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Future of healthcare in India: lessons from Scandinavia

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ABSTRACT

Introduction: - this study aims to explore the possibilities in improvement of the existing healthcare system of India by learning from a Scandinavian country - Denmark. Methods: - we used the WHO's framework for assessing performance of health systems. Results: - We discussed under the heads of financing, provision, resource generation (human, physical and knowledge) and stewardship. We compared and contrasted Indian and Danish circumstances and found similarities and differences.Conclusions: - we opine that since Danish health care system is acknowledged to provide good "value for money", the opportunity of learning from it is great. Naturally, suitable changes need to be made for Indian context and given the size of India these policy changes will have massive ramifications.
Keywords: Health systems, Health policy, Primary Health Care, Health system reform, Universal healthcare, India, Scandinavia, Denmark.

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Introduction:

is recognition in the national leadership that a massive reform in healthcare system is needed to keep pace with its future global ambitions.[1] Since there is an overall agreement on the need for a much needed reform, this article explores the way forward by learning from the experience of a country where the health system is acknowledged to be better functioning and could serve as an endpoint of India. This led to a choice from an OECD country and of the Scandinavian countries we chose Denmark as it has consistently scored the highest in various quality of life outcomes including health.

Although it should be acknowledged at the outset that there are major differences between the countries chosen for comparison (and are discussed later) yet the attempt here is to draw lessons from an ideal health system by comparing and contrasting using standardised frameworks.

About Denmark and India

Denmark, a small socially progressive country in Western Europe is among the most developed countries of the world with per capita income levels of $38,900 and a GINI index of 24.7 signifying less income disparities. The population is 5.3 million and with a gradual increase in elderly population. The overall population is growing due to birth rate and net migration.[2]

The health profile of Denmark resembles any other developed country with high life expectancy, low infant mortality and non-communicable diseases accounting for 80% of all causes of deaths. Problems related to obesity, smoking and drinking are high.[3]

It is a welfare state with universal coverage of health services. Access to health services is free for all citizens and some form of co-payment is needed for some services. The health services are funded by county and municipal taxation. *Primary care* is provided by locally practicing GPs who are paid for by capitation and fee for service basis. Their number and location is controlled by counties. *Secondary care* is provided in hospitals which are owned and run by counties. A principle of "gatekeeping" is used to ensure the proper referral of patients. There are very few private hospitals also. [4, 5]

Located in south Asia, India is the second largest country of the world in terms of population. It is a Low and Middle Income developing country with per capita income levels of $1070 and a GINI index of 36.8 which signifying income disparities. The population is more

than 1 billion and is projected to overtake China and become the largest in the world.[2, 6]

The health profile of the country is a mirror of its inequities. There is a "double whammy" of both communicable and non-communicable or life style diseases affecting the population. There is an extremely high rate of child malnutrition, infant mortality and the life expectancy is low.[7, 8]

The health services are a mixture of public and private health care. The public health services include a system of Sub centres, PHCs (Primary Health Centre), CHCs (Community Health Centres), District hospitals and tertiary medical college hospitals. These may be absolutely free or may involve a small payment for medicines, surgical procedures or even consultations. The private health care provision varies considerably from the ubiquitous single practitioner facility, "nursing homes" to the multi-speciality hospitals. These are almost always for profit and require payment. There is a considerable heterogeneity of providers with the government recognising alternative systems of medicines like *Ayurveda, Siddha, Unani* and Homeopathy. There is also a large proportion of population availing the services of unlicensed medical providers (commonly called *jholachhap* and Quacks) and over the counter drugs on advice of the pharmacist / chemist. The private health providers are not regulated by the government and there is no "gatekeeping".[9-11]

Selected shortcomings of healthcare delivery in India are:

Inverse care: People with the most means consume the most care, whereas those with the least means and greatest health problems consume the least. Public spending on health services most often benefits the rich more than the poor.

Impoverishing care: Payment for care is largely out-of-pocket at the point of service; people are confronted with catastrophic expenses and millions of people annually fall into poverty because they have to pay for health care.

