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# GLOBAL INFORMATION SOCIETY WATCH 2016

*Economic, social and cultural rights  
and the internet*



ASSOCIATION FOR PROGRESSIVE COMMUNICATIONS (APC)  
AND INTERNATIONAL DEVELOPMENT RESEARCH CENTRE (IDRC)

# Global Information Society Watch

## 2016



## Global Information Society Watch 2016

Economic, social and cultural rights and the internet

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# INDIA

## HEALING FROM AFAR: INDIA'S TELEHEALTH INITIATIVES ARE BRIDGING A GAP, BUT CAN THEY REALLY SOLVE THE COUNTRY'S HEALTH WOES?



KEYWORDS: e-health

### Society for Promotion of Alternative Computing and Employment (SPACE)

Gopalakrishnan R.  
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### At opposite ends of the spectrum: Access to healthcare versus access to the internet

The twin issues of healthcare and the internet are of great relevance to 21st century India.

Information and communications technologies (ICTs) are reaching the far corners of the nation. As of June 2016, there were estimated to be 462 million internet users in India,<sup>1</sup> second only to China. Among these, 309 million are urban and 153 million are rural,<sup>2</sup> and 80% of the users access the internet through mobile phones.

While internet access is growing, the availability of physical healthcare, especially in rural areas, remains abysmal: 63% of rural patients have to travel more than five kilometres to access an in-patient healthcare facility (compared to 27% in urban areas).<sup>3</sup> As per 2011 World Bank data, India has 0.7 physicians per 1,000 people, much lower than China (1.5), the United Kingdom (2.8), the United States (2.5), and other low and middle-income countries (1.2).<sup>4</sup> Nearly 75% of India's hospital beds are concentrated in urban centres,<sup>5</sup> despite cities accounting for only 28% of the population of over 1.3 billion.<sup>6</sup> Lastly, as extrapolated from a sample survey conducted in rural areas in India's central state of Madhya Pradesh, a staggering 67% of

healthcare providers in rural India have no medical qualifications.<sup>7</sup>

In such a scenario, the time for telehealth (or what has been called "distance healing")<sup>8</sup> has come.

In this report we examine how telehealth initiatives aid in the realisation of the right to health, as enshrined in Article 12 of the International Covenant on Economic, Social and Cultural Rights (ICESCR).<sup>9</sup>

India "acceded" to the ICESCR on 10 April 1979,<sup>10</sup> with accession being defined as "the act whereby a state accepts the offer or the opportunity to become a party to a treaty already negotiated and signed by other states. It has the same legal effect as ratification."<sup>11</sup> In other words, India has ratified and is a full signatory of the ICESCR. Interestingly, most of the socioeconomic provisions of the ICESCR (such as the rights to work in humane conditions, social security, protection of family and children, health and environment, education, protection of minorities and preservation of culture) were already part of India's Constitutional framework<sup>12</sup> which came into force in 1950, a full 29 years before India ratified the ICESCR. This shows the progressive outlook of India's legislators. That said, there have been delays

1 Internet and Mobile Association of India. (2015). *Internet in India 2015*. www.iamai.in/media/details/4490  
2 Verma, S. (2015, 2 December). India on course to overtake US next month in Internet user base. *Livemint.com*. www.livemint.com/Politics/9Vipq3XmcfQuhJRMbleuW/Indias-Internet-users-set-to-increase-49-to-402-million-by.html  
3 IMS Institute for Healthcare Informatics. (2013). *Understanding Healthcare Access in India: What is the current state?* www.imshealth.com/en/thought-leadership/ims-institute/reports/understanding-healthcare-access-in-india  
4 data.worldbank.org/indicator/SH.MED.PHYS.ZS  
5 IMS Institute For Healthcare Informatics. (2013). Op. cit.  
6 www.worldometers.info/world-population/india-population (live extrapolation derived from the 2011 official Census of India figures of approx. 1.21 billion- www.censusindia.gov.in/2011census/censusinfodashboard/index.html)

