NEWS IN BRIEF

THE NOBEL PRIZE IN MEDICINE

Englishman John Gurdon who won the 2012 Nobel Prize for Medicine and Physiology has a framed picture of a school report on his desk. The report from his teacher says "I believe he has ideas about becoming a scientist….this is quite ridiculous…it would be a sheer waste of time, both on his part and those who have to teach him." His teacher also wrote that young John "will not listen, but will insist on doing work in his own way". Great minds probably all have this all encompassing passion and indomitable spirit to swim fearlessly through ridicule and failure.

Gurdon challenged the dogma that the specialized cell is irreversibly committed to its fate. He hypothesized that this cell may still contain all the information required to drive its development into different cell types. In 1962 he replaced the nucleus of a frog embryo with the nucleus of a mature frog intestinal cell. The embryo developed into a mature frog. His work was received with intense skepticism. However, replication of results in different labs finally convinced the scientific community. What followed was a worldwide outburst of research which finally culminated in the cloning of animals.

He shares the prize with Shinya Yamanaka, a Japanese scientist, who was studying embryonic stem cells. These are pluripotent cells that are isolated from the embryo and cultured in the laboratory. He decided to find the genes which are responsible for keeping these cells immature. Of the several candidate genes discovered, when he inserted 4 of them into mature cells, they transformed them into pluripotent cells. These induced pluripotent stem cells (iPSC) have major implications in medicine. The most important and immediate application is to study disease mechanisms. Pharmaceutical companies use iPSC to screen candidate drugs for toxicity and efficacy. The future goal is to replace damaged tissues with iPSC from the same individual with no fear of rejection (*http://www.nobelprize.org, The Hindu 9 October 2012*).

THE 3 ½ YEAR MEDICAL DEGREE

In 1952, Sir JW Bhore, chairman of India's first health survey, abolished the Licentiate in Medical Practice (LMP) to establish a single medical qualification – the MBBS degree – to become a doctor in India. However, a lopsided distribution of doctors has resulted in only 26% of them currently serving in rural areas which account for about 72% of India's population. In 2010, proposal was made for a 3½ year long Bachelor in Rural Medicine and Surgery (BRMS) course. There have been many doubts and worries about the course. Will they not be tempted into private practice? Won't they migrate to urban areas? Will working for the government be a requirement for admission? Who will maintain quality control of their education? Will the rural areas have substandard medical care?

The MCI has finally given a green signal to this course under a new name – B.Sc. in Community Health. They cannot affix the prefix Dr to their name. They will serve government health institutions under a bond. They will have clear career progression as "health officers" up to the district level. The decision to accept and implement the course is now with the State Governments. Chhattisgarh where this model was adopted in 2001 has shown fair results. Assam has replicated the model and probably the rest of the country will slowly follow (*The Hindu, 8 October 2012, http://nhsrcindia.org*).

HER LOST CHILDHOOD

More than 40% of child marriages round the world occur in India. And in 8 states of India 50% of girls are married before they reach their 18th birthday. The United Nations Population Fund (UNPF) report also shows that girls from rural areas were twice more likely to be married as their urban compatriots. Those with no education were thrice more likely to become married underage. In the poorest families 75% girls had underage marriages as compared to 16% of girls from rich household. The consequences of these dry statistics are horrifying to imagine. An abrupt termination of education, lack of awareness of contraceptives, a lack of bargaining power to use them, teenage pregnancies and the associated life threatening health problems that invariably accompany them. The International Day of the Girl Child was celebrated for the first time on 11th October, though the girl child herself had nothing to celebrate (*The Hindu 22 October 2012*).

RAISING A STINK

When Union Rural Development Minister Jairam Ramesh said that India needed toilets more than temples he stirred up a political hornets nest. People have forgotten Gandhi's famous quotation "Sanitation is more important than independence". It is a perverse paradox that while 63.2% of households in India have a telephone connection and almost half have a television, 49.8% have no toilet facilities and defecate in the open. A World Bank study conducted some years ago pegged the economic impact of lack of toilets and sanitation at a staggering Rs. 24,000 crore annually. That comes to 6.4 % of India's GDP. The loss is due to deaths often of children by diarrheal diseases, reduced productivity and tourism revenues. One hopes that Mr Ramesh's "Nirmal Bharat Yatra" from Sevagram to Bettiah in Bihar which is a campaign to make the country open defecation free will yield good results (*The Hindu 12 October 2012*).

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