Summer Training Report

By

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ACRONYMS/ABBREVIATIONS

S.No	Acronym	Full Form
1	ANM	Auxiliary Nurse Midwifery
2	APOC	African Program For Onchocerciasis Control
3	AWW	Anganwadi Worker
4	ASHA	Accredited Social Health Activist
5	BCG	Bacillus-Camille-Guerin
6	CDC	Centre for Disease Control
7	CHC	Community Health Centre/Care
8	CHIP	Children's Health Insurance Programme
9	CPHC	Comprehensive Primary Health Care
10	CTD	Central TB Division
11	DALY	Disease Adjusted Life Years
12	DOTS	Directly Observed Treatment Short course
13	DPT	Diphtheria, Pertussis, Whooping Cough
14	EPI	Expanded Program on Immunisation
15	ERR	Economic Rate of Return
16	FCA	Family Centred Approach
17	FPI	Federal Poverty Line
19	HRO	High Reliability Organisations
20	MDR-TB	Multi Drug Resistant Tuberculosis
21	MMR	Measles-Mumps-Rubella
22	NID	National Immunization Days
24	NPV	Net Present Value
26	OPV	Oral Polio Vaccine
27	SHI	Switzerland Health Insurance
28	SPHC	Selective Primary Health Care
29	UHC	Universal Health Care

INTERNSHIP REPORT PART I

A COMPREHENSIVE REVIEW OF HORIZONTAL AND VERTICAL HEALTH CARE PROGRAMMES IN LOW AND MIDDLE - INCOME COUNTRIES

Rationale – The purpose behind conducting a review on horizontal and vertical health care programs is to understand the evolution of the healthcare framework around the world.

Objectives –

To assess objectively the results of the Health programmes that have been initiated since the Alma - Ata across the low and middle-income countries of the world, and

1. To delineate the understanding of what encompasses Vertical and Horizontal health care programs, Selective and Comprehensive health care and the diagonal health care approach.
2. To compare outcomes in Horizontal and Vertical Healthcare programs
3. To identify the way forward in enabling the vision of 'Health-For-All'

Selective Primary Health Care – "an interim strategy to begin the process of comprehensive health care where specific action would be taken against the most severe diseases based upon four factors – prevalence, morbidity, mortality, feasibility of control." （by Lesley Magnussen，2020）

Comprehensive Primary Health Care – "It explicitly outlined a strategy that would respond more equitably, appropriately, and effectively to basic health needs and also address the underlying social, economic, and political causes of poor health. It was to be underpinned by universal accessibility and coverage on the basis of need, with emphasis on disease prevention and health promotion, community participation, self-reliance, and intersectoral collaboration." （by Lesley Magnussen，2020）

Abstract

Healthcare programmes have been the weaponry of world governments against the menace of communicable diseases since the end of the second world war. There have always been polarised opinions regarding the mode of implementing mass programmes around the globe. Some policy makers have believed in the holistic multisectoral approach to achieve a healthy population while others argue against this stating that such policies are utopian and need to be replaced by practical approaches such as the selective approach.

The review of literature that follows tries to analyse the condition of health care programmes in the country and their achievements in the context of the sustainable development goals (SDGs) and the need for a change in policies if any to achieve a healthy populace in the near future.

While there have existed two factions for and against implementation of healthcare programmes, nowadays there is a call towards integration of these methods as and how the fit of the healthcare system permits. This diagonal approach has also been described briefly in this paper.

Keywords: Vertical Health care programmes, Horizontal health care programmes, Comprehensive health care, Social Equity, Behaviour change in Public Health,

Introduction

There are two types of health care programmes in existence in healthcare policy lingo – Horizontal health care and vertical healthcare. Throughout history they have been called by different names – comprehensive health care or selective primary health care. Horizontal Health care programmes are those that are structured to serve the public, *en masse* and financed directly by the government, tend to focus on all health indicators in general unlike Health care Programmes where funding and focus is given for a particular disease that infects a specific population. These are disease control programmes with separate funding, administration, governance and implementation.

History

Historical evidence from the 19th century provides that the focus of the countries at the said point of time was on public health programs that possessed an 'intersectoral approach' and through that on diseases that affected the population such as cholera, dysentery and malaria. However, this was quickly replaced by a technology centred approach at the beginning of the 20th century which was replicated in the colonised nations.

Post-Second World War, the newly independent countries found themselves to have inherited from their colonisers, in addition to democracy, a health system that was more urban based and heavily invested in technology and curative medicine. Considering the poor economic state these nations were in it was not feasible to depend on these institutions to improve the health status of the entire population. Hence many of the independent countries found themselves leaning to public health systems to support their enormous, poverty, hunger and disease-stricken populations.

The Origin of comprehensive health care took place against the backdrop of the under developed economy and poor healthcare of the then newly independent nations. To be able to sustain the technology driven system of healthcare that had been in the country was impractical and hence practical solutions were required with the limited human resources that existed in those nations at the time.

To name a few successes, the implementation of "community-based health programs" in Nicaragua, Costa Rica, Guatemala, Honduras, Mexico, Bangladesh, and the Philippines, the barefoot doctor program in China （by Lesley Magnussen，2020）, and India's own Bhore committee report that proposed a detailed provision of PHCs espousing at the early stage, a need for last mile coverage. *Social equity* was a theme brought forward by these nations - 'although socio economic gaps exist among different social group's they are not insurmountable'. This prompted the world to believe in a strengthening of public health system would be the final straw in eliminating many of the preventable diseases in the third world.