7 Das, J., Holla, A., Das, V., Mohanan, M., Tabak, D., & Chan, B. (2012). In Urban and Rural India, A Standardized Patient Study Showed Low Levels of Provider Training And Huge Quality Gaps. *Health Affairs*, 31(12). content.healthaffairs.org/content/31/12/2774.full  
8 Dasgupta, A., & Deb, S. (2008). Telemedicine: A New Horizon in Public Health in India. *Indian Journal of Community Medicine*, 33(1), 3-8. www.ncbi.nlm.nih.gov/pmc/articles/PMC2782224  
9 Besides health, other rights that indirectly benefit as a result of telehealth initiatives are enshrined in Articles 6 and 7 (right to work), 10 (right to protection of the family), 13 (right to education) and 15 (right to benefits of science and technology). International Covenant on Economic, Social and Cultural Rights. www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx  
10 However, India has not ratified the Optional Protocol to the ICESCR. See: National Human Rights Commission, India. (2012). *A Handbook on International Human Rights Conventions*. New Delhi: NHRC. www.nhrc.nic.in/documents/india\_ratification\_status.pdf  
11 Articles s.2 (1) (b) and 15, Vienna Convention on the Law of Treaties 1969. https://treaties.un.org/pages/overview.aspx?path=overview/glossary/page1\_en.xml accessed via www.treaties.un.org/pages/overview.aspx?path=overview/glossary/page1\_en.xml  
12 Hussain, N. (2016). ICESCR and India: At Fiftieth Anniversary. *Social Action*, 66 (April-June), 118-119. www.isideli.org.in/ckfinder/userfiles/files/lead-art-sa%20apr16.pdf

on India's part to submit its periodic state reports<sup>13</sup> that are meant to outline "the measures which they have adopted and the progress made in achieving the observance of the rights recognized herein" as mandated in Articles 16<sup>14</sup> and 17<sup>15</sup> of the ICESCR.

## India's legal and policy framework for telehealth

When it comes to telehealth in India, three strands of policy are important: 1) the laws around healthcare for citizens, 2) the emphasis on ICT roll-out, and 3) the promotion of business start-ups and entrepreneurship.

Healthcare in India is governed by a gamut of laws and corresponding regulations including the Indian Medical Degree Act (1916), the Drugs and Cosmetics Act (1940, with respect to the sale of drugs), the Indian Medical Council Act (1956), and the regulations issued by the Medical Council of India.<sup>16</sup>

The right to health is even reflected in India's internet policies, such as the Information Technology Act (2000) and under the Draft Policy on Internet of Things (2015).<sup>17</sup>

However, healthcare is governed foremost by the Constitution of India. Under Chapter IV, Articles 38, 41, 42 and 47 of the Directive Principles of State Policy impose duties upon the state to promote public health. Subsequently, through judicial pronouncements, it has been held that the right to health is part of the fundamental right to life under Article 21.<sup>18</sup>

For the second and third strands of policy, thanks to Indian Prime Minister Narendra Modi's three

flagship initiatives – Startup India,<sup>19</sup> Standup India<sup>20</sup> and Digital India<sup>21</sup> – a number of internet-based healthcare applications have emerged, and are discussed below.

However, it is important to point out that while there is no political conflict around the issue of providing healthcare to all, from the implementation standpoint, adequate economic resources are not being made available to achieve the universal right to health.<sup>22</sup>

## Using the internet to overcome mountainous health barriers

In 2015, a Bollywood movie was released called *Manjhi – The Mountain Man*.<sup>23</sup> It told the story of a village couple living in a remote corner of the state of Bihar. The wife has an accident and needs to be rushed to the hospital, but to get there, villagers need to take a detour around a mountain which adds 40 kilometres to an otherwise 15-kilometre journey. The wife passes away, and the shattered husband, Dashrath Manjhi, gives vent to his frustrations by spending the next 22 years of his life manually carving out a path through the mountain.

"More than 70% of India's population lives in the rural areas. For medical treatment, the first points of contact are doctors who are primary care physicians (PCPs). PCPs are general physicians who don't have the expertise to treat conditions requiring specialist intervention," says Anshul Mittal, co-founder of the company that produces a healthcare app called Konsult App.<sup>24</sup> "The patients requiring advanced care have traditionally been referred to bigger hospitals and specialist doctors in cities even though some of them could have been treated remotely. The problem for the patient is travel, time and cost."

Konsult is a Delhi-based healthcare start-up working with more than 500 specialist doctors and medical establishments from the National Capital

13 As can be gleaned from official data, India's last report was the Combined Second, Third, Fourth and Fifth Periodic Report of India up to 2006, which was submitted in March 2007. [www.refworld.org/publisher,CESCR,STATEPARTIESREP,IND,,,o.html](http://www.refworld.org/publisher/CESCR,STATEPARTIESREP,IND,,,o.html)

14 [www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx](http://www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx)

15 Ibid.

16 Dalmia, V. P. (2013, 12 February) Telemedicine In India - Legal Analysis. *Mondaq.com*. [www.mondaq.com/india/x/221258/food+drugs+law/Telemedicine+In+IndiaLegal+Analysis](http://www.mondaq.com/india/x/221258/food+drugs+law/Telemedicine+In+IndiaLegal+Analysis)

