning to train them as young teachers of oral health to their families and communities.

On using support from peers on the website service stickK.com to meet personal goals:
"I have trouble keeping commitments I make to myself, but when I'm accountable to others I tend to be successful. Thanks for the nudge!"
- Kathleen from New Jersey, user of stickK.com, (created by Dean Karlan, USA)

Design Principles

Barriers

People will sacrifice their long-term health for short-term rewards.

The health care industry and consumers approach health care with a market mentality.

The media conveys contradictory information about healthy practices.

Public health is not a criterion in the design of physical infrastructure.

Interrupt habitual behaviors and enable people to think and feel.

The Discovery Center*
Urban Health Plan*

Wendy Landman,
WalkBoston*

Wellington Nogueira Santos, Doctors of Joy**

Provide relevant information or tools right at the moment of choice or action.

Louis Othieno, VCT Online*
Karla Robinson, Breast Exam Reminder*

Bright Simons, Mpedigree*

Eileen Barreca and Sheila Spiezio, Portion Habit Tool*
Institute for Urban Family Health, Depression Screening Score*

Adam Grealish, OfficeStairmaster*

Build immediate, automatic positive reinforcement mechanisms to reward healthy decisions.

Berkshire Medical Center, Colon screening benefit*

Veronica Miller, Fridge Fun*

Dr. Felicity Breen, Steadygrow

Rob Nagler, Freiker*

Focus the details of a nudge around a specific context, audience and healthy decision.

CHETNA**
Simplicious*

Minal Doshi, Project Chrysalis*

BodyLove Radio Show*
Paul Reichert, Health In Progress*

Lois Saboe, Creative Strokes Room Makeovers*
HMRI-104 Advice*
Veggie Mobile*

Leverage the power of peers, family, youth, and community to promote public health.

stickK.com

Anshu Gupta, GOONJ**
Tori Tuncan, Lend4Health*

Francesco Cammarano Pellegrino, Boca Sana*
Art Angels Healing Arts*

Diego Garcia Montufar, San Francisco Saludable*
Darrell Hammond, Playful City USA**

* "Designing for Better Health" competition entrant
** Ashoka Fellow

Observations

- **Do your homework: understand the audience, the problem and its cause, the decision-making process, and the context before you design a nudge.**
 - An effective nudge is specific to a time, place, audience, and decision. What works well for one culture or location will be useless in another. For example, in countries where household calendars are ubiquitous, a calendar reminder has a minimal impact on behavior. In countries where a calendar is less prevalent in poor communities and has a place of honor, its reminders are much more effective.
- **Habitual decisions require an entirely different nudge approach than one-time or complex decisions.**
 - The thought- and decision-making processes for habitual versus one-time or complex decisions are very different, so the nudge must be different. Habits need interrupting, on emotional or awareness levels. In contrast, one-time or complex decisions, even if they involve emotional issues, tend to require relevant information appropriate to the context. Understanding how people make decisions within the context is critical before designing an effective nudge.
- **Be open to possibilities; an effective nudge can arise from an unexpected corner.**
 - When healthy decisions are integrated into the context of lifestyles and societies, ideas for a health-related nudge may arise from non-health areas. Thus children enjoy a higher social status from biking, instead of riding in a car, to school through the Freiker frequent biking program, or depression patients get a mental lift from a beautifully painted and decorated room, complements of the Creative Strokes Room Makeovers program. The end results are more healthy choices, even though the levers are unrelated to health per se.
- **A nudge may spark change, but is not the whole answer for broken systems and processes.**
 - By its definition, a nudge is part of a system or environment, but it cannot be the focal point for that system or environment. Whether a simple nudge leads to major social change is dependent on the situation, the social innovator, the perception of opportunities, and the system at hand. While social innovators may find new opportunities as a result of effective nudges, for broken systems the initial impulse should not be a nudge, but a systems change.
- **A "nudge" could be potentially dangerous in the wrong hands, because a well-designed nudge can be virtually invisible to the "nudgee."**
 - A nudge is part of an environment, and will inevitable be seen as "natural" in time as people become used to the nudge. Because of this invisibility, nudges can be dangerous if they prompt people to make choices that are unhealthy for themselves or others. Media ads promoting alcohol are a case in point. While most nudges designed around health may tend to be

positive, nudges that encourage people to denigrate others, separate rather than unite, or prompt success of some at the expense of others could be all the more dangerous because they will not be “obvious” to those involved in the system.