Immediately a year following the declaration of the Alma-Ata conference, it was called 'a far-sighted vision due to the high cost of capital and long years to effective implementation'. In place of the above program was proposed the selective approach to primary health care – the proposed ideas included; GOBI (growth monitoring, oral rehydration therapy,

breastfeeding, and immunization) these interventions targeted women of child bearing age as well as infants (children below five years of age). （by Lesley Magnussen, 2020）

1980's & 1990s –

The International Conference on Health Promotion or The Ottawa Charter of 1986 further build upon the principles of The Alma Ata declaration.

However, at the same time, the argument for selective health care programs received traction soon after the success of small pox eradication and the polio eradication program via the National Immunization Days (NID),1988. The 1993 World development report also espoused the investment in health and health systems; all these changes had an effect on the types of funding and approaches by the governments and opportune NGO access to the extremely poor countries in Africa and Asia.

Objectives

To assess objectively the results of the health programmes that have been initiated since the Alma - Ata across the low and middle-income countries of the world, and

Specific Objectives

1. To delineate the understanding of what encompasses Vertical and Horizontal health care programs, Selective and Comprehensive health care.
2. To compare outcomes in Horizontal and Vertically implemented healthcare programs
3. To identify the way forward in enabling the vision of 'Health-to-All'

Methodology: The Literature review chose to describe and compare the different means and conditions under which Horizontal and Vertical Programs are implemented and what changes each bring about in the health system.

Search Strategy

1. A systemic literature research was done on the databases like: PubMed, ProQuest, Cambridge University Press, The Economic and Social Weekly. The following search terms were used – Vertical Healthcare Programs. Horizontal Healthcare programs, Comprehensive Primary Health care, Selective Primary Healthcare, Social Equity. The time period of most of the literature reviews were following the year 2000 except

for singular editorial articles or reports used to cite definitions and instances from the past.

2. Eligibility Criteria used to select valid literature reviews was that of Communicable diseases/ Nutritional diseases/ epidemics that affect Low-and-Middle Income countries. While the concept and practice of primary health care is well-prevalent in developed economies, it is adopted as Integrated Health care supported strongly by a sound health system.
3. Compilation of selected sources; twenty in all, was done as a tabular summary to segregate papers as to whether they described horizontal, vertical or a mixture of both. Subsequent analysis and description done to summarize the general findings from each paper.
4. The review of the paper was done in a form of narrative synthesis to describe systematically Horizontal and Vertical health care programs. At the end of the paper, two Health care programs; one horizontal and the other vertical were selected and tabularised for differences and outcomes produced in their respective populations.

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HORIZONTAL PROGRAMS –

- A Policy brief by WHO （When do vertical (stand-alone) have a place in Health Systems?，2008）describes Horizontal Health care programmes as 'Integrated health care programmes.' They are described as "the process of bringing together common functions within and between organizations to solve common problems, developing a commitment to shared vision and goals and using common technologies and resources to achieve these goals".

1. Routine immunization is an example of an integrated health program that is practiced in almost every health system around the world as – EPI. The Diseases covered under the same include (DPT), OPV, BCG vaccine. While some authors consider the immunization program as a horizontal program due to its umbrella coverage of services and the ability to irreversibly contain such outbreaks due to herd immunity, the origin of the practice of mass immunization is somewhat different as to that mentioned above.

For Example, MMR, well up to the 90s was not a preventable disease in the US in-spite of the vaccine discovery forty years earlier. Intermittent inclusion and implementation of the program resulted in epidemics happening every 5 years amongst adolescents thereby, prompting authorities to reintroduce the federal immunization program for both measles and rubella – the National Immunization Program. The main problem that caused such regular outbreaks was cited to be 'withdrawal of funds' once the disease was seen to lower disease incidence in the population. （Beyond vertical and horizontal programs:a diagonal approach to building national immunization programs through measles elimination，2016）

2. The policy brief goes on to enumerate the health programs that yield productive results when integrated into the health service system – sexually transmitted diseases and reproductive infections, tropical infections, mental health infections, however with a pinch of salt varying significantly with the nation where the service is being provided.

- The international research program conducted in 15 low and middle income countries namely (India, Iran, Pakistan, Bangladesh, El Salvador, Colombia, Brazil, Ethiopia, South Africa, Kenya, Democratic Republic of Congo, New Zealand, Australia, Uruguay) reveals the successes of Primary health care – one of the tenets of Comprehensive Health care as cited in the Alma – Ata declaration of 1978. The various aspects of these health programs reveal unanimity in the improvements around the world such as – reduced vulnerabilities through community empowerment, social equity of health care, and creation of a self-supporting mechanism with a set of diseases that the community is capable of catering to. Most of the communities are ones that are tightly knit and are minority communities in their 'states' – Maoris, Aborigines, women etc. （Is the Alma Ata vision of comprehensive primary health care viable? Findings from an international Project，2014）

- Community Health Centres in Australia are an example of comprehensive health care that have been in existence since the 1970s. However, they have been facing existential issues due to the arrival of similar PHCs created by the federal government. While the former focused on the holistic model of health and employed a

larger aboriginal workforce (being community driven), the latter was more focused in chronic disease prevention and relegated the remaining functions to the local government and NGOs. Furthermore, broader health promotion activities ceased to be funded thereby, singularly focussing on chronic disease. This Biomedical concept thereby failed to incorporate the idea of an intersectoral approach finally settling for an approach of 'secondary prevention'. It is interesting to note the functions that the CHC centres performed in addition to health; community advocacy campaigns, support groups for aboriginal rights, women's groups, individual advocacy etc. （What is the difference between comprehensive and selective primary health care? Evidence from a fiveyear longitudinal realist case study in South Australia，2017）