17 Under clauses 1.5 and 4.4, 5.1.1, 5.1.4 and 5.1.7 it is stated that the Internet of Things can help provide automated solutions to problems faced in health services, smart health in smart cities, like the remote monitoring of health, or support for patients suffering dementia to prevent them from getting lost. The draft policy also calls for the creation of standards to ensure that there are no health hazards from the use of electronic gadgets. Department of Electronics & Information Technology (DeitY), Ministry of Communication and Information Technology. (2015). *Draft Policy on Internet of Things*. [www.mygov.in/sites/default/files/master\\_image/Revised-Draft-IoT-Policy-2.pdf](http://www.mygov.in/sites/default/files/master_image/Revised-Draft-IoT-Policy-2.pdf)

18 Centre for Enquiry Into Health and Allied Themes. (2003). Legal Position Paper on Right to Health Care Part II. Background paper commissioned by the National Center for Advocacy Studies for the purposes of the seminar titled "Right to Health Care: Moving from Idea to Reality" held at the Asian Social Forum, Hyderabad, India, 3-4 January. [www.cehat.org/rthc/paper3.htm](http://www.cehat.org/rthc/paper3.htm)

19 [www.startupindia.gov.in/index.php](http://www.startupindia.gov.in/index.php)

20 [www.pradhanmantrijoana.co.in/stand-up-india-loan-scheme-sc-st-women-sbi-hindi-pdf](http://www.pradhanmantrijoana.co.in/stand-up-india-loan-scheme-sc-st-women-sbi-hindi-pdf)

21 [www.digitalindia.gov.in](http://www.digitalindia.gov.in)

22 India has the notorious distinction of being among the countries that spend the least on healthcare. As per the 2016-2017 Union Budget, India's expenditure on health is a mere 1% of the overall GDP, compared to 3% in China and 8% in the UK. See: Sharma, N. C. (2016, 2 March). India's health woes: Budget for the National Health Mission remains stagnated at Rs 19,000 crore. *India Today*. [www.indiatoday.intoday.in/story/indias-health-woes-budget-for-the-national-health-mission-remains-stagnated-at-rs-19-000-crore/1/609824.html](http://www.indiatoday.intoday.in/story/indias-health-woes-budget-for-the-national-health-mission-remains-stagnated-at-rs-19-000-crore/1/609824.html)

23 Panwar, P. (2015, 20 August). Dashrath Manjhi: The Mountain Man – The inspiring & untold story of an unsung hero. *OneIndia.com*. [www.oneindia.com/feature/dashrath-manjhi-the-mountain-man-the-inspiring-untold-story-of-an-unsung-hero-1841887.html](http://www.oneindia.com/feature/dashrath-manjhi-the-mountain-man-the-inspiring-untold-story-of-an-unsung-hero-1841887.html)

24 Email interview with Konsult App Pvt. Ltd. co-founder Anshul Mittal, 24 April 2016. See: [www.konsultapp.com](http://www.konsultapp.com)

Region (NCR). Its app allows patients from the NCR and neighbouring regions to access expert medical advice for a fee. The availability of mobile internet services is central to its success.

Konsult is not the only healthcare app on the Indian market today. With rampant corruption<sup>25</sup> and poor facilities in governmental hospitals,<sup>26</sup> the marginalisation of communities due to gender<sup>27</sup> and caste,<sup>28</sup> and geographic and economic factors that result in negligible emergency services and rising costs of treatment, private doctors, goodwill Samaritans and entrepreneurs are taking the lead in finding innovative healthcare solutions. Numerous apps<sup>29</sup> such as Practo, Portea, MedicExpress and TweetzHealth are targeting different verticals in the healthcare ecosystem, including facilitating medical tests and appointments with practitioners, offering second opinions for diagnoses, and medical tourism.<sup>30</sup>

Konsult App is available for Android and iOS and can be used by both patients and doctors. The operations team first selects top doctors from the NCR, then gets them to download the app and use it to register as a doctor. Information required for the registration includes specialisations, qualifications, experience and medical registration details. After a careful review by the back-end team, the profile is

approved, the doctor gets listed on the system and his or her profile becomes visible. At the time of the registration, doctors can set their per-minute call charges and can also change their availability status to on/off in real time. Patients can consult the doctor on a voice call or using chat. Patients are also able to share their medical records with the doctors. The payment is based on the duration of the call or chat.

The app has received 15,000 downloads from NCR and neighbouring regions, with 3,000 monthly calls (as of July 2016) and 40% month-on-month growth.<sup>31</sup> Currently the app's user base includes cities in NCR (New Delhi, Gurugram, Noida, Faridabad) and satellite towns like Hisar, Alwar, Panipat, Sonapat and Kurukshetra. Other cities include Lucknow, Kanpur and Bareilly.

