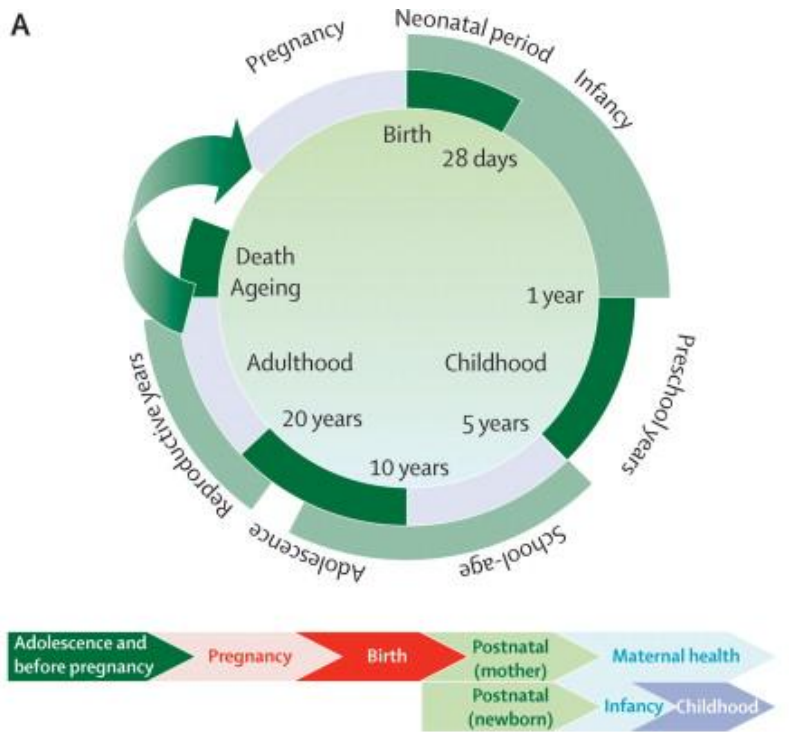


Preventive Health Approaches in Voluntary Hospitals

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Patel and colleagues systematically describe, in assuring health coverage for all in India, the state of health of the country's population and recommend that India needs to adopt an integrated national health-care system built around a strong public primary care system with a clearly articulated supportive role for the private and indigenous sectors.¹ Two words, "*Primary Care*" and "*Private Sector*", strike a chord. Many Non-Governmental Organizations (NGOs) are deeply engrossed in these two areas to assist deprived societies. Around one percent of NGOs involved in health activities manage hospitals.² Health services in hospitals concentrate primarily on illness care with limited preventive activities incorporated into the care. A lot more can be done with a little extra effort and commitment. Although private hospitals constitute a small proportion of all hospitals in the country, they are looked upon as better service providers and people prefer to go to these hospitals if they can afford it. Pioneer work in health and development has set up models for governments to follow. This approach could be followed by all hospitals, NGO or otherwise.

¹ Much of what is discussed in this paper is applicable universally. However, the paper largely reflects on the experience of authors in India and the work in Christian Hospitals.



Continuum of care: Connecting care during the lifecycle (A) and at places of caregiving (B).

The continuum of care has become a rallying call to reduce the yearly toll of half a million maternal deaths, 4 million neonatal deaths, and 6 million child deaths. The continuum for maternal, newborn, and child health usually refers to continuity of individual care. Continuity of care is necessary throughout the lifecycle (adolescence, pregnancy, childbirth, the postnatal period, and childhood) and also between places of caregiving, such as hospitals.³

A comprehensive list of preventive approaches are summarized in Table 1. Adoption of these interventions in hospital settings not only improves the quality of service but also allows people to participate in taking the responsibility of their own health.

Table 1: Opportunities for public health interventions

No	Interventions	Scope of Prevention	Resources	Services
1	Family Planning (FP)	Maternal morbidity and mortality and perinatal mortality	FP clinic	Contraceptives and advice on FP
2	Antenatal care		Midwifery services	MCH Clinic
3	Supervised delivery		Inpatient	Obstetric services
4	Postnatal care		Midwifery services	Home visits
5	Basic Immunisations	BCG, Polio, DPT, HEP-B, Measles	Possible collaboration with local Government for free supplies	MCH Clinic
6	Developmental assessment	Problems with normal growth and development	WHO Anthro (freely downloadable from WHO website)	MCH Clinic and Well Person Clinic School Health Programmes
7	Nutritional	Under-fives	WHO Anthro	
		Adolescent and Adults	BMI	
		BMI	WHO Anthro +	
8	High risk for Heart Disease	Advice and checks	BP, BMI, Cholesterol	Well Person Clinic Laboratory services
9	Diabetes	Advice and checks	Blood sugar	
10	Cancer screening	Cervix, Breast, Prostate	Trained staff	Clinical examination and cytology
11	TB, HIV/AIDS and other chronic diseases	Awareness on Sexual Health and Clinics Laboratory support	Follow-up under National Protocols	TB HIV clinic Reporting
12	Quality Data (self-audits, near misses etc.)	To support establishing a recall system	Audit, follow-up and reporting	A small PH team for clinic operation and data collection