- The Village Health Sanitation and Nutrition Committees are a brainchild of the National Rural Health Mission (2005) and an example of decentralized planning. In essence they are bodies that contain women, especially of the majority/disadvantaged group required to represent the community and perform health education in terms of malnutrition, health sanitation etc. Community Health Workers (ANM, AWW, ASHA) are an essential component of these committees. By means of being a part of the community, they are better able to convey and change attitudes of rural society.（Are village health sanitation and nutrition committees fulfilling their roles for decentralised health planning and action? A mixed methods study from rural eastern India，2016）

- A Family Centred Approach (FCA) is an effective complementary approach that serves comprehensive health objectives. It is an incorporation of social environment into health sector. While adequate establishment of the causes of disease and eliminating beliefs is necessary to prevention and control of public health, utilising the family as a conduit for creating awareness and acting as 'signatories' of behaviour change in rural populations. The longitudinal study conducted in rural Mangalore shows improvement in terms of malaria awareness and nutrition amongst pregnant women. It helps in breaking socio-cultural beliefs that are inherent regarding such ailments.（Family Centered Approach in Primary Health Care:Experience from an Urban Area of Mangalore, India）

HORIZONTAL HEALTH CARE PROGRAMS	
BENEFITS	CHALLENGES
Results in Public health system strengthening	Requires time in the magnitude of several years to achieve an efficient system
Is decentralised and involves a bottom-up approach being inclusive	Requires human and financial resources, and far sighted plan planning
Allows for intersectoral approach and hence stem disease causing factors in the bud	Due to its intersectoral involvement it is bound to face opposition at all stages.

- The Nigerian response to HIV/AIDS is a critical example to intersectoral action in CPHC; where a National Action Committee on HIV/AIDS is constituted that draws people from Justice, health, education, information and other sectors. The committee acts by advocating to the private sector to sponsor testing programmes and counselling for young population. （Strengthening Intersectoral Collaboration for Primary Health Care in Developing Countries:Can the Health Sector Play Broader Roles?，2010）

VERTICAL PROGRAMS -

Vertical Programmes or as they are alternatively sometimes known as selective health care programs are "so called because they are directed, supervised, and executed, either wholly or to a great extent, by a specialized service using dedicated health workers". （When do vertical (stand-alone) have a place in Health Systems?，2008）

These programs can be of two types – those with 1) a separate funding, governance, organization and management and those 2) that have all of the above except a separate delivery.

Vertical programs can be of different forms such as while i) targeting a particular disease ii) targeting a particular group or population

- The community case management of Malaria in Burkina Faso is an example of how disease control projects for want of resources and international expertise and human resource can prove inefficient. The program since being funded by foreign aid requires to fulfil the criteria set by international organizations – in terms of organizing, funding, governance and implementation, no autonomy is given to the national government; instead there occurs constant loss of state resources and duplication of services. Furthermore, since there is no incorporation of local level expertise in terms of 'advice' there is less acceptance by the rural population who do not respond to the 'one-sided communication' by such organizations. （Integrated primary health care in low- and Middle Income Countries;a double challenge，2018）
- DOTS (Directly Observed Treatment Strategy) - DOTS as an international program began in the 1980s, and has managed to reduce the concerted, focused and systematic efforts the burden of tuberculosis around. It bases itself on the multiple efforts through political commitment, sputum microscopy, regular anti-TB drug supply under regular surveillance and a very good data collection and report system.
  These efforts have helped in sharply reducing the incidence of TB around the world. The Polio Eradication initiative and African 'Onchocerciasis Control Program' are other often cited examples that have been successful around the world especially in Third world countries. The Major funding and human resource comes from international agencies such as the World Bank, The Global Fund to Fight AIDS, Tuberculosis and Malaria, Bill & Melinda Gates Foundation, UNICEF etc. （Msuya，2004/05）

- The End-TB strategy of 2015 that aims 'to reduce global incidence of TB and limit mortality due to TB by 50% and 75% respectively' combines vertical strategies assessing DALYs and cost effectiveness of the interventions done. The interventions focus more on mass screening and identification of unidentified cases in both India and South Africa. The same scenario is China is managed by improvement in screening of MDR-TB cases using newer technology. MDR-TB treatment thereby translates to higher costs per head and thereby goes onto define the health systems of the country – a socialistic structure in China or a welfare health system in India and south Africa. Here it is important to note the various aspects of the programs in these

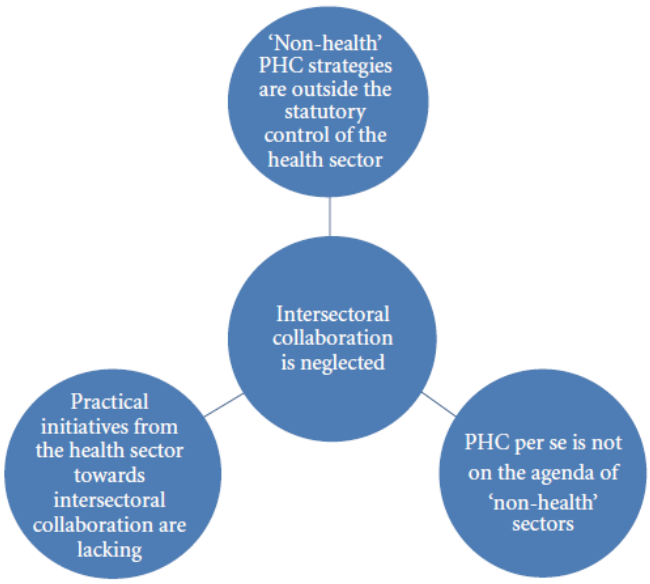
countries –the health system in China is supported entirely by the Chinese government with all costs borne by the institution; unlike in India and South Africa where the welfare system allows for subsidisation of costs for the poor sections of society. （Cost-effectiveness and resource implications of aggressive action on TB in China, India and South Africa: a combined analysis of nine models，2016）