- **People don't see science as a learning process; they want black-and-white answers that they can rely on.**
 - Because most people are not scientists, they think of healthy actions in terms of facts. They want to know what they have to do to be healthy, and are willing to do it if they see results relatively quickly. When science makes “progress” and refines or redefines what behaviors are considered healthy, people get frustrated and tend to denigrate the science instead of seeing science (and health) as a process. This increases the challenges of a nudge, but also enables an effective nudge to prompt people to rethink their conclusions.

Appendix

- 1. Christopher Branson, PhD, and Dr. Philip Clemmey, The Discovery Center, USA (competition entrant)**

High dropout rates in adolescent substance abuse treatment programs create barriers to service for individuals and contribute to wasted staff time and resources. This issue is particularly important in traditionally underserved communities. Using cell phones, The Discovery Center sends motivational messages and supportive cognitive-behavioral coping prompts to adolescents in its substance-abuse recovery program. It capitalizes on the widespread use of cell phones across different cultures and socioeconomic backgrounds and extends treatment from clinical locations to the client's natural environment. The text-messages support the client in using new skills learned in treatment to manage drug cravings and provide encouragement and feedback on their progress.
- 2. Sylvia Romero Johnson, Urban Health Plan, USA (competition entrant)**

Asthma medication compliance is difficult in the community of the Bronx, New York. Often, families have multiple children, face difficult social issues, and/or rely on single parents. Asthma controller medications are often prescribed to be given two times a day. Remembering when to give medications is often difficult for parents given the many urgent tasks in the day yet critical for patients' long-term health. Johnson supplied patients/parents with a watch alarm set for a specific time to remind the patient/parent to give their child their asthma medication. The alarm goes off at the time the patient or parent finds it difficult to remember, thus increasing awareness of medication schedules.
- 3. Wendy Landman, WalkBoston, USA (competition entrant)**

People often think of distance in terms of travel time, yet many maps don't provide this information. WalkBoston developed walking maps with unique, timed walk segments that demonstrate how easy walking can be by highlighting community destinations linked via five-minute walking increments. People learn how quickly they can walk among their destinations – often faster than driving or public transportation. By seeing the destinations and opportunities available within a five-minute walk, the map user understands the walkability of an area and is “nudged” to walk. Benefits of walking include adding physical activity, reducing greenhouse gas emissions and car trips, and creating more vibrant communities. The maps literally “connect the dots” of communities in the Boston area.
- 4. Wellington Nogueira Santos, Doctors of Joy, Brazil (Ashoka Fellow, 1998)**

Every child in a hospital shares something in common: they want to be outside playing and laughing with other children and leading a normal life. Doctors of Joy helps children rediscover this joy, where possible, within the hospital setting, since the very act of playing and laughing can help the patient toward recovery, or ease the pain of a severe illness, as documented by psychologist Morgana Masetti. Wellington's fundamental idea is to incorporate the clowns into children's' hospital routines, so that they can regain control over their own lives and bodies, an element that is frequently lost in the often invasive and traumatizing process of a hospital stay. The child-clown interaction begins a process of awareness and socialization that helps the child – and often the family – come to terms with the illness and deal with it together. It also gives children moments of happiness that bring their healthier

side to the fore. Through its work, Doctors of Joy is also beginning to change the way doctors, nurses, and administrators view their roles in the curative process. Nogueira Santos has gained attention from the major media outlets in Brazil, attracted in-kind and monetary support from important corporate sponsors, and won the respect and support of the very same hospital administrators who scorned his idea in the beginning. He has also been asked to help write national policies about humanizing health care within Brazil, using the experiences of Doctors of Joy.

