Jugaad: The 3 Idiots of HealthTech Innovation

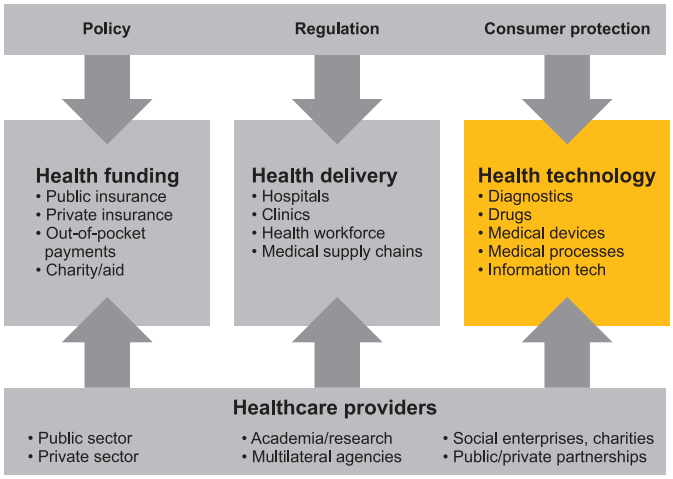
Addressing the key considerations for Jugaad that Indian health-tech entrepreneurs can adopt to disrupt the marketplace

By: Kapil Khandelwal

When I first watched 3 Idiots, the scene where the Actor assists in getting the actresses' sister in delivering the baby in the student's common room using various Jugaad, it reminded me of the Jugaad work doctors were doing in rural and semi-rural towns in Gujarat 20 years ago using crude instruments to deliver the health solution with what was available, given the constraints. Obviously, the client at that time was a global medical device MNC and wanted to understand what features it should prune from its product to compete at the price points to meet local and Chinese competition and make its product affordable to the doctors and nursing homes in the large part of 'base of pyramid' (see Square Meal on a Round Plate – (W) health Check, Aug 2013 http://www.slideshare.net/XKAPS/square-meal-on-a-round-plate-healthcare-base-of-pyramid-kapil-khandelwal-whealth-check-august-2013) in non-urban India. Over the last 20 years, things have changed and so the acceptance of base of pyramid innovation and MNCs have started to realise that they need to innovate differently to address the value proposition required for this market segment.

Many MNCs have gone to the extent that they have started their innovation centers in India and other emerging countries to do real innovation rather than conduct product features-price conjoint analysis to arrive at a range of product features stripped down from their mega innovative product created in their labs in the West for the highly regulated and quality conscious markets of the West. My earlier column discussed on the business model innovation in Base of Pyramid, in this column, we addresses the key considerations for Jugaad that Indian entrepreneurs and start ups can adopt to really disrupt the marketplace for HealthTech in India.

Governance of Health System



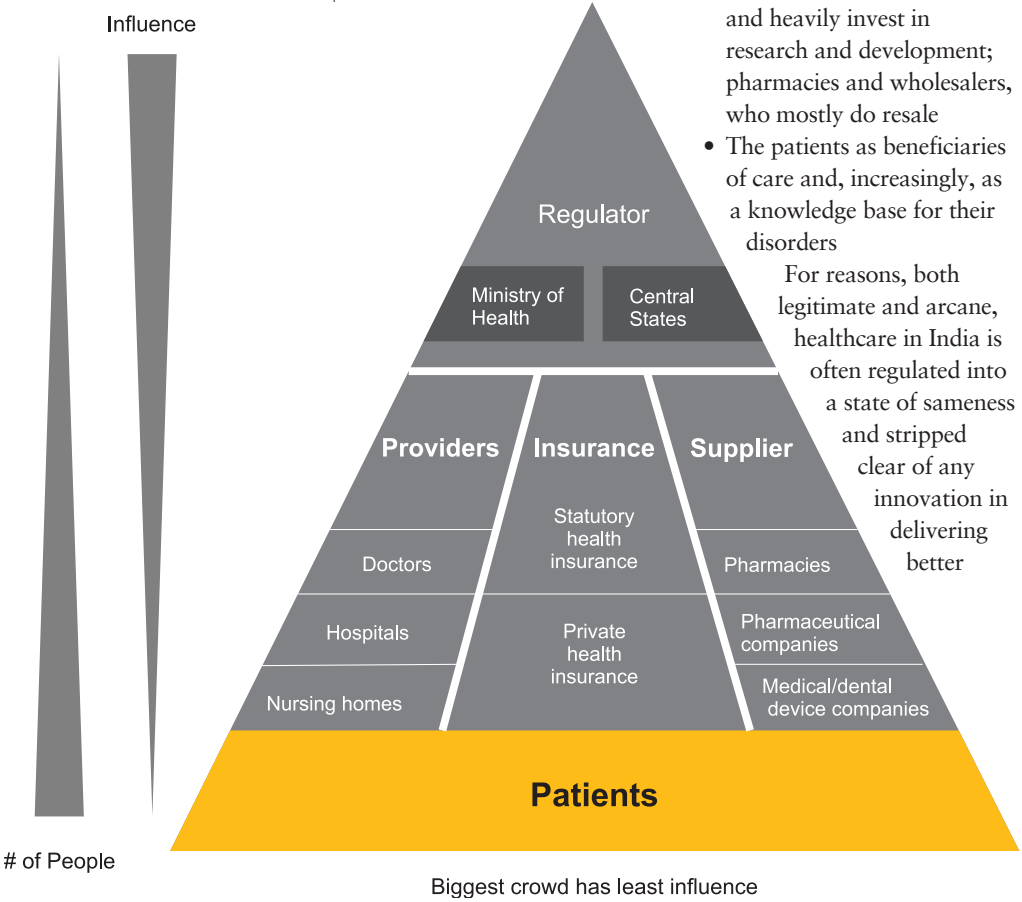
The key actors of 3 Idiots of Jugaad in HealthTech in India at Base of Pyramid