Many hospitals will readily respond to the content of this table and proclaim that most of these services are made available to the public utilizing these services on a daily outpatient basis. Whilst this is true, yet a systematic inclusion of all coming through the gates of the hospitals do not receive majority of these services. A good example is that most hospitals provide quality obstetric services, including antenatal care, but most under-5s who were delivered at the hospital are not followed up for growth monitoring, nutritional and other developmental needs. Same can be said about postnatal care, the most critical for the survival of the newborn and the mother. As one moves down the list, numbers increasingly decline until there are almost no interventions for risk factor reduction related to heart disease or other chronic diseases. Data collection and serious review and use of the data remains the prerogative of research institutions and a few larger hospitals. Audits of the data collected and its use in continued Medical Education is rarely practiced.

Reproductive, Maternal, Newborn and Child Health Services (RMNCH)

Improving RMNCH services in the communities we serve is recognized as the most effective way to reduce the morbidity and mortality burden among women and children. Although substantial progress has been made towards achieving Millennium Development Goals (MDGs) 4 and 5, the

rates of decline in maternal, newborn and under-five mortality remain unacceptably high.⁴ The MDGs which were set out in 2005 have failed to reach the intended targets by 2015, and are now replaced with Sustainable Development Goals (SDGs) which continue to highlight the unacceptably high maternal and perinatal mortality in poorer nations. Those poor countries who addressed RMNCH have significantly improved their health indicators. Bangladesh and Nepal are examples of some of the poorest countries in Asia, having shown significant improvements of health indicators in the recent past.¹

Preventing unintended pregnancies is an integral component of achieving the MDGs and SDGs, most notably improving maternal health.^{1 5} First step towards improving maternal and perinatal mortality is ensuring that every child born must not to be an accident, but a choice of the parents. Empowering mothers to be in control of their fertility can only be achieved by making the mother understand how pregnancy occurs and giving her the power to decide when to have a baby. Surprisingly, even educated women do not understand this properly and carry several taboos in their minds about pregnancy.^{6 7} Availability and choice of contraceptives is a fundamental human right and those providing reproductive health services to women have a duty to make sure that every woman coming to the hospital is given to understand *family planning* and the proper use of contraceptives. At the same time, easy access to family planning supplies made available to all. Most hospitals do make family planning services available to married women as a socially accepted norm. But adolescent/teenage pregnancies and other unwanted pregnancies do not receive the required attention in many hospitals and often end up in private clinics, which may or may not be safe. Moral judgment often takes precedence over the interest and safety and welfare of the patient.

Child wellbeing and survival largely depends on postnatal care and continued growth monitoring through under-five clinics during the first five years of life. The mother's knowledge is vital to ensure the survival of a child and her instinctive capability to keep the child alive and healthy. It should be supported and enhanced by providing her with a basic knowledge of child care. One of the tragic aspects of under-fives in India is the fact that chronic nutrition deficiency, manifesting as stunting (height-for-age below -2 SD) affects 38.7% of children younger than 5 years and 29.4% of children are underweight (2013-14 data).⁸ The situation is much worse in rural and remote areas. Poverty is certainly one of the reasons but even among those who can afford it, many children do not receive adequate nutrition after six months of exclusive breast feeding due to poor weaning practices. Weaning is a complicated process and the mother requires accurate and appropriate advice during this period to counter the inconsistent advice of mothers-in-law and neighbors. The *quality of food*, its *frequency* and the *quantity given* at each feed determines the nutritional status of an under-five.

Inadequate nutrition to pregnant mothers lead to low birth weight, giving a poor start to newborn in life, leading to stunting, depriving the child of optimal growth and mental development to achieve optimal education outcomes later in life.⁹ The hypothesis that size at birth is related to the risk of developing disease in later life, linking reduced birth weight and increased risk of coronary heart disease, diabetes, hypertension and stroke in adulthood are well documented.¹⁰ Malnutrition among under-fives is a major public health problem in India. This is reflected by the fact that the prevalence of under-weight children in India is among the highest in the world, and is nearly double that of Sub-Saharan Africa.¹¹ Therefore, however small the numbers may be, it is important for hospitals to detect malnutrition at an early stage to allow for the planning and timely implementation of interventions.

