

Editorial

Understanding “Nudge” in Health Care

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For a long time we have been talking about literacy. Literacy means developing skills to read and write. When we compare the health statistics, we often correlate it with literacy level. We factor out the higher literacy rate in Kerala (nearly 93.9%) as an important reason for a single digit infant mortality rate. However, literacy rates are increasing in India and that is reflected in improved quality of life.¹ But the consequent improvement in health with regards to the proportionate reduction in infant mortality is not happening in our country.

This makes us ponder and forces us to think beyond literacy to the concept of education. Education is a holistic concept whereby people are enabled to think beyond understanding to development of higher analytical skills and application of the knowledge and skills. The twentieth century was devoted toward education and development of schools of education. However, do the educated people take a better decision? Perhaps not always.

Human brain takes in billions of bits of information daily. Given that much of information, it is hard to take the best decision and make good choices. Even the best-educated people including medical professionals often make different and at times poor decisions. Here comes the role of “Nudge.” The final common pathway for the application of nearly every advances in medicine and technology is human behavior. The behavior may not be determined solely by the knowledge level and education as is commonly believed. The time has come that we have to go beyond emphasis on education and now think about behavior and behavioral economics.

There is a gap between the thinking of highly trained professionals and public. Despite increasing awareness, the footfall on the hospitals is increasing with underutilization of services available in the peripheral facility. A large proportion of visiting patients to the hospitals can be managed by preventive and promotive advices given by local health care worker. The public at large are also predisposed to cognitive biases and making wrong choices where there are opportunities for better choice that could be presented to them. Flagship program of Government of India *Ayushman Bharat Yojana* presents a huge opportunity to be made more

attractive by following the Pareto principle (also known as the 80/20 rule, the law of the vital few, or the principle of factor sparsity) which states that, for many events, roughly 80% of the effects come from 20% of the causes. An inbuilt part of the *Ayushman Bharat Yojana* is to focus on creating 1,50,000 health and wellness centers (HWC) in the country with the objective to provide comprehensive health care at a facility nearest to public. In fact, this assumes a significant importance as a cost effective strategy for health care provisions to the poor. Eighty percent of the population will benefit through HWCs. Moreover, efforts required will be only 20% in creating appropriate health care interventions that may also rely on lost cost innovations. To drive the fact deeply, not much will be required in investing to create HWCs. The facilities already exist. They even do not require technically expert medical professionals as the task can very well be done through schools and existing motivated and trained health care workers in the centers. Here is the opportunities for what we can do with the help of nudges.

A “Nudge” is defined as 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. In other words, to be counted as a nudge the intervention must be easy and cheap to avoid. A nudge can be as simple as an advice.

The founder father of Nudge theory is Richard Thaler, the U.S. economist, who was the winner of the 2017 Nobel Prize for economics. When the “choice architecture” is designed to influence behavior in a predictable way but without restricting choice, it is called a “Nudge.” Cass Sunstein and Richard Thaler in their best seller “Nudge: Improving Decisions About Health, Wealth, and Happiness” have demonstrated that despite our cognitive biases we can use human fallibility and the way we think to our advantage. The book also explored concept of “libertarian paternalism” which means that people are at their liberty for choice and at the same time, a soft advice is inbuilt. In other words how public and private organizations can help people make better choices through principles of behavioral economics.

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To drive the point in another way, people are already exposed to nudges from time immemorial. The soft push by parents in the form of advice to respect seniors and care for environment are examples of nudges. A 20-second advertisement for a noodle commercial is a nudge. However, the nudge utilized by multinational companies and by business units are manipulative nudge to promote their brands and pressurize gullible people into buying more. Similar types of commercials for positive health care are few and countable only on fingertips. Best example is “Swachh Bharat Mission (SBM)” promoted by Government of India.

Influenced by Thaler behavioral economic theory of nudge, British Prime Minister David Cameron in 2010, created a behavioral insights team, now known as the Nudge Unit, to leverage opportunities to improve his government's efficiency through behavioral science and careful testing. The unit quickly demonstrated how nudges could influence behavior. Although their initial area of focus was the problems of obesity, diet, and alcohol, but they soon expanded to many areas in administration policies.²

With the exception of a few countries in Africa and South America, no nudge unit exists in a developing country until now in Public Hospital as far as we are aware.