- Interventions in societies immediately after they are introduced to new horizons of health tend to focus on specific aspects/the severe problems ailing the society and thereby shy away from the social determinants of health. Similar is the case of the South African national nutrition policy implemented post-apartheid era in 1994 where building on the tenets of GOBI – Growth monitoring, Oral Rehydration, Breastfeeding and Immunization funding was diverted from other aspects of health and of human development in general. （Implementing comprehensive and decentralised health systems，2001）

- Sustainability of vertical programs over a long time due to constraints of resources – A study by WHO has identified the major constraint to the success of DOTS to be weak political commitment. Other constrains are: limited financial and human resources, deficiencies in organizational structures, problems in drug supply and lack of public awareness of the benefits of the program.- a simple assessment of the conditions during which the vertical programs began shows that a they coincide with the production of biochemicals around the world such as the distribution of larvicide laden mosquito nets, onchocerciasis programs in Africa (where similar chemicals were used against the causal organism)- The criteria used to evaluate the economic efficiency of the project in Kim and Benton study included net present value (NPV) and the economic rate of return (ERR)- a later evolution of the program involved the free distribution of the drug Mectizan that aimed to achieve complete eradication of the disease （Msuya，2004/05）

VERTICAL HEALTH CARE PROGRAMS	
CHALLENGES	BENEFITS
Require donor-based investment due to the mass investment that goes into the program at the beginning	Useful in containing diseases when they are of epidemic scale or communicable requiring immediate intervention
The client is not involved in decision making; hence making most efforts one sided;	Easily kept away from bureaucracy and hence avoid most organizational managerial problems.
They exist as a short-term solution to the problem causing a resurgence once the intervention is withdrawn.	Though they cannot be incorporated as a long-term solution, the AIDS and APOC program are examples of how vertical programs can be incorporated into the health system eventually.

Intersectoral collaboration as per the WHO



A COMPARISON BETWEEN TWO TB CONTROL PROGRAMMES WITH DIFFERENT STRUCTURE AND IMPLEMENTATION FRAMEWORK

	TB control Programs in the Peoples' Republic Of China	TB control Programs in India
Health Burden in the TB population	The greatest burden of TB amongst patients is with regard to MDR-TB apart from the case load of newly incident cases.	The greatest concern in terms of TB is with regards to the high number of undetected case load and a large number being attested to nutritional causes.
Organization	At the Central Level, the National TB Elimination Programme (erstwhile Revised National TB Control Programme) is managed by the Central TB Division (CTD). The TB Program evolved from a CDC led model; using separate TB clinics and TB departments within CDCs to a more integrated model. In 2011, the function of TB diagnosis and treatment was shifted to designated hospitals due to want of healthcare personnel. Integration of the programme into the primary healthcare service system resulted in better utilization of system resources.	The National TB Elimination Programme is managed by the Central TB Division (CTD). The respective Joint Secretary from the administrative arm of the MoHFW takes care of the financial and administrative aspects of the programme. The CTD is assisted by 6 national level institutes. The state TB officer is at the state level who is in-charge of the state TB cell and co-ordinates with the CTD for integration. Subsequent decentralisation takes place up-to the block level where TB units exist as a programme management unit of the National TB Elimination Programme.
Activities done to expand access to care	"Local Centres for Disease Control and Prevention offices reimburse patients' expenses" and enabling designated private hospitals to provide care	• Enable subsidy schemes in the private sector • Improve access to microscopy in the public sector
Financing	The Chinese Tuberculosis control program uses results-based financing to incentivize the TB program.	The National Tuberculosis Elimination Programme in India uses Public-Private Mix schemes to enable involvement of private partners to participate in the Tuberculosis control program. Grant-in-Aids are given to

		establishments depending on the population served. This system is based upon results-based financing.
To improve quality	• Improve referral systems and sample transport; • reimburse patient expenses; • enhance mobile health, case management, and adherence support; • improve management of side-effects of MDR tuberculosis treatment	• Improve private sector quality through provider training, supervision, regulation, and subsidies; • provide patient retention incentives, nutritional support, and link to social welfare programmes (National Strategic Plan for elimination of TB, 2017)
Funding	• Funded domestically; total budget (USD 719 million)	• Funded both by international agencies and domestically. (USD 583 million of which 100 million is by international sources)

RESULTS

	CHINA	INDIA
SPECIFIC OUTCOMES MEASURED	• China accounts a TB incidence of 60 per 100,000 and a mortality rate of three per 100,000 （2019） • 71000 (8.19%) undiagnosed cases of TB • MDR-TB cases; 66000 (7.62%) • HIV cases living with TB; 18000 (2.07%) • Treatment Success Rate; 93% • TB treatment coverage rate; 92%	• India accounts a TB incidence of 198 per 100,000 and a mortality rate of 33 per 100,000 population （2019） • 700000 (26%) undiagnosed cases of TB • MDR-TB cases; 130000 (4.83%) • HIV cases living with TB; 92000 (3.42%) • Treatment Success Rate; 81% • TB treatment coverage rate; 74%