Traditionally, a number of voluntary hospitals are involved in small ways in training community health workers to improve the services provided to women and children in villages. NGOs have been

involved with the training of community health workers (CHWs) for a long time.^{12 13} The government took over this programme in India and introduced accredited social health activists (ASHAs) under the Ministry of Health and Family Welfare (MoHFW), as part of the National Rural Health Mission (NRHM), to have an ASHA in each village in the country. The Planning Commission of India puts the numbers of trained ASHA workers at around 900,000 with the aim of increasing it to two million by the end of the plan.¹⁴ There may be limitations in the national ASHA programme, but NGO's continuing to duplicate government efforts is not sustainable and is a step in the wrong direction. Voluntary hospitals should support the programme and help these workers in improving their input in health service provision. One way would be to organize under-five growth monitoring clinics and ensure all children visiting the hospital and those born in the hospital receive checks and advice at regular intervals. This way hospitals can strengthen the existing government health programmes rather than its duplication.

Wellness Services for risk factor reduction for non-communicable diseases

Cardiovascular diseases (CVDs) and diabetes are, currently the most common non-communicable diseases (NCDs). The seed for heart disease is sown in childhood⁸, hence this is another reason to prioritize proper care for under-fives as discussed earlier. Hypertension, coronary heart disease and diabetes have been linked to our dietary patterns, excessive weight gain/obesity and lack of exercise.¹⁵ The hospitals deal with these conditions daily, mainly relying on medications but providing scant attention, if at all, to advice on risk factors. Patients believe that the answer to all ills lies in a pill or an injection. Unfortunately, the medical profession has facilitated this view all too effectively. Gullibility on the part of health professionals by listening to the advice obtained from pharmaceutical companies has much to do with this.

A wellness clinic where people undergo monitoring for any risk factors for NCDs, can be of great service to the community. NGO hospitals could do more to provide this service. It is the most cost effective and efficient way of reducing NCDs in the populations we serve. Increasingly the general public is also becoming aware of the advantage of prevention over cure and will welcome this service if available.

A wellness service/clinic promotes healthy living as well as the detection and prevention of risk factors linked to more serious illnesses. It relies on dedicated staff, usually a senior nurse and an assistant or two to help. Many voluntary hospitals also run nurse training schools and the students can be rotated through the clinic, which serves the dual purpose of awareness and training in preventive aspects of health care. The measurement of blood pressure, weight and height for Body Mass Index (BMI) and waist circumference all form routine aspects of this service. Most hospitals with laboratory services have automatic blood biochemistry machines to work out blood for sugar and lipid profile, liver and kidney function and the like. Standard protocols can be drawn up providing criteria for blood testing. Those found with high risk results, need to be referred to a physician for the full interpretation of results and the provision of appropriate advice.

Currently hospitals merely maintain NCD patients, provide repeat medication, and monitor the extent of the disease. Lifestyle risk factors are habits or behaviors which people choose to engage in. Lifestyle risk factors such as diet and lack of exercise are controllable. Diet and nutrition, physical inactivity, smoking and alcohol abuse are some of the common observable risk factors among patients presenting with symptoms of chronic diseases. A great deal more can be done for these patients than merely providing medical treatment.

National Disease Control Programmes

National disease control programmes are strategic control programmes developed at the national level and applied to all patients suffering from the disease. Immunization, Tuberculosis and HIV/AIDS national control programmes are good examples. Voluntary hospitals have a duty to consciously comply with the national protocols set for each disease. The importance of continuity of treatment and its completion is the key to the control of the disease. In a large country like India, it is a mammoth task and collaborating with government-run programmes can assist the nation in a small, but significant way. However, in this collaboration, it is important that the private hospital remains subordinate to the local health authorities and respects treatment regimens and reporting requirements. Often, with close collaboration with local government hospitals it is possible to obtain selected drugs and vaccines free, greatly benefitting the patients.