5. Louis Othieno, VCT Online, Kenya (competition entrant)

Ninety percent of all new HIV infections result from unprotected sex between people of different HIV status (i.e. cross-status sex). When the partners are of the same status, then both are either uninfected or already infected. If couples having sex use protection, the act cannot transmit HIV. Thus, the key to preventing HIV transmission through intercourse to uninfected people is ensuring that cross-status sex, when it happens, is protected. The first step in doing that is to be tested anonymously for HIV status, then registering the results with VCT Online's database. When clients contemplate intercourse with a prospective partner who is also registered with the service, VCT Online enables clients to use their cell phones to check if consensual sex with that person is cross-status. All that's needed is both partners' phone numbers, and their mutual consent. Clients of VCT Online are 90 times less likely to get HIV through sex than non-clients. Moreover, HIV transmits 70 times faster in the general public than it does in the sub-population of VCT Online clients.

6. Karla Robinson, Breast Exam Reminder, USA (competition finalist)

Cancer statistics show that early-onset breast cancer is aggressive, so early detection is key to its cure. Though some research has shown that breast self-examination (BSE) doesn't necessarily save lives, other research demonstrates that women do not regularly conduct BSEs because they simply forget. To remind millions of women to complete their monthly breast self-examination, Karla Robinson suggests a symbol on birth control pill packages on the optimal exam day, which is 7-10 days after the onset of menstruation (Since birth control pills regulate the cycle, it is easy to pinpoint the days in the pill schedule when this exam would be most helpful.). This is an extremely low-cost innovation with the potential to catch cancers in their earliest stages – when they are most treatable.

7. Bright Simons, Mpedigree, Ghana (Ashoka Fellow, 2008)

Counterfeit or substandard drugs pose serious health risks to consumers. They are believed to be responsible for 20 percent of malaria deaths and viewed as contributing factors to the growing problem of drug resistance. Counterfeiting drugs also violates copyright laws and is therefore a crime. But in developing regions, low-literacy rates and low technical capacity limit the efficiency of existing consumer-targeted controls (such as holograms and bar codes) to assure consumers of legitimate drugs. Innovator Bright Simons's Mpedigree improves the safety of pharmaceutical consumers by providing an easy way for them to identify fake drugs. Using this system – the first of its kind – consumers and patients can instantly verify the source of a purchased pharmaceutical at no cost, at the point of purchase, using standard mobile phones and text messages. By simply sending a code embossed on the body of the product in a text message to a dedicated access number, purchasers receive a real-time response that authenticates the product.

8. Eileen Barreca and Sheila Spiezio, “Portion Habit Tool,” USA (competition entrant)

The health care costs for children with overweight/obesity-related conditions are roughly three times those of an average-weight child. Well-meaning pediatricians’ advice like, “watch what they eat,” without further recommendations cause confusion and frustration for caring parents of all cultural, educational, and financial backgrounds who want to feed their children appropriately. Barreca and Spiezio’s Portion Habit Tool is a five-piece tableware set that suggests, physically measures, and limits portion size, serving only right-sized portions of all foods recommended by the current USDA Food Pyramid. Using this tool, correct portions are the default, so that overfeeding must be a deliberate act. Portion control immediately becomes part of the child’s approach to eating, and supports the development of life-long habits as well as addressing weight issues.

9. Institute for Urban Family Health, USA (competition entrant)

The Institute for Urban Family Health’s health centers are located in high-need, medically underserved areas, and their patients face many barriers to accessing behavioral health services. In some communities, the social stigma attached to mental health diagnoses contributes to a reluctance to seek help. Furthermore, there is a shortage of mental health workers, particularly from minority groups. In 2001, the Institute embarked on an ambitious initiative to identify and treat patients suffering from undiagnosed depression. Patients were screened routinely for depression, and their test scores were recorded as lab values in an electronic health record. When primary care professionals saw non-normal values of the score, they were prompted to prioritize depression care. Depression screening became a routine part of primary care, resulting in more treatment and improved depression scores over time. The program also changed cultural biases about depression and helped professional caregivers see depression care as part of their roles.