Despite the opportunities of combining healthcare and

technology in an innovative and Jugaad way, there are a lot of challenges. Still many obstacles exist such as insufficiency in interoperability and usability. One reason for this problematic situation is that the development process has been inadequate. There is a lack of user involvement in the development process and users are constantly exposed to solutions that they consider illogical and inconsistent. Therefore, it is important to understand who the key actors are.

- Regulators, e.g., Ministry of Health, national or regional committees who set regulatory guidelines
- Providers, e.g., doctors, nurses, other health professionals and medical experts who provide care in hospitals, doctor's surgeries, nursing homes, and others
- Insurance, e.g., statutory health insurance (ESIS), private health insurance, and government agencies
- Suppliers, e.g., scientific institutions, pharmaceutical and medical technology companies, who develop new products and treatments and heavily invest in research and development; pharmacies and wholesalers, who mostly do resale
- The patients as beneficiaries of care and, increasingly, as a knowledge base for their disorders

For reasons, both legitimate and arcane, healthcare in India is often regulated into a state of sameness and stripped clear of any innovation in delivering better healthcare outcomes. Despite the opportunities for economies of scale and influence, healthcare remains among the most fragmented of industries. The lack of vertical integration, in particular, within this field, robs patients of the value they could obtain from the system; and as anyone who has had more than a passing encounter with the healthcare in India can attest, it can be an intensely frustrating experience. Lack of awareness of use of conditions and possibilities can prevent the Jugaad in healthcare sector from moving forward towards preventing current obstacles. Therefore, a deeper understanding about how requirements are "made", formulated and used in practice is needed for the future. How else can appropriate and beneficial use of actors, activities and processes be enabled to ensure Jugaad in HealthTech innovation?



1st Idiot – The Need: Understanding what the consumer wants

It is important for product designers and business model and process that they should interact directly with users to get direct insights into the actors (stakeholders) domain. This is an intertwined approach to find needs, which are not readily articulated by the stakeholders. This process offers qualitative methods to make those needs visible early on innovation and service/ product development. The word qualitative indicates that what are sought for are qualities such as people's experiences, and what they perceive or interpret into

a situation. Such data is contextually dependent, i.e., it must be generated in the context in which the health outcomes occur. Besides context, people's activities, behaviours and goals are important to observe and learn from. The objectives, for this exercise, are to make the identification of needs and design a seamless effort, as well as an interest to identify opportunities to innovations. This is a four-stage process, which includes:

- frame & prepare, involves decisions about the scope or coverage of the project, the goal of the study and the definition of the people to be studied;
- watch & record, includes observations and documentations;
- ask & record, includes interviews, or simply asking questions, and documentations; and
- interpret & reframe activities to interpret and analyse data to identify needs, which in turn, reframe the project scope or coverage.

An example. A couple of years ago, we were discussing how the venture we were setting up in genetics would treat the patient in outpatient setting as an innovation. Talking to the users which included not only the patient, nurses, doctors and other support staff, we came across the following needs that let us to innovation into the care delivery model. Of course not all were used and applied, but it gave a general feel of what the consumers were looking for in such a clinic.