Systematic review of hospital activities and Self-Auditing

The last item listed in the table is the collection of “Quality Data” for services provided by an institution. Without appropriate information, the service provider cannot effectively deliver required public health interventions. Gone are the days when one had to keep paper records for monitoring these services. Today, Information Technology is readily available to address this need effectively. Most health workers in hospitals use smart phones or tablets. Hospital administration, in particular accounting, is carried out on desk top computers. Many medium to large hospitals have their own computer networks. Patient medical records are increasingly held on computers. Data can be recorded in the clinics on tablets and stored on computers or larger data storage devices. This technology is available at an affordable cost, even for small hospitals. Moreover, the costs can be easily recovered by charging a small fee to the people utilizing these services. Many private hospitals providing health services under insurance programmes have wellness clinics which provide good services to their clients and a healthy profit to the company. Even if patient records are not computerized, computers already in use at the hospitals have databases and spreadsheets which can be effectively used without the need to buy additional software programmes. Such small scale programmes have been tried and found to be successful even in financially poor settings.¹⁶

Discussion

Over the years, impressive gains have been made in immunization with coverage levels in most populations reaching more than ninety per cent. Continuation of this high coverage of protected children is vital. However, the same populations will show that almost half of all children under-five are undernourished. Why can't we have similar success in improving under nutrition among under-fives through growth monitoring clinics? The lack of this service is evident in both the private and the government sector. Paradoxically ASHA workers, who are responsible for this work, are not asked to provide this service.

Enlightened people make use of these services for their children. Adults routinely go for annual check-ups to obtain advice to reduce risk factors. However, the vast majority of people neglect this approach, particularly people with a poor knowledge of the benefits of these checks. This is totally absent in rural and remote areas. Once people recognize the advantages of preventive approaches, they readily make an effort to avail themselves of these services. I remember, while holidaying in Angkor Wat, our taxi driver wanted two hours off in the afternoon because he had to take his child for a monthly checkup and immunizations, an example of a functional preventive programme. An important part of prevention strategies is to make people understand the importance of the service and then to ensure that it is available at an affordable cost.

Maternal and Child Health Clinic

A detailed description of MCH clinic services is beyond the scope of this article but it must be clearly stated that the function of an MCH clinic is to ensure that all those who attend the service, receive a high standard of care covering all aspects of MNCH. First and foremost, the family planning needs of women 15-49 (emphasizing teen pregnancies) must be met so that unwanted and accidental pregnancies become a rarity. Secondly, good antenatal care and supervised child birth, followed by postnatal care ensures the safety of the mother and the newborn during childbirth and their future survival. Once the baby has survived the neonatal period, further survival depends on the extent to which under-fives receive monthly checks for immunizations, growth monitoring and proper nutritional advice to the mother for the child. Those children who show signs of malnutrition, both under and over nutrition, need expert advice. All hospitals who open their doors for this service have an ideal opportunity as well as a responsibility to comprehensively provide MCH care to all women and children coming through the gates.

Health Checkups

With the increasing risk of cardiovascular diseases, hypertension, diabetes, high cholesterol and the like, there is a great need to provide health checks to identify risk factors as early as possible and then to provide advice for risk factor reduction. This effort is much more cost effective and efficient for both the service provider and the recipient than it is to provide necessary curative services. A simple clinic providing the following services goes a long way to improving the health of the people:

- Measuring weight and height to calculate BMI followed by appropriate advice;
- Monitoring blood pressure, fasting sugar and lipid profile followed by appropriate advice;
- Other pathology tests if indicated for the identification of chronic diseases;
- Advice on nutrition and regular exercise and its importance in reducing risk factors for chronic diseases.

Establishing such a program is simple and a nurse and a laboratory technician with minimal initial training, but with supervision from a qualified physician, can easily provide this effective service. This is not only the most important health need of our time but it is also a source of revenue for financially struggling hospitals. Many private hospitals are already providing this service with a substantial boost to their incomes. Every year many of us spend a significant amount of money to access this service. Shouldn't we be formalizing it in our hospitals?

Special diseases

Diseases under National health programmes, such as Tuberculosis and HIV/AIDS are generally treated and followed up at special centers at district hospitals where free treatment is provided. However, many disgruntled patients prefer to come to private hospitals, even though they have to pay for these services. This is a sensitive subject and government centers running these programmes do not like their patients drifting from hospital to hospital. Many of these patients are old cases with a resistant disease and there is the danger of spreading resistant infections to others. Voluntary hospitals need to have a collaborative approach with their local government health authorities for these programmes and come to a common understanding to help such patients by following national protocols.

Data Collection and Audit

All hospitals, including private hospitals are required to collect basic hospital activity data especially births and deaths and report to local health authorities. Hospitals do collect the required

information but few review it and use it. Even though government district hospitals collect and collate health information, rarely it is used for making health workers understand the importance of data collection, even though the health workers are put on great pressure to improve health indicators. A responsible health institution must routinely audit their own work and learn from the results. Such audits help to improve the quality of services provided and assist in identifying new areas of need which can then be addressed. One good example is that very few hospitals look at the obstetric data to improve the quality of service provided to pregnant mothers and newborns. Rarely importance is given to review obstetric complications, stillbirths, near miss maternal deaths, cesarean section rates etc. Table 2 highlights the need for recording and the purpose for which the data is required.

