

Deconstructing Chronic Diseases

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My point of reference as I approach the problem of chronic diseases is first of a rural physician observing the vast spectrum of ill health that people present with at the clinic. Second, it is of one trying to determine a technological solution to these illnesses based on a good understanding the biology and the sociology. Third, it is of someone trying to understand the social determinants of ill health. And finally, of one interested in the politics of ill health as it plays at the local and the global level.

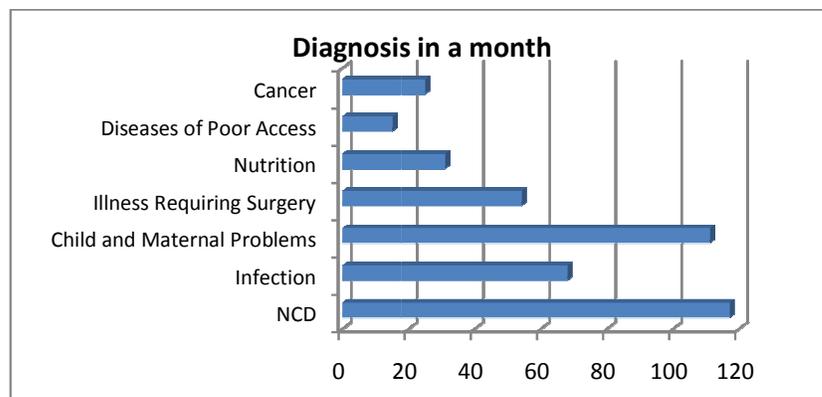
I must share another aspect of my development: the growing necessity to free myself of the presumptions and 'knowledge' acquired prior to actually working in rural areas. For example, I grew up with the idea that the most important health problems were due to childhood illnesses, obstetric problems, followed by falciparum malaria and tuberculosis - all problems conventionally associated with deprivation. This, I am afraid coloured my observation too, for a long time.

I found that dogmas start dominating the discourse around many illnesses, and that these dogmas tend to exclude views that are at variance. For example, I saw the tuberculosis debate being dominated by practitioners of adult medicine, tuberculosis was assumed to be predominantly pulmonary. Extrapulmonary and childhood TB were not as important to the epidemiology, or so many felt. Excessive stress was given to sputum positive tuberculosis, as if rest was not so important. And then a lot of focus was on the bacteria, its drug sensitivity pattern in specific, with little attention to the host. I found the same repeating in chronic diseases.

A turning point in my understanding: At a late evening camp to investigate and treat falciparum malaria clustering in a single village, we were shouted at for not responding to the felt problem of large number of people with stroke in the village.

And from there, I was forced to open my eyes to a wider spectrum of problems,

Figure 1: Illness profile for new patients over one calendar month at JSS clinics (November 2010)



My first response to the world of chronic diseases was a traditional one: communicable diseases v/s non communicable diseases.

Since most communicable diseases were acute - measles, malaria, ARI, gastroenteritis , typhoid and newborn infections (save tuberculosis and leprosy) and most NCDs often presented with slow symptoms , the terms loosely got transferred to acute vs chronic illnesses. As Anurag so vividly brought out the irrationality of this in his note, NCDs present acutely as well as chronically.

The next myth was broken when I saw these NCDs among the desperately poor. Till then I had grown with the myth that NCDs were more common among the non poor and even if they occurred among the poor, the numbers were small. And that the solutions necessary for them were expensive, and thus it was not cost effective to try to look after them when faced with the mountain high problems of infectious illnesses, and of hunger. I would thus not be prepared to pay them the same attention as I was more interested in the diseases of the poor- a bit of reverse arrogance.

I also grew up with the idea that injuries or illnesses that require surgery were not major public health problems, that they did not deserve a position of priority in the pecking order of human ailments and diseases. I would attribute the large numbers that thronged our modest clinic, to the offer of cheap and competent surgical services. But soon I realized that surgical problems and injuries were a large unmet need--surgery has been a step-child of public health.

Slowly, my world view evolved to the present.



Picture: This woman weighing all of 39 kg could have either tuberculosis , or cancer cervix or diabetes mellitus . Same poverty, same social group, working condition, as far as I could see.

And over time, I have the following observations and questions to pose for this problem.

1. *Chronic Illnesses are diverse, and I think, they are increasing in number*

Understandably, the interest in chronic illnesses started with vascular diseases and diabetes and their understood risk factors such as hypertension, dyslipidemia and obesity. But the primacy given to these select illnesses due either to what was observed in the west, or in urban India, or perhaps because of their unduly high projected prevalence of over 5%, is not justified. This seems to have been unfair to the other chronic illnesses even though they may not reach such proportions.

So we see cancers in huge numbers, chronic kidney disease, non-obese or lean diabetes, mental health problems, surgical problems, chronic lung illnesses such as bronchiectasis and fibrothorax, burns and so many more.

The NCD Alliance among the Poor- a new outfit focussing on Africa, Latin America and South Asia has called this as the long tail of other NCDs.

And I feel that the numbers are not as small as believed by many.

We need to define and quantify the burden (existing, projected, and avertable) of chronic diseases and their risk factors in populations living in extreme poverty.