Fragmented and fragmenting care: The excessive specialization of health-care providers and the narrow focus of many disease control programmes (polio, TB, RCH) discourage a holistic approach to the individuals and the families.

Unsafe care: Poor system design that is unable to ensure safety and hygiene standards leads to high rates of nosocomial infections, along with iatrogenic errors are an underestimated cause of death and ill-health.

Misdirected care: Resource allocation is more for curative services neglecting the potential of primary prevention and health.

Health services in India have been conceptualised on the basis of a British pre-independence Bhore Committee report of 1946. It laid emphasis on integration of curative and preventive medicine at all levels and made comprehensive recommendations for remodelling of health services. It envisaged a network of primary health centres at the village level. Suitable modifications have been made since then in line with current trends but the system largely is modelled on primary health care approach of WHO.[12]

Primary Health care approach was accepted by member countries of WHO as the key to achieving the goal of health for all in 1978 in Almaty, Kazakhstan. It included elements of health education, food and nutrition, safe water and sanitation, maternal and child health, immunisation, locally endemic diseases, common diseases and injuries and essential Drugs. These would be achieved on the principles of equitable distribution, intersectoral coordination, community participation and appropriate technology.

After so many years it has not been effective because the plan to run the health sector on the basis of centralised planning was unsuccessful. The reason, primarily being, an absence of due recognition to health in terms of funding. This led to a rise of multitude of different providers, formal and informal, public and private. As public resources stagnated and bureaucratic mechanisms failed, *laissez-faire* has become the default approach to management of the health sector.[13]

Some reforms proposed in its (primary health care) format include universal coverage reforms, service delivery reforms, public policy reforms and leadership reforms to make it more in line with today's realities and demands.

Problem formulation

In view of the shortcomings of healthcare delivery in India there is an urgent need for change in the existing healthcare system. The suggested strategies which can best overcome these shortcomings are a matter of debate and range from market solutions to a fully nationalised public healthcare system. This paper attempts to compare the Danish health system to India and the possibility of implementing a Denmark like system in India.

The need for a good health system arises from the strong causal association running from health to aggregate economic performance and from wealth to health. Higher incomes permit individuals and societies to afford better nutrition and access to better health care; better health increases productivity, and enhances the ability to earn more income i.e. healthier workers

are likely to be more productive; and healthier children more likely to exhibit better cognitive skills, and become healthier adults. In addition, there are effects that work through the population age structure. Reduced infant mortality rates are strongly correlated with a subsequent lowering of fertility. With the recent economic advances being made by the country, a number of researchers and policymakers are arguing the urgent need to reform the existing health system.[14]

There was a raging debate going on recently (in the United States and also the world) about the different healthcare systems and their benefits.[15] The author opines that a publicly funded universal healthcare system (like Denmark) may be the best choice for India along with a small component of insurance payments for self-segregated individuals - those who can afford better quality services and are willing to pay for them. This should be available in a shadow of strict regulation of insurance companies. The idea is to ensure that the public sector may not ultimately bear the burden of most risky and expensive treatments (cream skimming). The generally accepted shortcomings of private (for profit) health insurance include adverse selection, cream skimming, moral hazard, defensive medicine and complaints of denial of coverage & reimbursement.[16] At the same time a not for profit social or community health insurance is a welcome move and could be considered as a mechanism of universal health care. Thus, the current practice of providing tax rebates for private insurance policies and similar incentives need to be discontinued.

The major advantage of this single payer system is that one can attend universal coverage of medical services at a lower cost than is possible by many different funding sources. Another big advantage is that there is no risk selection (medical claims cannot be denied under the guise of "pre-existing conditions") and the whole population is covered. However, unlike Denmark, given the contextual limitations of India, a reasonable limit on the amount of money being spent and its health outcomes can be considered. Suitable measures like DALY's (Disability Adjusted Life Years) can be calculated to estimate the costs and outcomes of various health interventions being allowed in the system. Similarly, the use of Systematic reviews in Health Technology Appraisals and Evidence based medicine can lower the costs by finding the best recommendations for interventions based on state of the art clinical and cost effectiveness data.