Table 2: Some aspects of data review to improve health service provision in a hospital.

No	Service	Purpose	Remarks
1	Record all births and deaths systematically (already a statute requirement)	Maternal: Complications of pregnancy, maternal deaths or near maternal deaths, caesarean sections and other difficult deliveries Newborn: spontaneous vs difficult births, SB, LBW and perinatal deaths.	Monitor: Percent complications of pregnancy, CS rates SB rates, LBW Rates, Perinatal deaths.
2	Follow up of children born in the hospital	Immunization coverage and Growth monitoring especially nutritional needs of both mothers and the under-fives	Percent with full Immunization coverage at year two. Reduction in stunting and underweight rates Ensure all children have growth monitoring charts and mothers understand its significance.
3	Family planning	To minimise unwanted pregnancies	Measuring unintended pregnancies
4	Wellness clinics	Monitor chronic disease risk factors and numbers benefiting from the service	Identification of high risk individuals and of NCD admissions (ratio)

Conclusion

More than a million children under the age of five die in India every year and more than half of these deaths occur within the first four weeks of birth, the government told Parliament.¹⁷ Prematurity and low birth-weight, neonatal infections, birth asphyxia and birth trauma are some of the leading causes of neonatal mortality. Maternal mortality, although declining, still remains unacceptably high, especially when compared with neighboring countries like Sri Lanka, Malaysia and Bangladesh. Both, maternal underweight and overweight (obesity), are associated with increased risks of infant mortality due to the increased mortality risk of term births and an increased prevalence of preterm births. Maternal overweight and obesity may be an important preventable risk factor for infant mortality in many countries.^{18 19}

Control of overweight and obesity, reduction in cholesterol, blood pressure and blood sugars and increased physical activity can reduce the chronic disease burden to a great extent in all populations. Poverty on one side and easy availability and affordability of high density foods on the other side, add to the risk of NCDs. Exclusive medical treatment of these conditions only postpones the severity of illness and death as frequently people continue to seek medical help again and again for the same problems.

At first glance it may seem that this is not the responsibility of health professionals, but text book descriptions of each disease describe the epidemiology of the ailment and spell out clearly known underlying risk factors of the disease. Text books descriptions of the disease further describe the need for medical treatment to be followed by preventive advice to the patient. The preventive advice part of the “prescription” is often forgotten and if it is carried out at all, is woefully inadequate. The medical profession also has an obligation to help people by eliminating ignorance of causative factors and empowering people to help themselves. The profession has a further obligation to be knowledgeable about how to help those in need, which means keeping up with advances in medicine. The first step in that direction is reviewing and auditing our own work and learning from our successes as well as our failures.

The current state of health care is geared to make life easier for those who are already affected by disease, predominantly NCDs. Medical and invasive interventions for treatment and illness care are constantly on the increase. Technology is providing applications for the care of the elderly and for those suffering from chronic ailments. Compared with what is being made available to sufferers of chronic diseases, very little is being done to reduce the risks which are the root cause of chronic diseases.

Traditionally, voluntary hospitals have made the effort to reach out from hospitals to visit remote communities, largely providing for illness care to those who do not have easy access to health facilities. This type of outreach work, unless carried out on a grand scale, is neither cost effective nor efficient. Moreover, there is duplication of government efforts, such as in the training of community health workers and disregarding the role of ASHA workers. There is a great deal which can be done right in our hospitals. Efforts have to be made to keep people healthy and protect them from risk factors that lead to disease and death. To improve the health of women and children, the process starts even before conception by keeping a women healthy and informed so that she can make timely decision about when to have a child. This is followed by care during pregnancy, child birth and postnatal care. The child then needs to be monitored for optimal development and normal growth. As the child grows, there is a need for well-person care through preventive approaches, thereby leading to a healthy adulthood with a reduced burden of disease in later life. All these measures are affordable, can even be profitable for service providers and there is a demand for these services in the population. However small that contribution may be, voluntary hospitals have a duty to fill this gap, to be seen as service centers and not merely as businesses.

This paper has describes various portals through which these preventive approaches may be applied with assured health gains for the populations served. Voluntary hospitals must recognize this role. This responsible role will help many who are served in these hospitals. As pioneers in many aspects of health, this model may one day be followed by all hospitals, voluntary or government, in improving the health of all served by the health sector.

A sound opportunistic preventive approach along with judicious use of drugs and interventionist medical treatment should be the way forward.

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