10. Adam Grealish, “Office StairMaster,” USA (competition entrant)

People in a multi-floor building most often use elevators instead of stairs, even though using stairs would increase their activity and improve their health. In many cases, people do not even know where the stairs are located, much less think about using them. Adam Grealish suggests buildings should remind people to use the stairs by creating positive signage with an arrow to the stairwell and therefore induce healthier behavior. Appropriate signage gives people the information at the point of decision, so they can easily find stairs and use them instead of the elevator.

11. Berkshire Medical Center, Colon cancer screening benefit, USA (competition entrant)

Colon cancer screening saves lives. Yet many people avoid this procedure because it entails taking time off from work. The Berkshire Medical Center offers all eligible employees (50 or older) and their spouses/significant others paid leave to have their initial screening colonoscopy to prevent colon cancer. Well over 100 employees have taken advantage of this benefit, and many had findings that, if left undetected, may have become colon cancer in the future. Many employees say that if it weren’t for the benefit, they would not have had the screening colonoscopy. People who have used this benefit are spreading the word among others in the community. The BMC expects that the amount of money spent to pay the employee or their spouses for time off for this procedure will be far less than the expense incurred if the employee were to require treatment for colon cancer due to lack of screening.

12. Veronica Miller, Fridge Fun, USA (competition entrant)

Fridge Fun is designed to increase the consumption of healthy foods - especially fruits and vegetables - in families with young children. It is an erasable, laminated refrigerator magnet designed to nudge children/families to keep track of and eat the foods needed for a balanced diet. It is especially designed for children between the ages of two and five who like to color and do artwork. The child simply “colors in” the icon(s) in the food group he/she has just eaten. As the day progresses, the child and parents quickly (and colorfully) see what foods they’ve eaten and what they need to eat to have a balanced diet.

13. Dr. Felicity Breen, Steadygrow, New Zealand (competition entrant)

Obesity prevention requires early recognition. But cultural prejudice against obesity not only makes parents hesitant to label their children as “obese,” parents also have trouble seeing that their children are overweight. In handling weight issues, a child’s weight trajectory is more important than a single weight, but existing Body Mass Index (BMI) charts never account for trajectories, only specific weights at specific ages. Steadygrow introduces a non-judgmental alternative: weightzones, a range of appropriate body weights relative to the child’s age (based on BMI charts) and waist circumference. Holding weight steady and “growing into it” is an effective weight-loss approach, information that Steadygrow collects and helps parents monitor with online strategies and advice. Steadygrow’s weightzone terminology encourages respect for the child, and the program promotes weight change through healthy eating and activity and early medical support.

14. Rob Nagler, Freiker, USA (competition finalist)

Freiker promotes walking/biking to school by combining incentives (prizes/recognition) with a measuring system which tracks trips to school and makes the data available on a website (www.freiker.org). Each school installs a solar-powered Freikometer (a radio frequency ID reader) on a post near the bike racks. Riders/walkers have a “Freiker sticker” (radio frequency identification tag) on their helmet or backpack. Every morning when students ride/walk to school, they ride/walk under the Freikometer and get scanned, and the Freikometer beeps to let the kids know they have been counted. The Freikometer automatically counts the number of days the child has ridden/walked and uploads wirelessly to the Freiker website. Children then log on to the website to see the number of rides they have accumulated, and the prizes they have earned. Experience indicates participation in Freiker results in walking/biking becoming the normal mode of transportation rather than the exception. Freiker seeks to fight childhood obesity, reduce traffic congestion around schools, promote a cleaner environment, and combat climate change.