	While the integration of TB services namely the diagnosis and treatment phase has been done so with the notion of increasing the availability of healthcare professionals for effective TB control. • The new change has resulted in professionals who have been involved in TB clinics to be more qualified for the same as compared to general doctors from general designated hospitals. • Secondly due to free provision of TB services, there is also the 'non-profit generating' notion about the TB services in these hospitals. To summarize these changes can cause a reduction in treatment pathways, reduce costs and improve quality however creating an issue of lack of trained personnel to sustain the program.（Transforming tuberculosis (TB) service delivery model in China: issues and challenges for health workforce）	The TB program in India has been successive in reducing the annual TB incidence and is on its way to achieve its SDG target of 2025. However, as an exclusive public health program it has a huge margin of undetected cases along with a plateauing tendency of incidence and a rising burden of MDR-TB.（Counting the lives saved by DOTS in India:a model-based approach, 2017） • The Indian government has begun incentives to attract Private practitioners to TB control measures of the public health system. However, the Indian public health system acts as a deterrent to efforts made in the direction of curbing TB prevalence; lack of feedback from RNTCP, Drug toxicity, Loss of credibility as a private practitioner etc.（Vijayashree Yellappa，2013）

From the above results it can be summarized that while a well-developed primary health system has enabled China to reduce its burden in terms of smear positive cases and expand its coverage, India with a similar population is lagging as compared to the China. However, at this point it is also worthwhile to note the Health system that is prevalent in both the countries – a welfare-oriented health care system with a dominant private sector in India and a socialist health care system in China.

DISCUSSION

Primary Health Care is a by-product of long years of suppression and ignorance of subjugated nations to western colonisation and a holistic attempt at resurgence from the quagmire of factors that affect the population as a whole. From the above set of studies, it can be surmised that Comprehensive health care was a less costly, democratic, inclusive and empowering model meant to gradually guide the nation state to a health in all terms – the ultimate objective of creating healthy, educated, informed citizens capable of taking healthcare into their own hands. On the other hand, selective Primary health care was an anti-thesis of the same equation, created out of an attempt by western democracies to devise an idea well suited to their needs and interests – political and economic. However, there is a need to analyse the nuances that separate these two ideas from each other to better understand when and where these principles need to be applied.

Primary Health care as per the Alma-Ata declaration "involves, in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communications, and other sectors; and demands the coordinated efforts of all those sectors." (Article VII). Both Comprehensive and Selective Primary health care give importance to preventive health care than curative health care the former if only more so. However, the broader difference comes in terms of the parallel functions that are sought after in comprehensive health care.

Factors that influence health care inequity are of three types – proximal (those amongst the biological factors responsible for disease), transitional factors (individual health factors), distal factors (socio-environmental factors). Health care systems usually work to achieve elimination of proximal and transitional factors to some extent. Distal factors are not under the paradigm of health departments in most countries. （Pathways of influence on equity in health.， 2007）More importantly governments are rarely incited to act against potential population risks unless there is adequate evidence to do so for the same – evident from the case of measles virus vaccine resurgence, the polio vaccine program, NIDs etc.

A call to ensure effective delivery of 'Essential Public Health Functions' was proposed at the WHO assembly 2016 in addition to several other changes. （PUBLIC HEALTH PERFORMANCE STRENGTHENING AT DISTRICTS Rationale and Blueprint for Action

, June 2017） In addition to financial protection, accessibility, and creating social environment conducive to health, the conference also laid importance to the growing anti-microbial resistance due to their incessant use. The WHO emphasis UHC along with need to achieve the sustainable development goals, while tying health to economic development (World Development Report 2004). Tied funding is also a top-to-bottom manner leads to non-implementation at the local level.

Comprehensive Health Care is essentially:

1. Holistic; not involving a certain susceptible population.
2. Seeks to involve the community and the citizens involved; a bottom-up approach.
3. Involves multiple sectors and uses the social determinants of health model to prevent disease.

CPHC requires long years however to achieve its targets and sometimes even concurrent reform throughout to achieve its targets through more effective means.

Selective Primary Health Care on the other hand also encompasses preventive functions essentially, however, does so only in packets of services targeting specific populations or diseases if a susceptible population is unidentified. What makes such interventions undesirable in situations is the strict emphasis given to costing and time bound results. Especially in a health sector it is impossible to evaluate all data as health itself is not defined solely by the biochemical model or disease model.

SPHC Programme poses the issue of considering DALYs as a measure of improvement in health morbidity. DALYs discriminate the population on the basis of their gender and respective morbidity; namely when it comes to costs with respect to a diseased patient suffering from two different diseases require higher costs as per the fatality and complexity of the disease. Similarly, they do not discriminate between individuals when it comes to different living conditions but weighs them irrespective of them. （Emmel，1998）

As per the National Health Stack and the Ayushman Bharat scheme of the Indian government there has been an attempt to a comprehensive, intersectoral approach to tackling the rising healthcare costs through means of introduction of health insurance and other schemes that benefit the ‘below poverty line population.’ However, in-spite of the goodwill of the government has failed to be successful as from a comprehensive healthcare point of view it

does not take into account the ‘distal/social aspects’ of disease since only the financial cost implications are considered.

CONCLUSION

Finally, to conclude it is possible to say that comprehensive, decentralised health care is the most obvious choice to better health in all countries; however at the same time selective primary health care is as important in situations in less educated societies or when a sudden or vital action is needed to prevent rapid spread of a disease.

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INTERNSHIP REPORT PART II

HEALTH CARE DELIVERY SYSTEMS

Course Description: The Health care delivery systems course on EdX provides through a medium of videos and research papers & reports a broad view of how health care is spent in the developed countries.

Objectives of the Course: The objectives of the course can be outlines as follows –

i) To provide how healthcare management can be improved through better strategic planning
ii) The types of health care systems around the world – welfare based and entrepreneurial health care systems
iii) Leadership to improve health care management
iv) Healthcare innovation from the high performing health systems around the world

Course Content:

It includes videos for the presentation on health care systems around the world and research literature on the healthcare management innovations and leadership globally.