Globally speaking, over 165,000 mobile health (m-health or mHealth) apps are available to customers using iOS and Android devices. Out of these, 90% are free to download.<sup>32</sup> While the majority of these apps are concentrated in the areas of wellness, diet and exercise, nearly a quarter of these apps "focus on disease and treatment management reflecting the growing interest in the use of mHealth apps for chronic disease management."<sup>33</sup> Additionally, a small number of mHealth apps are responsible for over 90% of consumer downloads.<sup>34</sup> It is estimated that by 2017, health-related apps will have been downloaded 1.7 billion times, with global revenues expected to touch USD 21.5 billion by 2018.<sup>35</sup> (These figures are inclusive of revenues earned from connected medical devices such as wirelessly connected glucometers, heart rate and blood pressure monitors, etc., apart from healthcare apps.)

In India, the top 10 free medical apps listed on Google Play have been cumulatively downloaded approximately 14.25 million times.<sup>36</sup>

Mittal points out that the numbers of consultations are the highest in relation to seasonal illnesses, paediatric problems, gynaecological problems, skin problems, urology-related issues, neurological

- 25 Collins, S. J. M. (2013, 18 April). A government hospital that runs on bribes. *The New Indian Express*. [www.newindianexpress.com/states/tamil\\_nadu/A-government-hospital-that-runs-on-bribes/2013/04/18/article1549905.ece](http://www.newindianexpress.com/states/tamil_nadu/A-government-hospital-that-runs-on-bribes/2013/04/18/article1549905.ece)
- 26 Yellapantula, S. (2014, 27 November). Unhygienic Conditions Raise a Stink in Government Hospitals. *The New Indian Express*. [www.newindianexpress.com/cities/hyderabad/2014/11/27/Unhygienic-Conditions-Raise-a-Stink-in-Government-Hospitals/article2542852.ece](http://www.newindianexpress.com/cities/hyderabad/2014/11/27/Unhygienic-Conditions-Raise-a-Stink-in-Government-Hospitals/article2542852.ece)
- 27 Mehrotra, M. A., & Chand, S. (2012). An Evaluation of Major Determinants of Health Care Facilities for Women in India. *IOSR Journal of Humanities and Social Science*, 2(5), 1-9. [www.iosrjournals.org/iosr-jhss/papers/Vol2-issue5/A0250109.pdf?id=5674](http://www.iosrjournals.org/iosr-jhss/papers/Vol2-issue5/A0250109.pdf?id=5674); See also: Planning Commission of India. (2012). *High Level Expert Group Report on Universal Health Coverage for India*. Chapter 8 on Gender and Health. [www.planningcommission.nic.in/reports/genrep/rep\\_uhc0812.pdf](http://www.planningcommission.nic.in/reports/genrep/rep_uhc0812.pdf)
- 28 Jacob, K. S. (2009, 22 August). Caste and inequalities in health. *The Hindu*. [www.thehindu.com/opinion/lead/caste-and-inequalities-in-health/article7075.ece](http://www.thehindu.com/opinion/lead/caste-and-inequalities-in-health/article7075.ece); see also: Kowal, P., & Afshar, S. Health and the Indian caste system. *The Lancet*, 385(9966), 415-416. [www.thelancet.com/journals/lancet/article/PIIS0140-6736\(15\)60147-7/fulltext?rss%3Dyes](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)60147-7/fulltext?rss%3Dyes)
- 29 Gadgets 360. (2016, 20 January). Roundup: 10 Indian Healthcare Startups You Should Know About. *NDTV.com*. [gadgets.ndtv.com/apps/features/roundup-10-indian-healthcare-startups-you-should-know-about-792075](http://gadgets.ndtv.com/apps/features/roundup-10-indian-healthcare-startups-you-should-know-about-792075)
- 30 Interestingly enough, for all its drawbacks, India remains a hugely popular medical tourism destination thanks to its increasing adherence to international best medical practices, the availability of accredited hospitals, state-of-the-art technologies and innovative methods that allow for treatment at up to one-tenth of the cost compared to developed Western nations. Govindarajan, V., & Ramamurti, R. (2013, 15 October). India's Secret to Low Cost Healthcare. *Harvard Business Review*. [www.hbr.org/2013/10/indias-secret-to-low-cost-health-care](http://www.hbr.org/2013/10/indias-secret-to-low-cost-health-care)

