

EDITORIAL

Key Public Health Challenges in India: A Social Medicine Perspective

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“Medicine has imperceptibly led us into the social field and placed us in a position of confronting directly the great problems of our time.”

-Rudolf Virchow, Report on the Typhus Epidemic in Upper Silesia, 1848

This short note, adapted from a document drafted in the context of the launch of the Public Health Foundation of India, attempts a brief overview of certain key public health challenges and issues in India, some of which are not always widely recognized. While delineating these challenges, an attempt has been made to move beyond a purely bio-medical approach, towards a social medicine perspective, which gives central importance to social processes underpinning public health. Many of the statements are at a level of broad generalization, and of course may need to be refined and qualified in specific situations.

Epidemiological Transition or Epidemiological Polarization?

“This epidemiological polarization is characterized by a prolonged coexistence of two mortality patterns, one typical of the developed societies (chronic and degenerative), and the other of poor societal living conditions (infectious and parasitic) combined with high mortality from accidents and violence. ... This profile indicates the persistence of large health gaps between different social groups and areas within countries. ...

Increasing gaps in income and social inequalities still raise concerns because of their

effect on the widening of mortality differentials in the Region.”

- Carlos Castillo-Salgado, Health Situation Analysis in the Americas (1)

It is often acknowledged that a significant section of the Indian population is undergoing the classical “epidemiological transition” with reduction in mortality due to communicable disease and childbirth, increases in life expectancy and a rise in the prevalence of non-communicable diseases. However, if we look at Indian society as a whole, we see a more complex and layered pattern, with three broad social categories (recognizing some overlaps and intermediate groups) experiencing different types of disease patterns. The urban business and middle class and a section of the rural landed class enjoy a level of sustained prosperity and are undergoing the classical epidemiological transition. However urban slum dwellers and unorganized sector workers who often move between urban and rural areas still have a high morbidity from communicable diseases; yet they have begun to suffer a larger burden of “newer” diseases, including addictions, mental health problems and in certain settings, HIV/AIDS. They are an example of a group suffering from the “double burden”. Finally, the poorest rural sections in several northern and central Indian states, especially *adivasis* (indigenous people) continue to have high levels of infant mortality, malnutrition and even starvation deaths, and they continue to suffer from a large burden of communicable diseases. To state that India is undergoing an epidemiological transition would be reflect only part of the reality. With growing inequities what we may be witnessing might be better characterized as an epidemiological polarization, with different sections of the population relating to the epidemiological transition at different rates, and with

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significant differences in morbidity patterns. Any large-scale public health effort would need to analyze in detail and devise strategies to address this apparent polarization.

Segmentation and fragmentation of the Indian Health care system

It is difficult to speak meaningfully of the “Indian health care system” as a unitary entity. Rather, we see fracturing of health care delivery with different systems for different sections of society, along with fragmentation among various vertical programs within the public health system itself. There are distinct segments of the health care system catering to different sections of the population. While there are exceptions, gray areas and qualifiers, this should not prevent us from identifying certain overall broad trends. Unlike the situation through the 1970s and early 1980s, when a large proportion of the population (including the middle class) relied primarily on the public health system for inpatient care, today there are increasingly distinct health care systems for the rich, the middle class and the poor. Corporate and luxury private hospitals boast of world-class facilities and even an increasingly global clientele. They are availed of mostly by the richest and an elite section of the upper middle class.

Much of the urban middle class and sections of the more prosperous rural population prefer to utilize private hospitals and “nursing homes” in

cities and towns. However, their utilization of certain public system preventive services and tertiary public hospitals, especially for long-term care provide an exception to this overall pattern of middle class preference for private medical services. Finally, the urban and rural poor are the major patrons of public health facilities, especially at primary and secondary level, often also accessing less qualified private practitioners, of which some do not even have formal qualifications. The sorry state of resources for public health facilities in most places reflects the limited bargaining power of this last mentioned clientele and explains the generally low priority accorded to budgets and maintenance for most public health facilities (again with the exception of tertiary public health care facilities in larger cities, which may also be accessed by the middle class).

This pattern of segmentation is born out when we look at the utilization figures for public and “other” (essentially private) inpatient services in rural and urban areas, by economic quartiles based on National Sample Survey (NSS) 52nd round data. The utilization of public health services declines, and that of private services substantially increases, as we look at higher expenditure brackets. There is an effective reversal of ratios when we compare the lowest and highest quartiles.

Source of Inpatient Treatment, India 1995-96 ²

<i>Monthly per capita inpatient expenditures (quartiles)</i>	Rural Sources of Treatment		Urban Sources of treatment	
	Public	Other	Public	Other
0-25	61.2	38.8	60.8	39.2
25-50	57.7	42.3	48.3	51.7
50-75	46.8	53.2	40.3	59.7
75-100	35.6	64.4	28.3	71.7

There is a similar trend related to institutional deliveries. In the poorest quintile 73% of institutional deliveries are in the public sector. This percentage goes down in each income quintile reaching 36% for the richest quintile.