- optimise staff functions based on skills and abilities;
- provide appropriate clinical and post-visit support for doctors;
- provide timely access to accurate information;
- drive services through patient presence;
- make applications seamless;
- provide local, appropriate tools for the staff;
- improve provider-patient knowledge transfer;
- reduce waiting times;
- provide spaces for effective team interaction;
- create flexible doctors' spaces;
- increase holistic comfort for users; and
- develop an appropriate room layout.

2nd Idiot – The Cost/ Quality Equation: Understanding what it costs to deliver the outcomes

In India, when it comes to improving healthcare, most discussions revolve around the twin pillars of quality and cost: Will higher expenditures result in better care, or will better clinical outcomes help

Types of Innovation

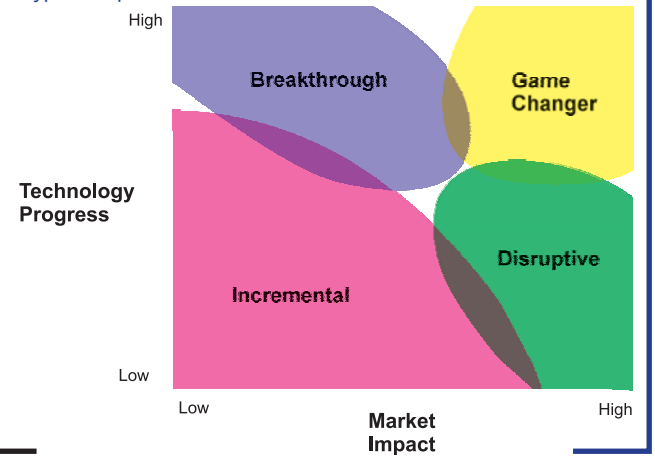
Incremental innovations involve modest changes to existing products and services. These are enhancements that keep a business competitive, such as new product features and service improvements.

Breakthrough innovation refers to large technological advances that propel an existing product or service ahead of competitors. This is often the result of research and development labs (R&D), who are striving for the next patentable formula, device and technology.

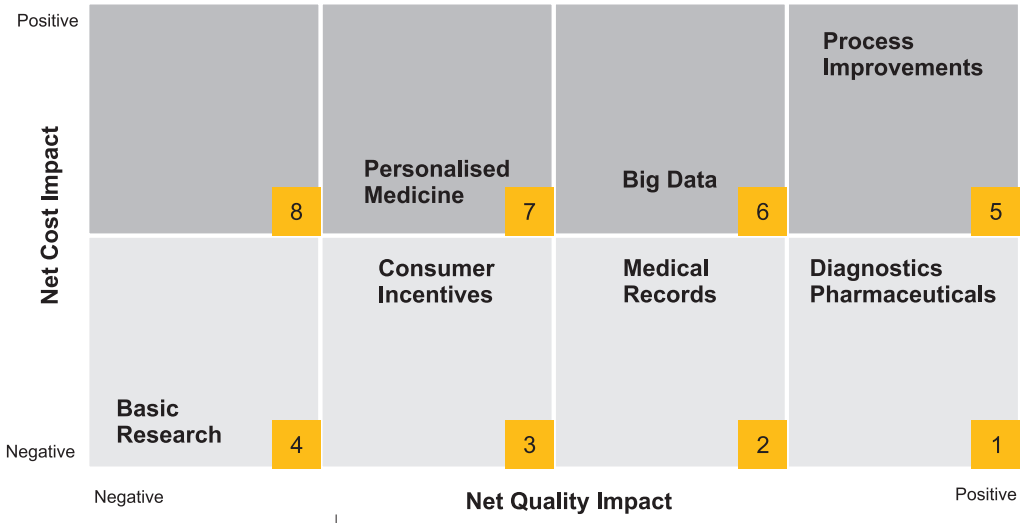
Disruptive innovation is a term coined by Clayton Christensen. In his best-selling book The Innovator's Dilemma he shows that disruptive innovations "result in worse product performance, at least in the near-term. [They] bring to a market a very different value proposition than had been available previously".

Game-changing innovation transform markets and even society. These innovations have a radical impact on how humans act, think and feel in some way.