- 31 Email interview with Konsult App Pvt. Ltd. co-founder Anshul Mittal, 14 August 2016.
- 32 IMS Institute for Healthcare Informatics. (2015). *Patient Adoption of mHealth: Use, Evidence and Remaining Barriers to Mainstream Acceptance*. [www.imshealth.com/en/thought-leadership/ims-institute/reports/patient-adoption-of-mhealth](http://www.imshealth.com/en/thought-leadership/ims-institute/reports/patient-adoption-of-mhealth)
- 33 *Ibid.* at page 1.
- 34 *Ibid.* at page 23.
- 35 *The Economist*. (2016, 12 March). Things are looking app: Mobile health apps are becoming more capable and potentially rather useful. *The Economist*. [www.economist.com/news/business/21694523-mobile-health-apps-are-becoming-more-capable-and-potentially-rather-useful-things-are-looking](http://www.economist.com/news/business/21694523-mobile-health-apps-are-becoming-more-capable-and-potentially-rather-useful-things-are-looking)
- 36 [https://play.google.com/store/apps/category/MEDICAL/collection/topselling\\_free?hl=en](https://play.google.com/store/apps/category/MEDICAL/collection/topselling_free?hl=en)

problems and sex-related or psychological issues. This seems to indicate that remote consultations are especially preferred when accessibility is an issue (due to rains), when patients are physically weaker (children and pregnant women), or when socially sensitive cases are involved (potentially embarrassing skin, sexual or mental issues).

The benefits of an app like Konsult are not restricted to Indian patients alone. Perhaps their most interesting case involves an international patient. Asif (named changed for privacy reasons), a six-year-old boy, travelled from Kyrgyzstan to India in early 2016 for treatment for a facial tumour. He underwent surgery (an embolisation followed by resections and facial reconstruction surgery) at a leading hospital in New Delhi. Kyrgyzstan did not have medical facilities for this treatment. After treatment the medical team in his home country required a lot of follow-up with the Indian doctors who treated him. They used Konsult App extensively for voice calls and sharing the latest reports.

With the aim of bridging the access to affordable and quality healthcare divide between rural and urban India, the start-up also runs what are called “Konsult Clinics”. Many rural patients may not be tech-savvy, suffer from language barriers, or not have access to smartphones with strong internet connectivity. So, for their clinic model, Konsult has linked up with several PCPs who use its application to speak to specialist doctors on behalf of the patients. As the PCP has already examined the patient physically, she or he is able to accurately describe the symptoms and the physical condition to the specialist doctor who can then advise treatment. Here both the PCP and specialist use the platform to share medical records and opinions. For cases which require more serious intervention, the patient is referred to the specialist doctor who already has the benefit of knowing the patient’s history. The specialist doctor can advise the patient to get the required tests done even prior to meeting her or him for the first time. This makes the whole process more convenient and affordable for the patient. According to estimates, this process can roughly translate to a cost saving of 90% for medical care.<sup>37</sup>

37 Bhowmik, D., Duraivel, S., Singh, R.K., & Kumar, K.P.S. (2013). Telemedicine – An Innovating Healthcare System In India. *The Pharma Innovation*, 2(4). [www.thepharmajournal.com/archives/2013/vol2issue4/PartA/1.1.pdf](http://www.thepharmajournal.com/archives/2013/vol2issue4/PartA/1.1.pdf) For Konsult App the average cost of treatment for an app user is INR 200-250 (USD 3-3.7) (average call time is four minutes). The patients seen by PCPs pay INR 100-200 (USD 1.5-3) for telephonic consultations. This is very cheap as compared to INR 500-1,500 (USD 7.5-22.5) for OPD fees – INR 500 (USD 7.5) for doctors in smaller cities to 1,500 INR (USD 22.5) for super-specialists sitting in top hospitals, in addition to travel and time costs.

## Profit-based telehealth models can only go so far

“While the major advantage with these apps is that it helps us fix our consultation rates, the fact is that I remain hesitant to diagnose serious diseases over the phone,” says Dr Aditi Gupta, a 29-year-old Delhi-based dermatologist who has been using Konsult extensively.<sup>38</sup> “As doctors we have to balance the risks with the benefits, and I don’t feel comfortable prescribing strong medicines with side effects over the phone, because I don’t want to get into any legal complications.”