15. Indu Capoor, CHETNA, India (Ashoka Fellow, 1992, and competition entrant)

The Centre for Health Education, Training and Nutrition Awareness (CHETNA) creates an illustrated book and hanging wall calendar – both adapted to the literacy abilities and socio-cultural realities of the women and their families – on maternal health entitlements and birth preparedness for rural women and their families. The picture book, visually attractive and written from a rights perspective, provides information to women and their families about maternal health services entitlements from the public health system. The wall calendar provides an opportunity for dialogue between the pregnant woman, her family, and health provider to plan for birth and prepare for complications. The sturdy calendar can survive the most adverse

circumstances; even robust mice in rural areas have not been able to destroy them. A monitoring tool addressing the husbands is also included. When women and their family members are provided with this understandable information, they use it and take effective action.

16. Joe and Lisa Mullany, Simplicious, USA (competition entrant)

Most people have limited time between getting home from work and needing dinner on the table. This makes it difficult to find a recipe that the family will eat, check to ensure all the ingredients are available, and go to the store or find another recipe. Too often, the choice is to simply serve a convenient prepackaged meal that is unhealthy but meets dinner timeframes. Simplicious is an online initiative that nudges people to eat nutritiously by making it easy to cook a variety of nutritional meals in their own kitchens, following the My Pyramid nutritional guidelines. For a low monthly fee, Simplicious offers its members a weekly meal plan and an associated shopping list on its web site. Using the list, members can shop once weekly to ensure that they have all the ingredients necessary for the week's meals. Members also have the freedom to replace a suggested meal with a saved favorite, or to remove meals from the weekly plan – their shopping lists automatically update with their changes. Simplicious reduces the likelihood of members defaulting to prepackaged convenience foods that, while making sure nobody goes hungry, provide poor nutrition.

17. Minal Doshi, Project Chrysalis, India (competition entrant)

The general practice of admitting a disabled child to a special school after the age of five does not align with theories of child development, which teach that the best period for a child's optimal growth is before that age. But proper early intervention is very resource-intensive, which makes it difficult to institute for very young children. In addition, parents are often not included in the child's treatment because they're not considered "experts." Project Chrysalis addresses this by creating therapeutic schools for very young disabled children, and training parents to be effective caretakers and therapists. This reduces the lifetime burden of disability by intervening as early as possible, yet reduces costs because parents are providing the bulk of the services. All therapeutic services are available in a single location, to ease the parents' financial and organizational burden of going to many locations for the child's treatments.

18. Dr. Connie Kohler, BodyLove Radio Show, USA (competition entrant)

Based upon the principles of entertainment-education, BodyLove is a health-promotion serial radio drama written for African American adults. BodyLove listeners dive into the lives of the women and men of the BodyLove hair salon, and learn about how they cope with their families, love, and their health. Characters deal with physical challenges common to the African American community, such as hypertension, emotional issues, and diabetes. Characters may even choose to manage conditions in ways that have life threatening consequences. After each performance, local radio hosts and health professionals follow the program with a call-in show to answer listeners' questions and link them to local health resources. Evaluations suggest that BodyLove is exerting influence on people's behavior, such as getting screened for diabetes and high blood pressure, starting to exercise, and eating a healthier diet. Anecdotal evidence also confirms that listeners' health behaviors change as a result of the show. For example, a 57-year-old woman from Marion, Alabama gave up drinking soda and joined a gym after listening to the

BodyLove show on the radio and learning about a character taking exercise walks.

19. Paul Reichert, Health in Progress Foundation, US (competition entrant)

Health In Progress is a non-profit foundation that provides innovative monitoring technologies to low-income and at-risk populations, giving them the information they need to take control of their own health. Paul Reichert was inspired to found the Health In Progress (HIP) Foundation as a non-profit arm of AMS, his medical assessment company. Through his involvement in the healthcare field, he saw that uninsured and low-income people are far too likely to lack access to preventive healthcare and assessments or the resources needed to care proactively for their own health. The HIP Foundation provides the same high-quality products and services to non-profit organizations as those provided by AMS to corporations. HIP is dedicated to combating the rising epidemic of chronic illnesses through educating the populace in both the private and public sectors and providing individuals with actionable health information.