The overall trend of stratification and

segmentation of the health care system, with *increasingly distinct health care systems for the better off and the poor* seems to have sharpened in the recent most decade. Just as the better off may utilize selected higher-end public services, it may be added that while the poor prefer to rely on public

health services, due to deterioration and reduced availability of these services they also substantially depend on less qualified and even unqualified private practitioners. These practitioners along with peripheral public health facilities form part of the “health system for the poor”, which today effectively amounts to a “poor health system.”

This fracturing of the health system has had serious negative effects on overall health system development in India. Such negative effects have been analyzed in detail by various authors.⁵ Health care utilization figures between NSS 42nd round (1986-87) and NSS 52nd round (1995-96) show that a weakened public health system has lost patients to the private sector, which in turn has grown rapidly and in a virtually uncontrolled and unregulated manner. This resulted in a sharp rise in medical expenses. In the decade between 1986-87 and 1995-96⁶, inpatient care costs increased in rural areas by 436% and in urban areas by 320%. There was a near doubling of the proportion of patients who did not utilize any form of treatment because of inability to afford it⁷. It was estimated that expenses in case of 40% of hospitalization episodes were being met by selling assets or taking loans. With the near complete fracturing of the health system and “secession of the rich”, by the early 2000s, instead of “Health for All”, we have a situation of “Health for those who can pay.” A system for universal access to health care appears *de facto* to have been given up as a national objective. For example the National Health Policy 2002 mentions “Health for All” just once, only to dismiss this goal as having been “ambitious” and in contrast it is stated that the NHP 2002 will be pitched at “a level consistent with our realistic expectations about financial resources...”

Along with overall segmentation and stratification of the health system, serious fragmentation within the public health system due to somewhat rigid division into vertical programs has been analyzed by public health commentators^{8,9}. This was a logical consequence of the moving away from Comprehensive Primary Health Care (PHC) towards Selective PHC, as the latter came to be embodied in specific vertical programs. Progressively these programs overshadowed overall

public health system development itself, and there was often no serious attempt at integration amongst them. The classic case has been the overbearing influence of the Family Welfare program, where targets to procure sterilization cases have often dictated where field level public health staff would put in their efforts, often to the neglect of other important public health functions¹⁰. It is a major irony that the Universal Immunization Program one of the flagship vertical programs in the 1980s and 90s, was itself partly hijacked by the “Pulse Polio” immunization drive, which has been observed to adversely affect other routine immunizations¹¹. This has been a case of a “vertical program within a vertical program” leading to adverse consequences!

While the recently launched National Rural Health Mission has emerged as an initiative with positive intentions to strengthen rural public health and to integrate various health programs, there is still a very long way to go in terms of reversing and ultimately eliminating this segmentation of the health system. This will require qualitative strengthening of the public health system (which needs substantially enhanced public financing) with a multi-level (from community to national level) re-integration of various activities within a unified public health framework. There needs to be effective regulation of the entire private medical sector and the unification of more or less the entire health care delivery system under a single public umbrella, moving towards a system for universal access to quality health care in a rights-based framework. It may be argued that this should be the primary agenda for public health policy in the coming decade.

Resurgence of communicable diseases: a reflection of ecological – social imbalances

“ Do we not always find the diseases of the populace traceable to defects in society?”

“If disease is an expression of individual life under unfavorable circumstances, then epidemics must be indicative of mass disturbances.”

- Rudolf Virchow

The resurgence of communicable disease in India was brought to international attention in 1994

by the re-emergence of plague in epidemic form, leading to hundreds of deaths. Repeated outbreaks of dengue in urban areas, the continued increase in *Falciparum* malaria cases, the emergence of leptospirosis as a significant public health problem and of course the HIV-AIDS epidemic all testify to the growing significance of resurgent communicable diseases.

While reiterating that this is one of the key public health challenges in India today, it may be relevant to stress that a purely bio-medical approach is inadequate to understand this resurgence. A complex interplay of social and environmental factors (including migration, urban living conditions, irrigation patterns, water logging etc.) have set the stage for most of these communicable diseases. The challenge before public health in India is not to just suggest a few new vaccines (though they may be part of a larger strategy) but to understand the complex underlying conditions responsible for resurgence, and to suggest relevant measures to address these comprehensively and effectively. There are specific experiences which have shown that a community-oriented, integrated approach combining appropriate use of bio-medical measures with environmental and community strategies is likely to be most effective; these need to be evaluated and relevant lessons need to be generalized to develop an effective approach to check the resurgence.