Disinclination to make advanced diagnoses is just one of the many limitations of telehealth.<sup>39</sup>

Another serious issue which has not been addressed is the gender dimension. Theoretically, these apps ought to facilitate gender inclusivity by enabling healthcare access for women through remote consultations. However, Gupta points out that when it comes to her set of tele-referrals alone, there has not been any noticeable numerical increase in female consultations specifically following adoption of the app. This could well be a pointer to the larger socio-gender problem of women being restricted from using mobile phones<sup>40</sup> in order to prevent “disturbance in society”.<sup>41</sup>

Additionally, despite initiatives like Konsult Clinics, criticism persists that being profit-oriented models, these apps can initially focus only on the urban, rich or “white-collar” user base, leaving large swathes of rural households in the same perilous position they were in before.<sup>42</sup> Furthermore, the business model of these apps, which involve incentivised payments to doctors based on the number of online consultations, could perpetuate the tendency of government doctors to sideline their work in public hospitals and cater only for better paying app-based patients.

38 Phone interview with Dr. Aditi Gupta, 14 August 2016.

39 Other challenges include ensuring the continuous availability of power and telecom connectivity, overcoming the linguistic barriers between doctors and patients from different parts of the country, the privacy of sharing confidential medical information, and overcoming the resistance to the adoption of technology, both on the part of the patients and doctors. See: Bhowmik, D., Duraivel, S., Singh, R.K., & Kumar, K.P.S. (2013). Op. cit.

40 Men account for 71% of the total internet user base, with women constituting only 29%. See: Internet and Mobile Association of India. (2015). Op. cit.

41 Lewis, K. (2016, 22 February). Girls and unmarried women in India banned from using mobile phones to prevent ‘disturbance in society’. *The Independent*. [www.independent.co.uk/news/world/asia/girls-and-unmarried-women-in-india-forbidden-from-using-mobile-phones-to-prevent-disturbance-in-a6888911.html](http://www.independent.co.uk/news/world/asia/girls-and-unmarried-women-in-india-forbidden-from-using-mobile-phones-to-prevent-disturbance-in-a6888911.html)

42 Arakali, H. (2015, 16 December). New Indian Startups And Apps Improve Healthcare In Urban India Through Smartphone Technology. *International Business Times*. [www.ibtimes.com/new-indian-startups-apps-improve-healthcare-urban-india-through-smartphone-technology-2225511](http://www.ibtimes.com/new-indian-startups-apps-improve-healthcare-urban-india-through-smartphone-technology-2225511)

Because of the above, public sector telehealth initiatives, from the local to the federal government level, need to continue to play a significant role towards ensuring the universal right to health. In this context, among other initiatives,<sup>43</sup> the government's ambitious Social Endeavour for Health and Telemedicine (SEHAT) initiative, launched in 2015,<sup>44</sup> is significant. Introduced under the Digital India programme, SEHAT expanded the scope of the already-existing common services centres (CSCs) to include healthcare services. CSCs, established at every *panchayat* (i.e. village level), act as service delivery points in rural India. With SEHAT, these CSCs will now also make diagnostic facilities available, operate generic drugs stores, and offer teleconsultation services. For the latter, the government has linked up with leading private hospital chains Apollo and Medanta, a promising sign of public-private partnerships in the healthcare space.<sup>45</sup>

### Multi-pronged approach needed

The link between ESCRs and the internet, particularly in the sphere of healthcare, will keep getting stronger. The internet has definitely been an enabler of ESCRs. However, with many of these telemedicine initiatives having been launched only in the last few years, it remains to be seen what the future holds.

In light of the numerous challenges and limitations as discussed above,<sup>46</sup> offline methods of treatment still hold sway. Public perception tends to favour traditional modes of face-to-face treatment. Changing the mindset of consumers is the most difficult task that these start-ups face. Most telehealth initiatives today, whether government-run or private, are only just beginning to tap into the rural patient base. The whole sector is very fragmented, but with the steady penetration of ICTs in India, the consolidation of the space can be expected in the years to come.

The e-health situation can be equated with the e-commerce boom in India. "Until a few years ago nobody would buy things online and now consumers trust online purchases. Patients visit doctors

and then speak to them on the phone for follow-ups. Speaking to doctors on the phone is not new – monetising it and offering it as a separate service is new. It will take some time for mass adoption, but it will surely happen because of the advantages it offers," concludes Mittal on a positive note.<sup>47</sup>

While telehealth can eventually become the starting point of diagnosis for millions of people in India, it can *never* singularly resolve India's healthcare crises. For that to happen, physical public health infrastructure, especially in the rural areas, has to be drastically strengthened, if not overhauled completely. The business models of established and critically acclaimed offline cost-saving surgical initiatives such as Aravind Eye Hospital<sup>48</sup> and Narayana Hridayalaya<sup>49</sup> can be replicated across the country.

The reality is that public, private, online and offline initiatives all need to work together to realise the right to health for all.

