

Welcome to BMJ Innovations

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Dear colleagues,
These are wonderful times of change for healthcare and how it is practiced. From the traditional 'automobile' hospital service model of 'wheel-in-get-fixed-walk-out', which works well for the healthcare problems of the last century—infectious diseases and trauma—the healthcare system has been grappling with the management of lifestyle and chronic diseases. The world has been unable to tackle the infectious diseases and lifestyle diseases have emerged as the major scourge of this century. Needless to say, the cost of healthcare has spiralled out of control and it threatens to destabilise the economies of the developed world and wreak havoc for developing economies; meanwhile underdeveloped economies still struggle.

While all of us are trying to tackle this problem, healthcare continues to move into homes for the elderly, day-care centers and people's homes. We are moving from a system of patriarchal physicians towards one of participative physicians who help enabled patients in making informed choices about their health. There are advantages of this system in developed economies, but in developing economies the patients still have absolute faith and trust in their physicians. This trust and faith has been the cornerstone of practice of medicine for centuries and it is imperative that patient-doctor trust should not be eroded by excessive use of technologies.

The patient is centre stage and technologies continue to enable patients in making better decisions. In the last five years, mHealth has exploded and in the foreseeable future patients will have access to their physiological data from smartwatches, the e-contact lens and possibly bio-powered implants. Although technology has empowered physicians and patients, and has led to the early diagnosis of certain cancers and risk factors, it is also creating defensive, investigative technology-dependent physicians and impatient patients. The use of technology has to be for the benefit of the patient and ease of the physician and not

only because it is cool! The overuse of technology has to be contained consciously and we have started the Society for Less Investigative Medicine (SLIM; mission-slim.org) with the same agenda. Technology for medicine is a double-edged sword; it can be beneficial both for the physician and the patient, but overuse can be disastrous. This decade has been particularly positive for people with disabilities, for example, prostheses and implants that enable the blind to perceive light and the amputees to walk. Assistive technology has not only enabled the disabled but promises to make the vision of the cyborg a reality. The philosophy is to '*Live long and die young!*'.

Unfortunately, while we are now starting to use technologies which existed only in the realm of science fiction until the last decade, there is a large portion of humanity that has not benefitted from the emergence of these technologies. Citizens of Africa, Eastern Europe, the Indian subcontinent and the underprivileged in the developed world are still bereft of the benefits of the advancements in MedTech.

These problems present an opportunity that we have partially succeeded in utilising via the efforts of the immense pool of talent that is present in physicians, engineers and designers from the developing world. They are not only highly skilled, but also have a deeply frugal mindset and are exposed to local problems every day. Embracing the Gandhian philosophy of the ability of systems to provide for every man's need, we have embarked on an inter-continental program for MedTech innovation. We fondly call it GANDHI (Globally Affordable Need-based Development of Health Innovations) and it has started to give rise to medical technologies that not only are clinically effective but also extremely cost effective. GANDHI originated from our Medtech program at the School of International Biodesign at the All India Institute of Medical Sciences in Delhi, which we run in partnership with



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IIT, Delhi, Stanford University, USA and partner universities from Australia, Japan and the United Kingdom.

Such frugal medical technologies are poised to disrupt the healthcare economy and will hopefully meet the unmet clinical needs of the world. On behalf of the *BMJ Innovations* editorial team, I invite you to share your stories of success and

failure in innovation for healthcare. We are looking for impactful technologies and processes which have the potential to deliver '*more for less for more*' as well as the technologies which will make science fiction a reality.

Keep innovating! Let us make the world a healthier place for all.

Correction

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The author list for this editorial should read as follows: B Bhargava, P Jha.

Prashant Jha's affiliation should read: School of International BioDesign, All India Institute of Medical Sciences (AIIMS), New Delhi, India.

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