Starvation and Chronic undernutrition – unexplored public health dimensions

While undernutrition has long been recognized as an important problem in India, the periodic occurrence of starvation deaths in recent years is an alarming feature. These deaths are only the tip of the large iceberg of undernutrition among both children and adults. According to the National Institute of Nutrition, 60% of children in rural areas are undernourished, 21% are severely undernourished and 38% of adults have chronic energy deficiency¹². Two features of this situation are especially disturbing from a public health point of view. Firstly, despite repeated reports of starvation deaths, and official denial of the same, there has been no apparent response from the public

health profession to define and identify starvation and starvation deaths, and to understand the settings in which such incidents occur; some of us have been told that starvation is a ‘taboo’ topic for official researchers. It was left to an independent group of health professionals and activists (the Hunger Watch group of Jan Swasthya Abhiyan) to develop a methodology for documenting starvation deaths in a larger community setting. However, much more needs to be done to understand and help effectively prevent starvation, which may be seen as an ultimate assault on the health of affected groups.

Secondly, and perhaps more seriously, we know that undernutrition substantially decreases immunity to a variety of communicable diseases. The decline in prevalence of major communicable diseases such as tuberculosis in Western countries during the first half of the 20th century, predated the introduction of anti-microbials, and has been largely attributed to nutritional improvements in the population. It is well known that while 40% of the population in India suffers *infection* with *M. tuberculosis* at some point of time, only a small fraction of these develop the *disease* which depends on other factors such as reduction in systemic immunity, which is likely to be linked with undernutrition. However aside from a few independent groups of health professionals working in rural areas who have noted the likely linkages¹³, there has been little response from the public health profession to understand the public health implications of large scale undernutrition in terms of understanding the persistently large number of tuberculosis cases including multi-drug resistant cases, endemic malaria, and recurrent outbreaks of gastroenteritis in poor rural communities.

The nutritional context is a cause for concern. Per capita food grain consumption in India declined from 485 grams per day in 1991-92 to only 427 grams per day in 2002-03, and even aggregate per capita calorific consumption has declined in this recent period¹⁴. To understand and address the public health dimensions of large-scale, in some situations increasing undernutrition, and to at least assist in identification of starvation enabling its prevention, appear to be among the neglected tasks

of public health in India.

**Occupational and environmental health:
“invisible” crisis spots**

Industries and workers in India are stratified, like so many other aspects of society. There is a segment of large, well maintained industrial plants which are better in observing safety and occupational health regulations. Many of the studies done by official agencies relate to these large organized sector industries; this may be due to the fact that the official occupational health research institutes have to now “earn their own upkeep” and it is only large organized industry that can pay for their studies. However, these industries often outsource or subcontract their most hazardous, polluting and tedious tasks to smaller industries or rely on similarly hazardous extraction processes for their raw materials. It is in this latter segment, where the major occupational hazards may be found, that there is no effective regulation and practically no protective measures. As a consequence of “liberalization”, labor laws have been made more pro-industry while factory inspections in many states are reduced to a mere formality. In one recent example is provided by the stone crushing industries in Godhra in Gujarat. It has come to light that in the last few years, over 400 young adults who migrate from the neighboring Jhabua district of Madhya Pradesh (M.P.) to work in these crushers have died of silicosis due to extremely high dust levels in the crushers¹⁵. In numerous construction sites, brick kilns, salt pans, quarries and small mines, small chemical and processing industries abysmal working conditions are responsible for large numbers of occupational injuries, deaths and morbidity. The gross inadequacy of the official notification system for occupational diseases and accidents is matched only by the extremely lax labor inspectorate which is supposed to ensure adequate working conditions in such sites, where the workers themselves are not allowed to organize and are hence are unable to effectively press for better working conditions.

Similar environmental conditions around chemical and processing industries (often

concentrated in “industrial estates” in the “Golden corridor” of South Gujarat and certain areas in Andhra Pradesh) may have catastrophic public health consequences for surrounding populations. Bhopal is the largest and best-known example of such multicentric disastrous impacts. Environmental activists (such as groups involved in the Community Health and Environment Skill Share national network) have conducted studies, at times at considerable personal risk and under threat from industry and have identified several such areas of significantly increased morbidity due to unregulated polluting industries. However, the public health profession needs to respond by thoroughly documenting and analyzing these often “silent” environmental health crises and by recommending comprehensive measures to both remedy and prevent such man-made public health disasters.