### Action steps

The following action steps are suggested for India:

- *Strengthen the National Rural Health Mission through increased funding and social audits:* The National Rural Health Mission (NRHM), launched in 2005,<sup>50</sup> is India's largest public health programme and seeks to address all the ills plaguing rural health, as detailed above. Unlike past programmes, the NRHM has been considered a "minor success"<sup>51</sup> and therefore needs to be further strengthened<sup>52</sup> through increased funding<sup>53</sup> and better state-wide utilisation of funds.<sup>54</sup> Finally, social audits

43 In January 2016, four m-health services were also announced by the Union Ministry of Health and Family Welfare, which collectively aims to improve family health. Press Information Bureau. (2016, 15 January). Shri J P Nadda Launches Mobile Health Services – Mobile Academy, Kilkari, M-Cessation and TB Missed Call initiative – to Strengthen Public Health Infrastructure. [www.pib.nic.in/newsite/PrintRelease.aspx?relid=134503](http://www.pib.nic.in/newsite/PrintRelease.aspx?relid=134503)

44 Press Information Bureau. (2015, 25 August). 'Sehat' Unique Initiative for Health Care Launched. [www.pib.nic.in/newsite/printrelease.aspx?relid=126318](http://www.pib.nic.in/newsite/printrelease.aspx?relid=126318)

45 Ibid.

46 Dasgupta, A., & Deb, S. (2008). Op. cit.

47 Email interview with Konsult App Pvt. Ltd. co-founder Anshul Mittal, 14 August 2016.

48 Ydstie, J. (2011, 29 November). India Eye Care Center Finds Middle Way To Capitalism. *NPR.org*. [www.npr.org/2011/11/29/142526263/india-eye-care-center-finds-middle-way-to-capitalism](http://www.npr.org/2011/11/29/142526263/india-eye-care-center-finds-middle-way-to-capitalism)

49 Rai, S. (2015, 17 December). Rs 600 cr Narayana Hrudayalaya IPO: Balancing affordable healthcare and the impending pressure for profits. *The Indian Express*. [www.indianexpress.com/article/business/business-others/rs-600-cr-narayana-hrudayalaya-ipo-balancing-affordable-healthcare-and-the-impending-pressure-for-profits](http://www.indianexpress.com/article/business/business-others/rs-600-cr-narayana-hrudayalaya-ipo-balancing-affordable-healthcare-and-the-impending-pressure-for-profits)

50 [www.nrh.m.gov.in/nhm/nrh.m.html](http://www.nrh.m.gov.in/nhm/nrh.m.html)

51 Dhar, A. (2011, 15 September). National Rural Health Mission "a minor success". *The Hindu*. [www.thehindu.com/todays-paper/tp-national/national-rural-health-mission-a-minor-success/article2454690.ece](http://www.thehindu.com/todays-paper/tp-national/national-rural-health-mission-a-minor-success/article2454690.ece)

52 Jacob, K. S. (2013, 10 August). For a new and improved NRHM. *The Hindu*. [www.thehindu.com/opinion/lead/for-a-new-and-improved-nrh.m/article2333819.ece](http://www.thehindu.com/opinion/lead/for-a-new-and-improved-nrh.m/article2333819.ece)

53 "There was only 2% increase in the total budget allocation for FY 2016-17 compared to FY 2015-16." Janakiraman, P, & Kapur, A. (2016, 26 February). National Health Mission (NHM) GOI, 2016-17. *Budget Briefs, 8(3)*. *Accountability Initiative, Centre for Policy Research*. [www.cprindia.org/sites/default/files/policy-briefs/NHM.pdf](http://www.cprindia.org/sites/default/files/policy-briefs/NHM.pdf)

54 Ibid.



need to be institutionalised to ensure proper implementation.<sup>55</sup>

- *Weed out quackery through public-private partnerships:* As revealed in an alarming recent WHO report,<sup>56</sup> 57% of India's allopathic doctors (across both urban and rural areas combined) do not have any medical qualification.<sup>57</sup> The state must set up a database through a public-private partnership (including those who offer healthcare app services) to weed out fraudulent medical practitioners from the system. The mechanism that is set up can publicly disclose the names, designations and experience of all medical practitioners online, thereby reducing scope for misrepresentation.
- *Continue emphasising preventive measures:* Building on the old adage "prevention is better than cure", numerous studies have shown that simply ensuring clean water, sanitation and hygiene can dramatically improve public health.<sup>58</sup> To this end, India's massive *Swachh Bharat Abhiyan* (Clean India Mission) campaign<sup>59</sup> should continue to be promoted by politicians, media and celebrities alike.
- *Provide more support to the telehealth sector by improving:*
  - The ease of doing business for healthcare start-ups: There are no specific laws governing telehealth and there is a need to interpret traditional medical regulations for today's digital age. For example, many

healthcare start-ups function as aggregators of doctors and medicines. However, there is no clarity on how to assess their liability in cases of deficiency in medical service (e.g. the wrong prescription of drugs) or when there is malpractice on the part of the doctors listed on their apps. Such ambiguity must be cleared up. Additionally, support must be provided in the use of innovative mobile technology applications to enhance and standardise the quality of healthcare by frontline rural health providers in low-resource settings.<sup>60</sup>