Some of the disadvantages of single provider systems are related to its monopolistic position. Many economists believe that monopoly causes these systems to become less efficient and this result in either the costs of care becoming higher or the quality of care taking a beating.[17] This can be addressed by encouraging competition among the various constituent units within the system. Another common fear is that of rationing and waiting times which sometime happen in public systems due to lack of accountability and bureaucracy. These can be overcome by having strict quality guidelines about the functioning of the system and proving incentives to the manpower to perform. Waiting times can be dealt with by providing time guarantees for different treatments (like Denmark).

While it seems there is scope for fluctuations in the preceding discussion, there indeed is consensus that health cannot be left open for the market forces. Due to a variety of factors including information asymmetry health is considered (and accepted) as a market failure. The theoretical approaches which consider this otherwise and consider healthcare an employment generation / economic activity have demonstrated considerably higher spendings and far lower outcomes.

It is accepted that a major change in the health care system is difficult due to the phenomenon of Path Dependence – "that what happened at an earlier point in time will affect the possible outcomes of a sequence of events occurring at a later point in time" and also that the costs of switching to another plausible alternative are high.[18] However, big change is possible, and has been observed in many health systems in interplay of "structure and conjuncture".[19] In India, three fourths of all the payment for healthcare is "out of the pocket" and health and health expenses were one of three main causes that lie behind 85% of all cases of impoverishment. One-half to two-thirds of all households falling into poverty mentioned ill-health and health expenses as a contributory cause. Also the health care purchased is often of poor quality, even harmful.[20] Thus, it could safely be argued now that the "conjuncture" is also right to correct the "structure".

Design & methods

As the health system is a part of the broader political system, it is influenced by the existing political system in place. Esping-Anderson has classified welfare states into three broad categories of Liberal, Conservative and Social democratic.[21] Thus, Health systems are also under the influence of these major welfare state typologies. But, it can safely be said that all health systems are pluralistic in terms of financing and organization with tendencies to one method rather than another. Hence, Denmark is more of a Social-democratic system while India can be considered to be somewhat of a Liberal system.

Comparing and analysing various health systems is a tricky business. There are wide variations between different chosen summary measures and also citizens perceptions.[22] However, a brief discussion is attempted below according to the WHO's proposed framework for assessing the performance. The defining goal of which is to help improve the health of the population. The framework involves a discussion of *financing, provision, resource generation (human, physical and knowledge) and stewardship*.[23]

Financing

The eight basic mechanisms are out-of-pocket payments, voluntary insurance rated by income, voluntary insurance rated by risk, compulsory insurance, general taxes, earmarked taxes, donations from nongovernmental organizations and transfers from donor agencies. Denmark finances its health system by taxes and voluntary insurance and in India majority is by out of pocket expenses along with some contribution of general taxes and voluntary insurance.

Public health expenditure in India as a per cent of GDP at its lowest was 0.9 % being the fifth lowest in the world. Total health expenditure (in 2006) was 4.9% and per capita in US$ is 109. There has been a slight improvement recently. Majority of this is spent in paying the salaries of the employees. The expenditure is not uniform across the states and there is considerable variation among different states as some states pay more and some pay less.[3]

Denmark spends 9.5% of its GDP on health which comes out to around 3349 US$ per person. Public expenditure on healthcare was 6.9% of GDP and private expenditure was 1.5% of GDP. [3, 24] This money is collected by these methods:

· *Taxes:* local taxes are levied proportionately on income and property. State tax used to finance healthcare are personal income tax, VAT, energy and excise duties, labour market contribution and corporate income tax.

· *Employer Contribution*: There is no Social Health insurance contribution by employers in Denmark

· *Voluntary Health Insurance*: are group rated and vary according to level of coverage chosen. Maximum age limit is 60 years and pre-existing conditions are excluded.