**Pervasive culture of irrational medical practices,
medical consumerism**

One consequence of the unregulated proliferation of the private medical sector has been the phenomenal growth of various forms of irrational medical practices. These improve the “financial health” of certain doctors, but fail to improve, and may even damage the health of the patient. These measures have now even been internalized by large sections of the population. Three well-known practices which drain people’s pockets of hundreds of crores every year are unnecessary injections, unnecessary intravenous infusions and “tonics”. It has been estimated in a well-known district level study that nearly two-thirds of expenditure on medications prescribed by doctors was unnecessary¹⁶. This irrationality extends to prescribe of unnecessary antibiotics and steroids, non-indicated investigations (including CAT scans and MRIs) and superfluous surgeries. The finding that 45% of deliveries in a community-based study were been performed by cesarean section¹⁷ is a reflection of this trend. Women’s health activists have documented “epidemics” of hysterectomies in certain areas where many women suffering from comparatively minor gynecological complaints are induced by surgeons to have their

uterus removed. What is even more worrisome is that *this trend is now extending to public health interventions like vaccines*. Certain vaccine manufacturers in collusion with a section of the medical profession have undertaken the large-scale promotion of Hepatitis B vaccination “camps” in various parts of the country among all age groups and sections of the population; this is going largely unchallenged by the public health profession. While the “injection culture” has now been well documented other multifarious aspects of irrational medical practice which are linked with a form of “medical consumerism” need to be thoroughly critiqued based on strong scientific analysis. Here the public health profession needs to play a much more proactive role, and should be in the forefront of public health advocacy.

There are a number of other such challenges, which need to be analyzed and addressed by the public health community; here one could just flag a few more for further discussion:

- Migration, displacement and its impact on public health
- Conflict and violence (including violence against women) – key determinants of community health in specific settings
- Population policy, reproductive health services and the need for an integrated approach to Women’s health
- Public health impact of addictions and promotion of health damaging products – tobacco, alcohol and gutkha
- Understanding multiple determinants of mental health and need for overhaul of the Mental health care system
- Private water, public health? – addressing the public health consequences of emerging water privatization
- Population wide significance of widespread fetal and maternal malnutrition in fueling future epidemics of diabetes, hypertension and coronary artery disease
- Neglected diseases (e.g. Sickle cell anemia, Kala Azar, Calcium deficiency among women etc.)
- Impact of price deregulation and TRIPS patent regime on availability of essential drugs

Finally, it may be mentioned that the *initiatives*

that have been launched to reform the Health system themselves need evidence based analysis. One example are the health system development projects that have been launched in several states, wherein certain common policy prescriptions have been followed. Regarding measures such as introduction of user fees there are studies showing decreased utilization by the poor (in Andhra Pradesh) and inadequate functioning of exclusion mechanisms for the poor (in Maharashtra). Such policy interventions need objective, evidence based assessment, to understand how these have influenced provision of services and utilization especially by the poor; this would enable correction of any distortions and better design of further health sector initiatives.

Conclusion

Public health in India, as on the global scale, stands at a crossroads. The first approach, which dominates much official thinking, concentrates on vertical programs and top-down “goals.” It attempts to analyze specific *symptoms* of the present public health crisis, by holding them under a ‘lens’. However, in pursuit of specific solutions, the overall picture is often lost sight of; looking constantly through a lens makes one short-sighted. Malnutrition is accepted as a problem to be addressed by micro-nutrients, but the causes for drastic decline in food security and even starvation are not talked about. Resurgence of malaria is a matter of concern requiring new anti-malarials, but the phenomenon of annual mass migration of one-sixth of India’s population in search of livelihood – tossing the poorest toilers between equally deprived rural and urban settings, made to suffer the brunt of “migrant malaria” because of their changing exposure to myriad strains of the parasite – is scarcely discussed. Occupational hazards in the unorganized sector are only dimly perceived, and are not considered an academically “interesting” topic despite evidence of deterioration in already bad working conditions in this large and growing sector, as India “globalizes” and offers its cheap labor to become “competitive” in the global market.

The second approach, which is disparaged as neither “practical” nor “respectable”, asks

inconvenient questions and searches for some of the *real causes* behind the symptoms of the public health crisis. This approach combines an incisive and detailed analysis of the proximate causes (not glossing over them), yet linking them with deeper social and economic processes. This strand of public health offers concrete options to tackle existing public health problems, but also holds up a mirror to society, a provocative and discomfiting mirror, allowing society to understand that these problems are not “accidents” but are arising as a systematic consequence of the deliberate social and economic choices being made, which benefit a few and marginalize many. Just as good epidemiology should be able to accurately predict the trend of development of a disease given specific initial conditions, good public health should be able to alert society to the consequences of specific policy choices being made – consequences that might need to be assessed in terms of large scale human suffering, which cannot be “balanced out” by the promise of better access to global markets or raised GDPs. It should be able to help society measure the human costs of a particular model of “development” and to take decisions about changing such a model.

Do we choose the lens or the mirror? Perhaps it is time to take a long, hard look in the mirror.

“... palliatives will no longer do. If we wish to take remedial action, we must be radical. Palliatives in such cases are more costly than radical action ...”

- Rudolf Virchow, Report on the Typhus Epidemic in Upper Silesia, 1848

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