2. *The importance of the host/ deprivation:*

In the entire discussion on the epidemiology of these illnesses, the overwhelming stress is on the environment or the agent and not so much on the host. Is it due to tobacco, is it bad lifestyle related dyslipidemia, or what? By host, I don't mean genetics here. I am talking about the embodiment of deprivation of various types impacting on the host- deprivation of income, food, access to health services, their spirit, or deprivation inside their mothers' womb as well as mental stress. There is a need to investigate this.

To paraphrase Louis Pasteur for what he said for infections then, for the chronic illnesses today--The (onco)gene or the environmental agent or toxin is nothing, the terrain everything..

3. *The hidden chronic diseases:*

These are large neglected problems: Alcohol use dependence, untreated epilepsy, chronic arthritis, RHD, mental health problems including suicides, chronic skin disorders, which don't find space in the discourse on chronic diseases. It seems that the competition between illnesses makes these get neglected. There is an overemphasis on vascular diseases and diabetes as well as urbanization and whatever it stands for. The nature of the chronic disease burden among the poorest may be misunderstood.

4. *Risk factor versus illness management:*

The emphasis on Risk factor management is certainly important for prevention of these chronic illnesses. But an equal emphasis on management strategies for coping with them is needed:

Drugs and hospitals are important components of management at an individual level, particularly if someone presents with a complication.

We are aware that for *acute and /or severe presentations* of any illnesses, communicable or non communicable: a hospital is justifiably important, and if the management strategy could be communitized, it could go to a health worker too outside of a hospital. For example, for an acute illness like falciparum malaria, we are looking towards an ASHA to perform a rapid kit test and administer prompt treatment, or to prevent serious haemorrhage after birth, she is being expected to offer the woman 3 tablets of misoprostol. Other examples are of home based care of a newborn, or Integrated Management of Childhood Illnesses.

But for chronic/continuous illnesses, there are no models available. Hospitals are inadequate for their optimal care. City NCD clinics are an option only for cities. The usual duration of dispensing of medicines in rural public health facilities in Chhattisgarh, till recently was 3-7 days. Very reluctantly, they are allowing refills for 15 days. How can that work? How do you keep people motivated to continue medications for years, if you force them to come to you and stand in a queue each fortnight?

Then what works? Frankly there are no good answers. We believe that here we have to learn from the models of *disease based patient groups*, like the way PLHIV have done or AA have done. We have attempted some such work for the last two years, and our early results are promising. But a lot more needs to be done. The point is – we badly need effective models for managing chronic diseases, not just preventive strategies.

5. Do the traditional risk factors adequately account for all common chronic diseases?

What proportion of adverse cardiovascular events is accounted for by conventional risk factors such as dyslipidemia, hypertension, diabetes, strong family history and smoking? The 'Interheart' study tried to answer part of the question by saying that traditional risk factors accounted for ~90% of MI risk. However a closer look suggest that psychosocial factors (stress? poverty?) accounted for an Odds Ratio of 2.67 and a Population Attributable Risk of 32.5%, almost the same as that of smoking.

I would also like to ask how do we limit potential risk factors such as those I mention above as the only cardiovascular risk factors to be considered? How does one start increasing the pool of risk factors such as say poverty, or lower birth weights, or not having enough food, or just extreme sadness due to an event (*sadmaa*, in a different context)? I wonder whether people have proved that oral tobacco use is NOT a CV risk factor. I think we need to unbundle the word 'chronic stress', but at no rate should we dismiss it as being unimportant.

The link of chronic illnesses to deprivation should be explored more seriously. Paul Farmer calls diseases as biological embodiments of deprivation--and thus I am not comfortable with the postulation that chronic illnesses are more common in the non-poor than among the poor.

We are struck by the paucity of social category disaggregated data on any illnesses, including chronic diseases. And in the absence of this, how can good planning or resource allocation happen?

Finally, we all like homogenous, common and minimum principles explaining diseases, especially causation (but also of cures and prevention). But is this a correct way to think about the problem?

Since recently, a category 'NCDs among the poor' had come up and is trying to carve a space for itself. It is now supported by 'The Lancet'. The Global Framework for NCDs has not so far been designed specifically for low-income countries or for the Poor in Middle Income countries.

6. Politics of chronic diseases:

Where do you put your money? Which chronic diseases should be supported?

Several disease manifestations that happen among the poor have been poorly studied. For example, Thin diabetes as a disease is poorly worked up. The role of stress in heart diseases, or in cancers has not been explored well. So how do these illnesses among the poor get their rightful due?

Next, in acute care, you can get away with hospitals or with selective/vertical programmes. But in chronic care you need very robust and well-functioning community health programmes too, or else you are done for. Are we ready to invest in them for the large and still predominantly rural population?

7. There seems to be ***an ideological warfare between the MCH/ infectious diseases and the NCD lobby internationally*** vying for funds and pre-eminence. Are there different determinants for them? Do we require fundamentally different strategies for them?

So at Ganiyari, when we see a wasted or consumed adult, man or woman who is very poor , we think of Tb, food starvation, diabetes , HIV and an advanced cancer all as equal possibilities;, and depression and hyperthyroidism as further possibilities...