

# News from here and there

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## Revenue targets for doctors in corporate hospitals

As part of its series on 'Corruption in medicine', the *BMJ*, on 3 September 2015, published an article on the unethical practice of profit-driven targets that corporate hospitals in India set for doctors on their payroll. The article by Meera Kay, a Bengaluru-based journalist, had viewpoints from the medical and non-governmental organization (NGO) sectors. It raised the issue of lack of proper ethical guidelines leading to unnecessary tests and procedures being done on patients. While these practices increased the revenue that private hospitals generated, they also exposed the patients to substantially more risk of potential complications, especially when the diagnostic tests were invasive or when operative procedures were involved. Doctors involved in such practices were often under pressure from their administration to meet the targets and unable to voice their misgivings as it could potentially jeopardize their job security.

The article quoted a report 'Voices of conscience from the medical profession' by Support for Advocacy and Training to Health Initiatives (SATHI), a Pune-based NGO. The report highlighted that over 50% of hospital beds in India were in private sector hospitals. Most of these profit-driven hospitals aim to enhance the financial returns for their investors. The article quoted Kunal Saha, president of People for Better Treatment, an NGO promoting corruption-free healthcare in India, who raised the issue of payment for surplus investigations and operations being an added out-of-pocket expense for patients or their primary caregivers in the absence of an effective medical insurance system in India.

The Society for Less Investigative Medicine, established in 2014 by cardiologists at the All India Institute of Medical Sciences in New Delhi, has suggested using evidence-based recommendations in healthcare as a method to discourage unnecessary tests and procedures. Multiple internet portals offering second opinions in medicine are now available and a study published in the *Times of India* in January 2015 suggested that a large percentage of opinions about surgeries were reversed when a second consultation from an independent source was sought.

The Clinical Establishments (Registration and Regulation) Act, passed in 2010, has provisions to assess the investigations and surgeries prescribed by doctors and hospitals and can be used to implement standards of care supported by evidence-based guidelines. According to Meera Kay, neither the Medical Council of India (MCI), nor Healthcare Providers India, the trade body for private hospitals, responded to *BMJ* queries regarding this subject, before the article was published.

Not all private hospitals, however, exert such pressure on their consultants. Dr Nagendra Swamy, Group Medical Director and Chairman, Quality Council at Manipal Health Enterprises said: 'It is our policy at Manipal Hospitals to never pay any incentive or compensation to doctors for prescribing investigations or medications. They are paid only for their professional services. We insist on evidence-based practice, to provide appropriate care based on clinical conditions in order to provide best possible relief as per accepted medical practices. We do discuss their performances, based on clinical outcomes, patient feedback and

medical audits.' This statement was confirmed independently by two physicians who were associated with the hospital.

MAHARRA HUSSAIN, *Dubai, United Arab Emirates*

## Parasitic diseases breakthrough sweep Nobel Prize in Medicine 2015

The Nobel Prize in Medicine 2015 was shared, one half jointly by William C. Campbell (Ireland) and Satoshi Ōmura (Japan) for their discovery of ivermectin, a novel therapy against infections caused by roundworm parasites and the other half to Youyou Tu (China) for her discovery of artemisinin against malaria from traditional Chinese medicines.

Ivermectin is the treatment of choice for onchocerciasis. Unlike previous treatments, which had serious, and sometimes fatal, side-effects, ivermectin is safe and effective. It has been used widely since 1987. Ivermectin is on the WHO List of Essential Medicines—a list of drugs that every medical system needs. Ivermectin does not kill the adult worms but suppresses the production of microfilariae by adult female worms for a few months following treatment and hence reduces transmission. As the adult worms can continue to produce microfilariae until they die naturally, ivermectin has to be taken once a year for 16–18 years to break the transmission.

Artemisinin is isolated from the plant *Artemisia annua*, sweet wormwood, an herb used in Chinese traditional medicine. Artemisinins are among the most potent antimalarial agents, effective against nearly all asexual and sexual parasite stages. They can kill malaria parasites within minutes with a parasite reduction ratio of approximately 10 000 per erythrocytic cycle, resulting in rapid clinical responses. WHO recommends artemisinin-based combination therapies (ACTs) for the treatment of uncomplicated malaria caused by the *Plasmodium falciparum* (Pf) parasite. ACT has been adopted in 67 malaria-endemic countries as the first-line treatment for all falciparum malaria. Artemisinin, used in combination therapies, is estimated to reduce mortality from malaria by >20% overall and by >30% in children. In Africa alone, this saved more than 100 000 lives each year.

Dr G.S. Sonal, Head of Malaria, National Vector Borne Disease Control Programme, Government of India, said: 'Antimalarial medicines have been one of the most powerful tools in malaria control. However, the acquisition and spread of parasite strains that are resistant to multiple antimalarial drugs have become one of the greatest challenges to malaria treatment, and are associated with the increase in morbidity and mortality in many malaria-endemic countries. To deal with this grave situation, ACTs have been introduced and widely deployed in malarious regions. Contribution of this single molecule is immense ... and truly deserves this kind of appreciation. [The dream that India has] ... of eliminating malaria entirely from the country ... is possible because of ACT used in India for Pf cases. In India, ACT was introduced in 2006 in areas showing chloroquine resistance in falciparum malaria. In 2008, ACT was introduced in high Pf predominant districts and extended to treatment of all Pf cases in the country by 2010.'