Course Methodology: Videos for Health Care systems and Research articles for the rest of the modules.

Key Learnings:

MODULE 1

The Health care system of United states of America - is a mixture of private and public - most are run by private organizations - where 70% are non-profit leaving the remaining for profit-60% of health insurance is provided by employers. care involves preventive care, curative inpatient care and prescription drugs -

- 15% are covered by Medicare mostly elderly people (Medicaid and Medicare)-It is a single payer system where most people are covered by a single payer system. All people covered by one type of insurance- they are of part A - Available to citizens

above the age of 65 Medicare part B -a Low deductible of 20% and covers outpatient services, that has a pretty low deductible - Then there is a Medicare part C where private companies offer health insurance benefits as alternatives to already offered Medicare benefits, If they provide services at lesser rates as compared to government charges they get to keep the extra money as profits. Next if Medicare part B which is that of prescription drug plans designed and run by private companies but paid for by the federal government. Individual beneficiaries can pick the plan they like depending on the drugs they think they might need.

- Next is Medicaid which is a state-based program that provides health care for those who cannot afford it - namely the poorest in the society. There are some minimal federal guidelines set for Medicaid by the federal government and the rest is up-to the states as they see deemed fit.

The Medicaid program covers

i) kids under 6 years of age up-to 133% FPL (Federal Poverty Line)
ii) kids (6-18) up-to 100% of FPI
iii) State Children's Health Insurance Plan (SCHIP) ups these to 300% FPL in most states.
iv) Pregnant women up-to 133% FPL
v) Elderly and disabled who receive supplemental security income (SSI)

The federal poverty line is used to determine the eligibility to health care programs and benefits including savings on Marketplace e-health insurance, Medicaid and CHIP coverage.

The Affordable care act was meant to allow expansion of the Medicaid cover but it made it optional to the states to do so or not.

Finally, to close, the state provides 2/3rd of the funding for the insurance but covers only 1/3rd of the population; the inverse being true for private insurance coverage.

SWITZERLAND

Next is the health care system of Switzerland which has a universal health coverage where since 1996 the Federal Health insurance Act has mandated that all residents but statutory health insurance from private health insurance companies.

- It requires one to purchase insurance even sometimes retroactive to arrival; the country works to cover undocumented immigrants. - SHI is offered by competing non-profit insurance companies.
  Premiums can vary on age - <19,19-25, >25 or on the basis of geographical area.

Majority of the swiss **opt for a managed care scheme within a basic care scheme**. **Coverage is comprehensive being for Physicians, Drugs, Medical Devices, Home health care and preventive services** (Screening, Immunisations and examinations) Dental care is not provided under the umbrella of services, also eyeglasses and contact lenses are only covered for children

Note: Insurance is not coupled to employment with couples buying separate plans even for their dependents

- Voluntary health insurance covers terms not provided in the basic plans such as a better choice of doctors, hospitals etc
- Maternal and child care are exempt from the health insurance cover. Kids are exempt from inpatient care however caps are present for the care provided over and above which doctors cannot charge.

The swiss focus on after hour care managed by doctor care associations

- High out of pocket spending is the issue for the health care system of Switzerland; also doctors are under constant pressure to keep health care costs low and in case they are seen to be prescribing high cost and increasing number of drugs they can be set under investigation by insurance companies and if seen to be overly charging the patients they can be asked to pay the surplus charges from their own pockets.

II HEALTH STRATEGIC PLANNING

Health care strategic planning has been in place since the 1960s and began to be included in healthcare since the late 1970s. (what is strategic planning)

Strategic planning can be broadly be defined as ten processes – five based upon the product development and five on the process of strategic planning.

Development of the product

1**. Establish a unique, far-reaching vision** – to develop a vision that is far-sighted and defined than ill-defined and resource consuming.
2. **Attack critical issues** – or Prioritization of needs; requiring that attacks be done on most critical issues to enable profitable ventures and resulting in furthering of organizational objectives.
3. **Develop focused, clear strategies** – there is a need for tangible targets fro the same reason of defining results and making necessary altercations wherever necessary to achieve targets in the long-run.
4**. Differentiate from competition –** It is necessary to identify one's competition in order to determine what strategy is to be taken to gain market share. While superior quality is a requisite for competition, sometimes quality along with affordable cost is another determining feature for customers.
5. **Achieve real benefits –** As there is financial investment involved it is necessary to measure real time benefits in terms of measurable quantities such as products, finances, operations and quality improvement. In a healthcare program, while sole profit making is not the only objective, there is a need to achieve efficiency and quality; both contributing to volume-based profits which is not in itself toxic.

The following are innovative processes of strategic planning

1. **Organize preplanning –** planning must begin only after determining a set of pre-determined objectives, assigning a set of roles and responsibilities, and scheduling.
2. **Structure effective participation –** A strict identification of who the key participants are and determine participative mechanisms—interviews, surveys, focus groups, task forces, review meetings, and retreats

3. **Think strategically -** Strategy must be sued again to design a far-sighted goal using the faculty of books, technology and expertise of the staff involved.
4. **Manage implementation -** Good communication and management are involved in implementing a strategic plan, as well as the assignment of the right responsibilities and developing a structured system for the same
5. **Manage strategically**

III HEALTH CARE DELIVERY SYSTEMS AROUND THE WORLD

Positive deviation in Healthcare

Positive deviant healthcare can be understood as identifying the healthcare resources in a given community and using the assets inherent in a society to improve health outcomes.

It is a social and behavioural change mechanism that is easily adapted into a community due to its conformance with the communities' beliefs and practices and may already, in instances in practice within the community.