World Bank, in its report, aims to capture both the spread and form of behavioral science in 10 countries, selected based on being innovators or early adopters in the field: Australia,

Canada, Denmark, France, Germany, Netherlands, Peru, Singapore, United States, and United Kingdom.³

In 2016, Patel et al launched the Penn Medicine Nudge Unit to systematically develop and test approaches using nudges to improve health care delivery. Health system leadership, frontline clinicians and staff, and members of the unit itself generated ideas. Their early successes and failures revealed some lessons about the role that nudge units can play in improving health care.⁴

No Nudge Unit exists in India yet. This might be due to design issues as well as state capacity in developing nudges. In September 2016, the NITI Aayog was supposed to set up a “Nudge Unit” on the lines of the Behavioral Insights Team in the United Kingdom. It was reported that NITI Aayog had tied up with the Bill & Melinda Gates Foundation to go about changing behaviors of people. The policies that were supposedly going to benefit from this nudge unit were the flagship programs of the current government—SBM, Jan Dhan Yojana, Digital India, Beti Bachao Beti Padao, and so on. The SBM requires behavioral change on a large scale; the efforts of the mission have been directed mostly toward construction of toilets. The NITI Ayog has again put an advertisement for recruiting people experts in Behavioral economics to join Aayog for the job of nudge specialists.

Final Mile, a private venture, who called themselves behavior architects, initiated nudge but the company has

Table 1 Nudge has found its way in many of the human operations. The following examples will be quite noteworthy

Situation/Condition	Problem identified	Effect when “Nudge” used	Reference and remark
Infective conditions	Branded medicines were prescribed over generic	Generic medicines were put as default and branded medicines given as other choice in Electronic health records	Patel et al, 2016 ⁸
Heart ailments (myocardial infarction)	Only 15% were referred for cardiac rehabilitation as process was manual	Team introduced that all patients with MI registered for cardiac rehabilitation by default increased referral	Enhancing cardiac rehabilitation through behavioral nudges—clinical trial-NCT03834155
Ordering investigations on HIS panel	Physicians tend to order low cost investigations leading to over-ordering	Study suggested to use nudge carefully and make test panel appropriately	Sedrak et al, 2017 ⁹
Sugar sweetened beverage (SSB) usage by adolescents	Companies encourage SSB placements by keeping in shops in front doors	Computational model of keeping non-SSB in optimal position encouraged consumption of healthy drinks compared with SSB	Wong et al, 2015 ¹⁰
Chlamydia screening among students	Type of incentive which increases uptake for screening	Financial incentives framed as a gain or loss to promote Chlamydia screening showed that £5 vouchers vs. £200 lottery weighs toward former	Niza et al, 2014 ¹¹
Protection for HIV infection, other sexually transmitted infections, and unintended pregnancy	Poor compliance	The Empower Nudge lottery to increase dual protection use: a proof-of-concept randomized pilot trial in South Africa	Galárraga et al, 2018 ¹²

Abbreviations: HIV, human deficiency immunovirus; MI, myocardial infarction.

recently been taken over by Fractal Analytics who are now promoting the model in India using artificial intelligence.

Nudge units in health care are conspicuous by their absence in India. Health care presents an opportune time to encash on the behavioral economics.

Nudge unit are also evolved form of quality improvements initiatives. Schneider et al in 2017 have shown in a cluster-randomized trial, a multistate campaign targeting hospitals and professionals involved in surgical care and infection control was associated with an increase in adherence to evidence-based practices that can reduce surgical site infections.⁵ In fact, nudges offer opportunities to influence medical professionals' behavior toward overuse and underuse of health services.⁶ Translating systematic reviews, meta-analysis, and Cochrane reviews into properly designed and laymen understandable language also qualifies as nudges.

The word "Nudge" has caught the fancy of many groups in India in last couple of years including journalists, economists, policy studies expert.⁷ Some of the common examples of Nudges used in health care are highlighted in ►Table 1. This is an opportune time for Indian health care system also to go for nudging with intention of assessing the impact and improving quality of nudges. The task is not as simple as it appears. To an uninitiated person with no knowledge of economics and behavior it may appear too philosophical. To make "Nudge" in health care a reality, team similar to that, which works with advertisement industry, is required.

A word of caution—a nudge is contextual and works for the society for which it is constructed for and may not work everywhere. Simply borrowing nudges from developed countries may not work in our country or region.

Conflict of Interest

None declared.

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