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Editorial

National Health Policy 2017 (NHP 2017): Biomedical Research and Technology

It was after a gap of nearly 15 years that revised National Health Policy has been finally approved by the Union Cabinet in March this year. It envisages to 'achieve the highest possible level of good health and well-being for all Indians through a preventive and promotive healthcare orientation in all developmental areas, and to achieve universal access to good quality health care services without anyone having to face financial hardship as a consequence.' Though the policy will be subjected to further debate by various stakeholders and organizations for action plans development over a period of months, policy in itself was based on four assumptions. First, the health priorities are ever changing. Maternal and child mortality have rapidly declined but there is growing burden on account of non-communicable diseases and some infectious diseases. The second is the emergence of a robust health care industry estimated to be growing at double digit. The third is the growing incidences of catastrophic expenditure due to health care costs, which are presently estimated to be one of the major contributors to poverty. Fourth, is a rising economic growth enables enhanced fiscal capacity.

The Policy envisages providing larger package of assured comprehensive primary healthcare through the 'Health and Wellness Centres' and denotes important change from very selective to comprehensive primary health care package, assuring availability of free, comprehensive primary health care services, for all aspects of reproductive, maternal, child and adolescent health and for the most prevalent communicable, non-communicable and occupational diseases in the population.

The policy recommends an expansion of scope of interventions to include detection and response to early childhood development delays and disability, adolescent and sexual health education, behavior change with respect to tobacco and alcohol use, screening, counseling for primary and secondary prevention from common chronic illnesses –both communicable and non-communicable diseases.

Schools may act as a site for primary health care incorporating health education as a part of the curriculum, thereby promoting hygiene and safe health practices starting from school environs itself.

This issue of Annals reflects some of the subjects touched upon in NHP 2017 and resonate the concern that non-communicable diseases are emerging and posing a big important public health problem in India. There is an ever increasing demand on research into multifaceted aspects of Diabetes mellitus and Cardio-metabolic disorders. High incidence of infections in diabetes perplexed the physicians as well as biomedical researcher. Whether or not hyperglycemia imposes an independent risk for infection is an unresolved question till date. Several epidemiologic studies have shown that diabetics receive treatment for infections more often than non-diabetics. However, the magnitude of the effect of diabetes on the risk of infection remains an active research question. Studies have explored host factors and found that neutrophil chemotaxis and adherence to vascular endothelium, phagocytosis, intracellular bactericidal activity, opsonization, and cell-mediated immunity are all depressed in

diabetics with hyperglycemia. Chawla *et al* have studied the circulating LL-37 antimicrobial-peptide (also referred as Cathelicidin) and compared groups with short and long term glycemic status and published their findings in this issue of Annals. The research further increases our curiosity in this very important disease and a call for finding alternative in research in this NCD domain.

Pande, Kaur and Sachdev in their retrospective-cum-prospective cohort study published in this issue of Annals have shown that prevalence of obesity, hypertension, diabetes mellitus and metabolic syndrome is high in our community. Very rightly, the NHP 2017 articulates the need for the development of strategies and institutional mechanisms in seven areas, to create Swasth Nagrik Abhiyan –a social movement for health. It recommends setting indicators, their targets as also mechanisms for achievement in each of these areas. These seven areas are –

- The Swachh Bharat Abhiyan,
- Balanced, healthy diets and regular exercises,
- Addressing tobacco, alcohol and substance abuse,
- Yatri Suraksha – preventing deaths due to rail and road traffic accidents,
- Nirbhaya Nari –action against gender violence,
- Reduced stress and improved safety in the work place, and
- Reducing indoor and outdoor air pollution.

Another very important area in NHP 2017 is mental health programs with due recognition to National Mental Health Policy 2014. The policy suggests training community members to provide psychological support to strengthen mental health services in the country. Collaboration with government would be an important plank to develop a sustainable network for community/locality towards mental health. Creating network of community members for support and leveraging digital technology in a context where access to qualified psychiatrists is difficult is suggested to be adopted to fill gaps in mental health services. It poses additional responsibilities for psychiatrists and psychologists to explore and find solutions to common morbid conditions and improving awareness among public at large and health professionals in particular.

Chadda *et al*, in their article in this issue of Annals, have estimated that nearly 20-40 % of medical-surgical patients have comorbid psychiatric or psychosocial problems, often unrecognized by treating physicians. Using a cross-sectional, descriptive, online questionnaire-based study on Consultation Liasion Psychiatry, study noted deficiencies including stigmatization and suggested need for better teamwork, training and manpower development to provide optimal care. It is a high time that NHP suggestions be implemented across continuum from primary to tertiary care.

Recognizing the integral role of technology (eHealth, mHealth, Cloud, Internet of things, wearables, etc) in the healthcare delivery, a National Digital Health Authority (NDHA) has been proposed to be set up in NHP 2017 to regulate, develop and deploy digital health across the continuum of care. The policy advocates extensive deployment of digital tools for improving the efficiency and outcome of the healthcare system.

Apart from using technology for improving healthcare, there is a need to integrate technology in all

aspects of public health care. There is a need for exploration of technology in education, device development, and optimization of surgical gadgets, linking with community and creating awareness. This will not be possible working in-silos but involving technocrats in healthcare teams at all levels of implementation to reap the benefits.

Saxena *et al* have demonstrated value of non-invasive uro-flowmetry in diagnosing urinary tract dysfunction at an earlier stage. This research also throw light on using technology in patient care, improving patient satisfaction and decreasing morbidity associated with delayed diagnosis.

Use of high level technology has also been demonstrated by the work of Natarajan *et al* and by Singh *et al* in the issue. While Natarajan and coworkers in their study have shown value of custom mega prosthesis in patients with metachronous osteosarcoma, Singh et al have reviewed in detail the role of human mesenchymal stem cells in tissue repair and regeneration.

We do visualize a future where the health delivery will leverage on optimal use of technology creating more demands on health professionals to keep themselves abreast with the newer developments. It will challenge medical educationists to evolve strategies to prepare the current generation of physicians learn differently and prepare them future ready to face and tackle appropriately newer challenges as and when they arise. The NHP 2017 though has touched upon this aspect with suggestion to review present PG entrance examination, has given little thought with focused attention on actions at entry level for raw students who are beginning their journey in the medical field lacking appropriate maturity and aptitude. Studying under a highly competitive education system prevent the present day health professionals from developing resilience and are vulnerable to stress of highly demanding healthcare system which is inconsiderate to the working environment for physicians. There is a need for a change in overall education system keeping a balance between Indian values and evidence-based pedagogy from West. This also require culturally appropriate research on teaching technologies in Indian settings and scientific evidence thus derived must be used for policy enunciation and should not be based merely on biased opinions.

Lastly, as the NHP 2017 concludes that a policy is as good as its implementation, one should start implementing right away as far as the resources permit. Small incremental steps, as is said, fetch big dividends in a long run.

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