Three processes that facilitate positive deviation are –

i) Social Mobilisation; by conveying to the community the knowledge behind positive deviation.
ii) Information gathering; By getting the community to collect information regarding practices in the community, vetting and analysing them.
iii) Behaviour Change

Research shows that:

- It is useful in the poorest communities to bring about behaviour change

- It helps to improve child health
- Often useful health behaviour may remain trapped within a few families of a community; positive deviance help unlocking this trapped potential.

ADVANTAGES	DISADVANTAGES
• A low-cost approach that identifies with the community	• It is not a common sight to find a lot of positive deviant behaviour.
• Since it originates from within the community, it gets more support from within the community in terms of cost sharing, human resource	• Inequality exists across communities in an inherent need identification regarding eliminating disease and gaining good health outcomes.
• Enhances research into the path of better and more sustainable methods if seen as a success.	• Since positive deviance relies on unintended positive benefits as well, the need to identify these are also necessary which may not be uniformly present either.

IV HIGH PERFORMING HEALTH SYSTEMS AROUND THE WORLD

Health systems around the world face multiple issues regarding safety, efficiency, patient satisfaction, Incorrect surgeries and treatments being provided in hospitals, Inaccessible public health services etc.

It is of the essence to study health care system practices and adopt the best processes not just from other health care systems but identify practices that are analogous and adopt them to improve quality. Here is a compilation of health care problems around the world and what can be done to solve them.

1. Integrated Health care is a proposition that works on the premise of multiple-disease suffering patients who require specific treatment for each disease. Integrated care works to provide care to susceptible patients for the entire non communicable disease spectrum that a person susceptible to.

The following is a list of recommendations by the International Experts Working Group on Patients with Complex Needs.

1. Make care coordination a high priority
2. Identify patients in greatest need of proactive, coordinated care
3. Train more primary care physicians and geriatricians.
4. Facilitate communication between providers—for example, through clinical record integration
5. Engage patients in decisions about their care
6. Provide better support for caregivers.
7. Redesign funding mechanisms to meet patients' needs
8. Integrate health and social services, and physical and mental health care.
9. Engage clinicians in change and train and support clinical leaders.
10. Learn from experience and scale up successful projects.

HIGH RELIABILTY IN HEALTH CARE:

High Reliability Organisations are those that have achieved a high degree of safety in-spite of functioning in hazardous conditions; like aviation and nuclear power. This is due to the reason that health hazards are considered a normal occurrence by default.

Reliability is defined in rates of units of 10, representing the number of defects per opportunity for that defect. An opportunity for a defect translates to a population of patients at risk for the medical error or defect. Measurement and assessment of such measures can act as guides while considering patient care quality. In addition, the context in which work occurs is also considered.

Weick and Sutcliffe have elaborated the most elaborate description of high reliability care as an environment of "collective mindfulness" in which workers look for small problems that may contribute to a risk to the organization. HROs are preoccupied with failure and thereby even the smallest failure is guaranteed utmost importance.

They include five high reliability principles –

1. HROs are preoccupied with failure, never satisfied that they have not had an accident for many months or many years
2. Being able to identify the subtle differences among threats may make the difference between early and late recognition
3. Sensitivity to operations
4. Commitment to resilience
5. Deference to expertise; by going to the most experienced individual rather than moving by hierarchy.

HROs tend to not become complacent by hazards in work environments lest they become 'contaminated' by its presence. They tend to nip this in the bud.
Another factor seen in HROs is the resistance to simplicity; or the one size-fits-all practice as is seen in hospital practices.
Thirdly is the lack of sensitivity of health care workers to small problems that may be within their view or work area. In addition, intimidating behaviour by superiors further complements the problem.

Weick and Sutcliffe offer solutions and suggestions to alter the functioning of a health care organisation so as to be able to adopt HRO measures.:

(1) the leadership's commitment to the ultimate goal of zero patient harm
(2) the incorporation of all the principles and practices of a safety culture throughout the organization,
(3) the widespread adoption and deployment of the most effective process improvement tools and methods

V FACETS OF PATIENTS AND HEALTH OUTCOMES

Hospital care or institution care involves three facets that constantly interact with each other and influence the patient, clinician and organizational quality outcome in general. Hence in order to measure the various aspects of the quality of health care it is necessary to measure these factors effectively and perform adequate measures where needed.

Health in this growing competitive world is measured not alone by patient health outcomes but by broader determinants- which may be broadly defined as: patient outcomes and clinical procedure processes.