Jugaad Innovation argues the West must look to places like India, Brazil, and China for a new approach to frugal and flexible innovation. The authors show how in these emerging markets, Jugaad (a Hindi word meaning an improvised solution born from ingenuity and cleverness) is leading to dramatic growth and how Western companies can adopt Jugaad innovation to succeed in our hypercompetitive world



An Illustrative Matrix



to contain costs? Consumers in India believe that more tests and procedures (which in turn meant higher costs) means better quality. Empirically, there is no clear conclusion that the association between cost and quality and is still poorly understood. Again, based on our discussions with consumers to ascertain how they associate the cost/quality conundrum the following conclusions emerge:

- regardless of how consumers think about costs, a large majority appreciate value
- uninsured patients are always eager for information on what it costs – the quality of care and outcomes
- consumers with insurance would even like to trade off high quality with lower costs
- some consumers do not expect high quality care but they think the cost should be fixed somehow
- rapidly rising costs might be acceptable if they were accompanied by gains in efficiency or quality of care

An important aspect of innovation is the degree of novelty involved. There is a continuum extending from minor, incremental improvements, breakthrough, and disruptive, game changers. The latter can be far-reaching, potentially changing the basis of society, as the impact of today's information communications technology (ICT) technologies has shown in recent years, for example big data, social media, etc. (see my earlier articles on these topics).

The final objective of this exercise is to arrive at a continuum of all the alternatives based on the need that the consumer will lap up. (check An Illustrative Matrix)

One of the key factors that impacts costs in healthcare is the timeline and the costs required to meet the regulatory preconditions to commercialisation and the associated risks of failures and attritions in the process. These add to the costs of successful commercial products coming out of the process of innovation.

3rd Idiot – Outcomes for the stakeholders

Finally, all the culmination of the Jugaad has to result in the outcomes that are positive for the key stakeholders outlined earlier. I am not delving into specific healthcare outcomes, which may vary from product to product or service to service. There are critical outcomes that the enterprise has to achieve (check Enterprise Framework diagram).

In the start up scenario where there is innovation driving the company, the above framework has been fairly successful in guiding the healthcare enterprises

Implication and trends

ICT plays a dual role in the overall process of Jugaad/ Innovation. Firstly, ICT serves as an embedding tool of certain technology features into the core product/services in healthcare. Secondly, it enables in the overall process of innovation. Let's discuss both these briefly. Some of my previous columns and articles have already discussed on the key trends in ICT in HealthTech products/services proposition. The net impact of ICT is in fundamental changes in the healthcare delivery and the practice of medicine, making it more personalised,

precise, collaborative, evidence-based and outcome-driven, and extending the sphere of care beyond hospitals and physicians' offices by the use of smart devices leveraging ICT.

Some of the innovations currently ongoing in healthcare that will transform healthcare are:

- Leveraging big data to influence healthcare consumer's outcomes (see my earlier article);
- Leveraging social media and What's App for more inclusive reach of healthcare applications (see my earlier article on this);
- Robotics (both machine and real) that can be used in a large spectrum of healthcare applications right from handling mundane activities such as appointment with the doctor to very precise surgeries using robots;
- Smart monitoring and communication devices to enable home care and ensuring that there is no danger to the patients in their home environment due to fatal events; and
- ICT-based smart machines that can provide general healthcare and well being to a large masses of population who have no access to healthcare or doctor.

Moving to the second issue of ICT enabling innovation in HealthTech, there are clearly two key areas where ICT can provide a major boost to innovation. Firstly, it is in the area of compiling end user needs and secondly, in the area of monitoring risks and metrics for the innovation solutions.

Conclusion

Jugaad in HealthTech can yield great ideas for start up in India as there are several opportunities to address the end user needs and reduce the cost and improve the quality of healthcare and outcomes. There is a simple framework that can be used to contextualise this innovation process. ICT has a dual role in enabling and creating the solution in HealthTech.

Epilogue

At the time of concluding this column, the Hon Finance Minister of India announced a ₹10,000 crore funding for start-ups in his budget for 2014-15. Await more comments about the budget some other time. The innovation in HealthTech become even more acute as the pipeline of start-ups with fundable innovation needs to be enhanced. My experience with the Ignition Grant Fund of Department of Biotechnology (DBT) as its key architect and ideator has been fairly lukewarm due to the pipeline of innovation in the biotech space. The framework suggested here can be a guide for start-ups in HealthTech innovation. HBI

About the author

Kapil Khandelwal has earned recognition as an angel investor, venture capitalist and expert in health sciences, education, and information communications and technology (ICT). In his 25 years of his career, he has carried out over 30 transactions including cross-border and buyouts. He runs an early stage investment fund and his own investment banking and advisory services company EquNev Capital Private Limited. Contact at: kapil@kapilkhandelwal.com

Enterprise Framework