20. Lois Saboe, Education and Community Resource Associates, Creative Strokes Room Makeovers, USA (competition finalist)

People with chronic and severe mental health challenges are largely on their own to create a healthy “home” in the face of homelessness, shelters, jails, and otherwise inadequate housing. Yet it is especially difficult to get and maintain a decent home when dealing with mood swings, thought disorders, transience, fixed incomes, rejection, isolation, addictions, and poor social/life skills, among other things. Creative Strokes Room Makeovers is a network of peers with mental health challenges who help each other transform their lives by de-cluttering, cleaning and painting each other’s rooms. It demonstrates how survivors and people working to recover from such challenges can transform their community from the inside out, one room at a time. With some donated supplies and peer support, dreams of home improvements become possible, then real. Learning “hands-on,” network members have fun helping each other make home improvements and transform their lives.

21. Sudha Kuriganti, HMRI-104 Advice, India (competition entrant)

104 Advice is a toll-free health helpline providing standardized medical information, advice and counseling to individuals without easy access to prompt, reliable medical advice. The purpose of the service is to set up a virtual medical advice hotline – a phone number that anyone can call to get basic medical advice (for example, “I woke up with a fever, is this serious?”) or basic medical information (for example, “where is the nearest eye specialist?”). The service offers a range of standardized health information and advice in three languages – Telugu, Hindi, and English – including information about all health delivery services across the state and counseling for HIV/AIDS, matrimonial discord, depression, and chronic diseases. For service improvement in government hospitals, people can also log complaints through the helpline. The 104 Advice helpline handles an average 1,500,000 calls per month.

22. Amy Klein, The Veggie Mobile, USA (competition finalist)

The Veggie Mobile is a mobile green grocer that makes affordable fresh produce available to inner-city residents (including a large percentage of senior citizens) in neighborhoods where there are no grocery stores. Before The Veggie Mobile, residents were dependent on processed foods available at local convenience and liquor stores. By making fruits and vegetables accessible, convenient, enjoyable, and affordable, The Veggie Mobile makes a healthy diet the easy choice for people living

in “urban food deserts,” a population that is particularly vulnerable to adverse health effects that result from poor nutrition. The mobile green grocer drives into targeted neighborhoods and sets up shop weekly at pre-determined locations to sell high-quality produce at half the price of a grocery store – if a grocery store were available. The Veggie Mobile concentrates its work in neighborhoods where the nearest grocery store is more than four miles away and out of reach of the residents who lack easy transportation options.

23. Dean Karlan, stickK.com, USA

stickK.com empowers people to achieve personal goals through “Commitment Contracts” to motivate themselves to achieve these goals. stickK.com is based on two well-known principles of behavioral economics: People don't always do what they claim they want to do, and the right incentives get people to do things. Online, stickK.com users make contracts to achieve goals with stakes that mean something to them: paying a specific amount of money to an “anti-charity,” or recipient they don't want to pay. They also include friends and peers in their commitment network, who help prompt the user to “stick” to the goal. With this peer support and personalized incentive, more stickK.com users meet their goals.

24. Anshu Gupta, GOONJ, India (Ashoka Fellow, 2004, and competition winner)

Menstruation is a taboo subject, especially in India. Before GOONJ, many wealthier Indian women didn't know that their poorer sisters didn't even have an extra bit of clean cloth to use monthly. When these women did use dirty or contaminated cloth, they risked serious health consequences: one woman died from tetanus because the blouse piece she used as a sanitary pad had a hook inside. Poverty and the culture of shame and silence further added to the hardships and indignity. Yet even the biggest health projects do not have budgets for sanitary pads. GOONJ is a nationwide intervention, which starts with providing a physical product but aims to change behaviors and educate Indians about the problem while removing the taboo about menstruation. GOONJ begins by collecting old rags and cloth from urban women, while educating them on the plight of their poorer sisters. These women, while collecting from others, also spread awareness of the problem to others. GOONJ then teaches the poor women to transform the cloth cheaply into useable cloth, thus providing them with clean materials to use every month.