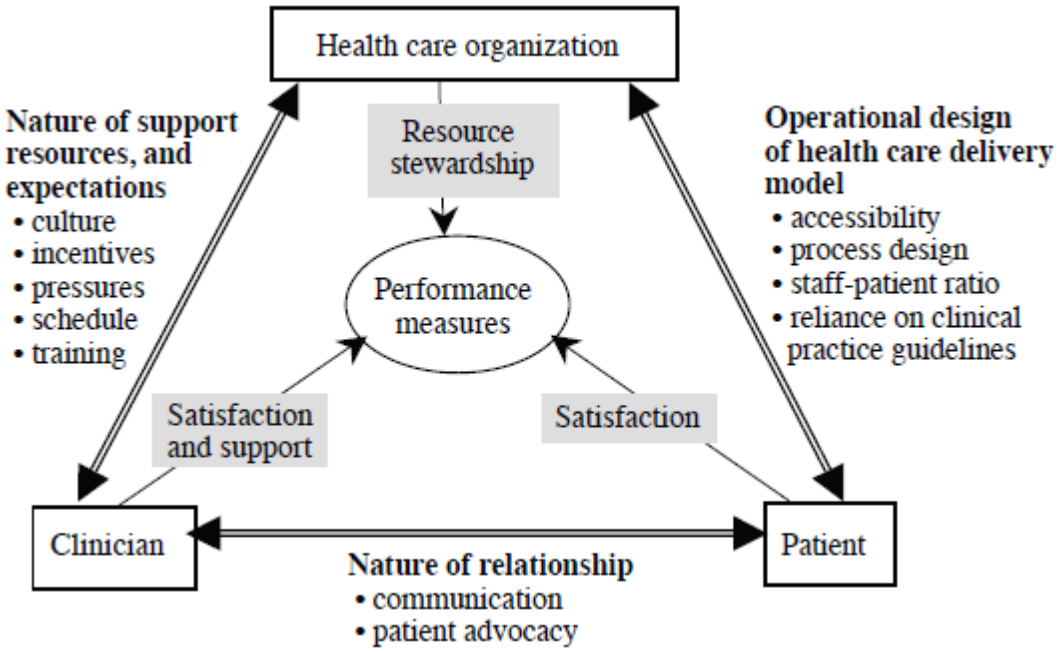
Health care system design needs to be guided by both these parameters in order to achieve successful healthcare practice.

Factors that influence healthcare clinical procedure processes are

- Patient satisfaction
- Perception of service delivery
- Nature of interactions with staff
- Nature of communication with clinician
- Personalized care
- Accessibility
- Responsiveness/timeliness of care

And those influencing patient outcomes are

- Health outcome
- Clinical performance measures



Health care Delivery Triad

While health care influences factors in all three directions, it is to be noted that controlling organizational and operational efficiency by downsizing on staff or expenditure is not effective in quality improvement, but improvement in patient satisfaction can help directly in marketing, operational and financial benefits. Hence, setting a correct form of patient -clinician relationship is necessary for better quality. Of the three relationships, the patient-clinical relationship is itself mutually beneficial as good patient outcomes can lead to it being translating into better work satisfaction to a clinician, similar is granting autonomy in decision making regarding technical detail to a surgeon or doctor.

Finally, while this model is sufficient enough for almost all common health care settings it is necessary to identify new models to define changing perspectives in health care provision.

VI MANAGEMENT OF HEALTH DISPARITY

Health Inequalities and Health Equity are terms used interchangeably in health policy. While the former refers to "A health disparity/inequality is a particular type of difference in health (or in the most important influences on health that could potentially be shaped by policies); it is a difference in which disadvantaged social groups—such as the poor, racial/ethnic minorities, women, or other groups who have persistently experienced social disadvantage or discrimination—systematically experience worse health or greater health risks than more advantaged social groups." – hence health inequalities are those differences that are shaped by differences either in social structure that results in certain groups to be privileged in terms of access to, Quality, appropriateness etc of health care obtained or may be so directly by health policies that are shaped to favour certain groups more than others.

Up-to the late decades of the 20th century, there seemed to be more emphasis on the health inequalities within the social groups in a country and less on those between different gender groups or ethnic groups; this began to change towards the mid-90s when health inequalities between countries with different per-capita incomes began to be compared.

- Often it is seen that health comparison is done between disadvantaged groups with average levels of health in society however, this presents a skewed picture owing to the predominance of these groups and a shift of average to the disadvantaged side.
- The most common measure used to compare groups are – Rate ratio, Rate difference, Population attributable risk relative indices of inequality, and concentration curve and index.
- Studies also state that the hitherto practice of comparing groups with a similar socio-economic background is founded on unscientific evidence and is misleading. It is sought to be replaced by comparing ungrouped individuals using economic factors such as the Gini-Coefficient (to measure economic inequality; based on income).
- The "index of dissimilarity" (ID) has been proposed by some authors (86) to measure the magnitude of disparities across diverse kinds of groups, including racial/ethnic, socioeconomic and other groups. The ID for a given health indicator sums differences between rates in each subgroup and the overall population rate, expressing the total as a percentage of the overall population rate.

To sum up it can be stated that – "health disparities are systematic, potentially avoidable differences in health—or in the major socially determined influences on health—between groups of people who have different relative positions in social hierarchies according to wealth, power, or prestige".

RELATIONSHIP BETWEEN HEALTH LITERACY AND PHYSICAL HEALTH

- "capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions."

Some of the tests used to measure health literacy are –

1. Rapid Estimate of Adult Literacy in Medicine – tests the ability of a person to spell a group of health-related words
2. Test of Functional Health Literacy in Adults (TOFHLA) [reading and numerical tests]– requires patients to fill gaps in health-related passages and perform numerical tasks that are done in health management.
3. Newest Vital Sign (NVS) – asked to answer questions on a label on an ice cream passage regarding nutrition.

CONCLUSION

The above list of modules and discussions can be summarised as

- Health care systems around the world vary depending upon the society that has developed over centuries and health care problems vary amongst individuals. While health care technology has improved to a point where the genetic makeup of individuals can be assessed for identifying their genetic dispositions to certain diseases, the same cannot be said about the adoption of different managerial practices to achieve higher patient satisfaction, quality of care and cost efficiency. Examples can be cited from both health care organizations (The US health care system that loses billions of dollars to unfair health practices, fraud and inefficiency) as well as hospital institutions.
- It is imperative to adopt parallel procedures both from other organizational structures apart from health care institutions if they benefit the capacity of the same. Such is the example HRO (**High Reliability Organizations**) provides us.
- Similarly, is **Positive Deviance** that refers to adoption of sustainable health care practices from within the community itself. Such cost-effective models increase the trust of backward communities in concurrent health developments and organizations.