- The quality, inclusivity and penetration of telecommunication networks:
  - More mobile towers need to be erected and better regulation of mobile networks by the Telecom Regulatory Authority of India and the Ministry of Communication and IT is needed so as to ensure better connectivity, prevent undue profiteering by private telecom operators, and bring down costs further.<sup>61</sup>
  - Special government programmes need to be developed to support women. These programmes should aim to increase their internet access and sensitise others against the social stigma and ostracisation they have to endure in many contexts, and which currently restrict them from accessing ICTs.<sup>62</sup>

55 Chauhani, N. (2015, 13 April). CAG for social audits of NGOs, rural bodies. *Times of India*. [www.timesofindia.indiatimes.com/india/CAG-for-social-audits-of-NGOs-rural-bodies/articleshow/46901448.cms](http://www.timesofindia.indiatimes.com/india/CAG-for-social-audits-of-NGOs-rural-bodies/articleshow/46901448.cms)

56 Anand, S., & Fan, V. (2016). *The Health Workforce in India*. Geneva: WHO. [www.who.int/hrh/resources/16058health\\_workforce\\_India.pdf](http://www.who.int/hrh/resources/16058health_workforce_India.pdf)

57 In rural India only 18.8% of allopathic doctors possess valid medical qualifications. See *Ibid*.

58 [www.who.int/water\\_sanitation\\_health/publications/facts2004/en](http://www.who.int/water_sanitation_health/publications/facts2004/en)

59 Which *inter alia* emphasises eradication of public defecation by 2019 through the construction of toilets, especially in rural areas. See: [www.swachhbihar.gov.in](http://www.swachhbihar.gov.in)

60 Gautham, M., Iyengar, M. S. & Johnson, C. W. (2015). Mobile phone-based clinical guidance for rural health providers in India. *Health Informatics Journal*, 21(4), 253-266. [jhi.sagepub.com/content/21/4/253.abstract](http://jhi.sagepub.com/content/21/4/253.abstract)

61 "Although the Indian telecom industry is one of the fastest-growing industries in the world, the current teledensity or telecom penetration is extremely low when compared with global standards. India's teledensity of 36.98% in FY09 is amongst the lowest in the world. Further, the urban teledensity is over 80%, while rural teledensity is less than 20%, and this gap is increasing. As majority of the population resides in rural areas, it is important that the government takes steps to improve rural teledensity. No doubt the government has taken certain policy initiatives, which include the creation of the Universal Service Obligation Fund, for improving rural telephony. These measures are expected to improve the rural teledensity and bridge the rural-urban gap in teledensity." [www.dnb.co.in/IndianTelecomIndustry/OverviewTL.asp](http://www.dnb.co.in/IndianTelecomIndustry/OverviewTL.asp)

62 Lewis, K. (2016, 22 February). *Op. cit*.

# Economic, social and cultural rights and the internet

The 45 country reports gathered here illustrate the link between the internet and economic, social and cultural rights (ESCRs). Some of the topics will be familiar to information and communications technology for development (ICT4D) activists: the right to health, education and culture; the socioeconomic empowerment of women using the internet; the inclusion of rural and indigenous communities in the information society; and the use of ICT to combat the marginalisation of local languages. Others deal with relatively new areas of exploration, such as using 3D printing technology to preserve cultural heritage, creating participatory community networks to capture an “inventory of things” that enables socioeconomic rights, crowdfunding rights, or the negative impact of algorithms on calculating social benefits. Workers’ rights receive some attention, as does the use of the internet during natural disasters.

Ten thematic reports frame the country reports. These deal both with overarching concerns when it comes to ESCRs and the internet – such as institutional frameworks and policy considerations – as well as more specific issues that impact on our rights: the legal justification for online education resources, the plight of migrant domestic workers, the use of digital databases to protect traditional knowledge from biopiracy, digital archiving, and the impact of multilateral trade deals on the international human rights framework.

The reports highlight the institutional and country-level possibilities and challenges that civil society faces in using the internet to enable ESCRs. They also suggest that in a number of instances, individuals, groups and communities are using the internet to enact their socioeconomic and cultural rights in the face of disinterest, inaction or censure by the state.

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