· *User charges and Co-payment*: generally there are no user charges but some co-payment is applied for physiotherapy, spectacles and dental care. Drugs are also subject to varying levels of co-payment.

Thus on comparison Denmark spends much more on health as compared to India both in terms of expenditure and also per capita. However the public and private proportion of expenditure is different (inverse) in the two countries. This is a reflection of the existing health systems and costs in the two countries which are unlike each other. For India to improve its existing health system, it needs to massively increase its funding towards healthcare. This has been recognised by the government and had committed to increase it to 3 % of GDP (now revised down to 2.5% still well below what other developed countries spend).

Provision

The average life expectancy in Denmark is 78 years and the top five causes of death are ischemic heart disease, cerebrovascular diseases, chronic obstructive pulmonary disease, trachea bronchus & lung cancer and colon and rectal cancers. Other important causes of death are falls, Alzheimer's, breast cancer, Diabetes mellitus and lower respiratory infections.

Morbidity profile in India shows a life expectancy of 62 years with the top five causes of deaths being ischemic heart disease, lower respiratory infections, cerebrovascular disease, perinatal conditions and chronic obstructive pulmonary disease. Other major causes of death include diarrhea, Tuberculosis, HIV/AIDS, road traffic accidents and self inflicted injuries.[25]

Thus a Dane lives on an average 16 years more than an Indian and the causes of deaths in Denmark are chronic and lifestyle diseases while in India it is a mixture of both chronic and infectious diseases. Child mortality (85/1000 live births) and maternal mortality rate (540/100000 live births) is also very high in India. Child malnutrition is also very high with 47 % of under five children are underweight, this is even worse than sub Saharan Africa where the figure is 30 %.[7]

Health services in India, as discussed previously, are public and private along with a large number of "grey" or unlicensed providers. There is also, in some cases, insurance provided by the employer. This could be ESI (Employee State Insurance) for industries and CGHS (Central Government Health Scheme) for government employees. There are also private for profit insurance companies in the market for those who can afford. There are also some newer and novel attempts at community based health insurance like *Chiranjeevi*, RSBY and *Yeshashwini* but they are few and far between.[26]

Isolated diseases and health conditions are also sometimes covered by individual "vertical" government programs. These are Tuberculosis under the RNTCP (Revised National Tuberculosis Control Program), HIV

/ AIDS, Leprosy, Sexually transmitted diseases, Reproductive and Child Health program (RCH) and the current National Rural Health Mission (NRHM). However, the utilization under these programs is variable in different states and varies each year depending on the funding of the program. There is also considerable criticism of these programs because these vertical programs affect the functioning and growth of the existing horizontal health care system which in itself is understaffed and underfunded. These programs are attractive because the results are more easily measureable in the short term.[27, 28]

Strangely, there are also a few hospitals in India which are considered "world class" and a number of "medical tourists" including some from western countries come to them for affordable and personalized high quality treatment. From this we can infer that if the system permits, India is also capable of producing world class facilities. [29]

Most of the health care (including hospitals, health centres) in Denmark is purchased and provided by counties and municipalities. There are also waiting time guarantees. Individuals can choose from two GP options (group 1 – free, group 2 - paid) to reach a specialist. For those in group 1 (almost everyone) need a referral to reach a specialist (Except ENT and Ophthalmologist). While group 2 need to pay a part of their cost to reach a specialist. Different surveys have shown that majority of Danes are satisfied with the condition of their health services.[4, 24]

Thus we see that on one hand the health system in India is disorganised, patchy and underfunded (yet there are also oasis of excellence and high quality care). Stop gap arrangements like vertical health programs are being used in place of a comprehensive long term plan for improvement. This is also apparent in the differences between the morbidity and mortality statistics of the two countries. Denmark on the other hand has a well organised and functioning health system with which the majority of Danes are happy.[4, 5]

Resource generation:
Health systems are not limited to institutions that finance or provide services, but include a diverse group of organizations that produce inputs to those services, particularly human resources, physical resources such as facilities and equipment, and knowledge. This would include universities, educational institutions, research centres and companies producing pharmaceuticals, medical devices and equipment.