25. Tori Tuncan, Lend4Health, USA (competition finalist)

Lend4Health facilitates community-funded, interest-free, online micro-loans as a unique funding option for treatments for children with Autism Spectrum Disorders. The Lend4Health community members read about people in need of microloans to help partially pay for autism treatments, and contribute various amounts to the budget of the requesting member. The amounts are then repaid within a specified time period. Unlike other online microloan programs, Lend4Health loans are interest-free, based on the Islamic finance concept of “qard hasan” (benevolent loan). Lend4Health has increased the number of people who can seek treatment, the speed with which treatment can be sought, and awareness and support of health issues. To date, 40 families have benefited from Lend4Health's unique service.

26. Francesco Cammarano Pellegrino, Boca Sana, Venezuela (Ashoka Fellow, 1998, and competition winner)

Poor oral hygiene does more than dull smiles; it can lead to numerous other health problems. Instead of simply getting the word to parents, Boca Sana trains children to

act as promoters of oral health. The children not only learn how to care for their teeth, they feel acknowledged as important messengers. They also teach parents and other relatives, because they enjoy teaching others something special that they know. Their knowledge of dentists and dentistry eliminates their fear of visiting the dentist. Boca Sana children teach others tooth-brushing techniques, oral hygiene, and oral disease prevention tools. Because of Boca Sana, over 55,000 Venezuelan children and young people have improved their oral health and received preventive dentistry treatments. In addition, Boca Sana convinces dentists that part of their professional mission is to teach and help people to overcome their fears of dentistry.

27. Rhonda Radford Adams, Art Angels Healing Arts, USA (competition entrant)

Poor oral health is linked to more than 120 systemic diseases, many of which can be prevented if detected early. Emphasizing good oral health care habits for children prevents future problems and possibly disease. Art Angels Healing Arts Program provides clinical and preventive education for patients through the ancient art of story telling, namely the “Tickles’ Traveling Toothbrush Show.” The stories promote individual and social health awareness to support groups, healthcare facilities, and schools, and encourage dialogue among children, parents and caregivers to reduce the fear and anxiety that discourage people from visiting the dentist. This community arts-in-dentistry project is based on a cast of quirky characters created from “dental office personalities.” These characters creatively present dental health lessons combining elements like song, dance, and interactive role-play. The program also uses hands-on art-projects using items and materials commonly associated with the dental office to help patients become more comfortable visiting their dentist. The activities are designed to forge a fresh approach to overall wellness.

28. Diego Garcia Montufar, San Francisco Saludable, Peru (competition winner)

Healthy Amazon combines sanitation and nutrition in a single initiative: it is a waste management program that produces compost for family gardens. The low-cost waste management system replaces common community practices of burning waste and throwing garbage into the streets through an educational program, which demonstrates the benefits of trash separation. In the San Francisco, Peru community, 95 percent of households now separate their trash. The program will now use the compost produced from the “waste” to grow vegetables to remedy child malnutrition in the community. Most people are already involved in agriculture, so the program will encourage them to devote some of their land to growing the foods that their children need for optimal health. Just as with the recycling education, the program will teach people the health benefits for their kids and give them an incentive – free compost from their waste – for gardening on their land.

29. Darrell Hammond, Playful City USA, (Ashoka Fellow, 2003, and competition entrant)

Playful City USA (PCUSA) honors communities across the US that make a strong commitment to promoting the importance of play in order to support the health and well being of their children. PCUSA is the only program that rewards municipalities for their commitment to play, and is the first to analyze national play practices. PCUSA prompts communities to adopt a framework for positive action that includes: Creating a Play Taskforce, Identifying Current Spending on Play, Conducting a Playspace Audit, Designing an Action Plan for Play, and Proclaiming an Annual Play Day. Future goals include identifying best practices that increase levels of play. PCUSA has empowered community change in 67 municipalities.

The analytic process behind the Discovery Framework is the property of Ashoka.
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