Interestingly, the story of artemisinin began in the unlikely atmosphere of the Cultural Revolution in China as a government initiative to aid the North Vietnamese in their war with the USA. During the war, malaria caused by chloroquine-resistant Pf was a major problem that spurred research efforts on both sides of the battlefield. Under instructions of Chairman Mao and Premier Zhou, a meeting was held on 23 May 1967 in Beijing to discuss the problem of drug-resistant malaria parasites. This led to a secret nationwide programme called Project 523. Project 523 developed, in addition to artemisinin, a number of other products that are used in combination with artemisinin, including lumefantrine, piperazine and pyronaridine.

PRITAM ROY, *New Delhi*

### **IgNobels go to research on kissing and on appendicitis**

The 2015 IgNobels were awarded to the winners on 17 September 2015 at Harvard University's Sanders theatre. Hajime Kimata and a group of scientists including Jaroslava Durdiaková, Peter Celec, Natália Kamodyová, Tatiana Sedláčková, Gabriela Repiská, Barbara Sviežená and Gabriel Minárik were jointly awarded the prize in medicine. Kimata showed that kissing as well as sexual intercourse reduced the allergic skin wheal response, while kissing also reduced the allergen-specific IgE production in atopic patients. As for the group, the title of the paper says it all: 'Prevalence and persistence of male DNA identified in mixed saliva samples after intense kissing' (*Forensic Sci Int Genet* 2013;7:124-8).

The diagnostic medicine award was shared by Helen F. Ashdown, Nigel D'Souza, Diallah Karim, Richard J. Stevens, Andrew Huang and Anthony Harnden, for their paper in the Christmas issue of the *BMJ* in 2012 which showed that abdominal pain while going over speedbumps could help in the clinical diagnosis of acute appendicitis.

SANJAY A. PAI, *Bengaluru, Karnataka*

### **Early antiretroviral therapy and better care retention can reduce HIV/AIDS epidemic in India**

A study published on 1 October 2015 by Maddali *et al.* in the *Journal of the International AIDS Society* (<http://dx.doi.org/10.7448/IAS.18.1.20217>) states that in the next two decades, commencement of early antiretroviral therapy (ART) in Indian adults can reduce new infections by 18% and AIDS mortality by 9%. New HIV cases can be reduced by 38% and AIDS-related mortality by 15% with better retention in care.

Extensive global investment in HIV prevention and consequent increased availability of ART has resulted in a 35% decrease in new HIV infections in 2014 (approximately 2 million cases) as compared to the year 2000 (approximately 3.1 million cases). Commencement of ART at higher CD4 cell counts prolongs immunological function and helps reduce risk of transmission among HIV-infected individuals, since they are unlikely to transmit the virus to sexual partners because of sustained viral suppression.

The WHO, for these reasons, recommended that ART be initiated at higher CD4 cell counts ( $\leq 500/\text{cmm}$ ).

According to the National AIDS Control Organization, in India, around 2 million people were estimated to have HIV/AIDS in 2011. The current practice is to initiate ART when the CD4 cell counts are  $\leq 350/\text{cmm}$ .

The present study was conducted using a dynamic compartmental model replicating HIV transmission, disease progression and health system engagement among Indian adults. It compared early ART initiation (CD4 cell counts  $\leq 500/\text{cmm}$ ) versus delayed ART initiation (CD4 cell counts  $\leq 350/\text{cmm}$ ) under both realistic and ideal care conditions.

The primary outcomes of the study were HIV prevalence and incidence, AIDS-related deaths, quality-adjusted life-years (QALYs) and HIV-related healthcare costs over a period of 20 years for Indian adults. The study also evaluated how the full HIV continuum of care modified the impact of early ART intervention.

Previous models had suggested that early ART initiation in India was cost-effective, but did not fully consider the extent to which suboptimal engagement in HIV care would emphasize the economic and health benefits of earlier ART initiation. Thus, the model used for this study also provided quantitative estimates of how the economic and epidemiological impact of early ART intervention is modified by attrition in the HIV gamut of care.

In the study, the adult population of India was divided by sex, HIV risk profile and HIV infection status. On getting infection, people living with HIV progress through several compartments based on disease progression and their engagement with the continuum of care. For patients on ART, the authors considered both first- and second-line regimens.

Healthcare costs and QALYs were calculated using a unit-costing approach, estimating the number of person-years spent in each model compartment, including costs associated with transitions between model compartments. The authors project that with realistic gaps in HIV care, and with the current ART protocol, 1 285 000 new HIV infections and 973 000 AIDS-related deaths would occur over the next 20 years. The Indian healthcare system would incur costs of US\$ 9.6 billion (nearly ₹64 000 crore).

Assuming optimal levels of engagement throughout the continuum of care, 831 000 new HIV infections and 482 000 AIDS-related deaths would occur over the next 20 years under the current ART protocol. Under the same optimal levels of engagement, early ART initiation would result in 517 000 new infections (a 38% reduction) and 411 000 AIDS-related deaths (a 15% reduction) over the next two decades, at a cost-effectiveness of US\$ 442 (nearly ₹30 000)/QALY gained and incremental healthcare expenditures of US\$ 329 million (nearly ₹2200 crore). Under these optimal conditions, early commencement of ART could reduce HIV infections to less than 15 000 per year.

If early ART is initiated within the current continuum of care, the authors estimate 1 050 000 new HIV infections and 883 000 AIDS-related deaths in the next 20 years (i.e. 18% and 9% reduction, respectively). The 20-year incremental costs are estimated to be US\$ 400 million (over ₹2600 crore).

P.M. NISCHAL, *Bengaluru, Karnataka*