There are 229 medical colleges in India admitting 25500 students every year. But there is an extreme shortage of post graduate seats for residency training. Thus a number of students are not able to do a specialisation leading to migration (discussed later). The salary and working conditions are not good and there is no incentive to work in the public health system.[30, 31]

Physician density (doctor to population ratio) is 1 for 1676 persons in India (or 6 physicians for 10,000 population). In comparison, physicians per 10,000 population in Denmark is 36. Thus Denmark has six times more physicians than India. Coupled to that is a maldistribution of physicians in India so the doctor to population ratio in India is skewed. Rural, tribal and hilly areas are more underserved as compared to urban areas; and better performing states have thrice the number of doctors compared to poorly performing ones. As such, India faces a serious shortfall in the number of human resources required for health as compared to global norms in the states where they are most needed. [3, 31]

Almost 60,000 Indian physicians practice in the United States, United Kingdom, Canada, and Australia—a workforce equal to 10 per cent of the physicians in India and the largest émigré physician workforce in the world.[32] In a study published in the bulletin of WHO it was found that more than half (54%) of graduates form the best medical college of India (AIIMS- All India Institute of Medical Sciences) reside outside India.[33] The reasons for migration are diverse and include better salaries, better life style & working conditions and personal safety. This has been recognised by the government of India and the strategies being discussed vary from increasing the quantity of physicians being trained to focussing on the quality and also providing better incentives and working conditions to the physicians.

Similarly there is a shortage of nurses, paramedical and auxiliary workers. There are also no programs for continuing education so that their knowledge and skills can be kept up to date. The government's effort to plug this shortfall is by recruiting semi-skilled and unskilled workers in government programs and resorting to draconian laws and arrests.

The pharmaceutical industries suffer from weak regulatory environment due to a weak drug control infrastructure. Spurious and substandard drugs are easy to find. The pharmaceutical sector also suffers from a different patent regime now. Earlier due to the process patent system it was easier to make low price drugs for the local market. Now the drug prices are expected to rise considerably with this new patent system.[31]

Thus we see that there are bottlenecks in health workforce (physician, nurses, and auxiliary workers) training. The incentives to workforce are few leading to a huge migration. There is a weak regulatory environment for pharmaceuticals. There is a surprising lack of effort towards reform.

Stewardship

It involves the key aspects of setting, implementing and monitoring the rules for the health system. It can be understood to be a broader form of regulation. As discussed previously, the lack of underlying policy and its timely implementation has led to the current situation in India's health system.

Health in India is considered to be a state subject, i.e. the different state governments are responsible for planning and implementing different aspects of health system instead of the central government. This leads to a fragmented policy and considerable variations in its implementation in different regions depending on the whims and fancies of different political parties (left - liberals, right – fascists, centralists) in power in different states at the time.

Another major problem is that those in positions of making decisions (government officials and bureaucrats) about health do not usually have a background in health. A policy of consultation with relevant stakeholders is rarely applied and there is a huge gap in research to policy translation. This is also a reason of considerable resentment among the workforce.

In Denmark although, municipalities have full responsibility for prevention, health promotion and rehabilitation outside of hospitals yet they all function under a broad national consensus and guidance.

The recent findings from NRHM review have demonstrated reasonable success on various indicators. Although the funding had been much lower under this basically rural program in a rapidly urbanising India. This shows that a broad national consensus on health policy can deliver effective results across diverse states.

Results & Conclusion

The WHO has acknowledged that under the Primary Health care framework there has to be a change in the manner how the interventions have been conventionally delivered. The world health report 2008 on Primary Healthcare lists out these differences and suggests measures aimed at aligning specialist-based, fragmented and commercialized health systems with rising social expectations. [13]

While most high income countries finance their healthcare by taxation or insurance, low income countries fund it through out of pocket expenses.[34] As India is undergoing an economic transformation, due to its high growth rate, towards becoming a high income country, it is logical for it to model its health system in line with the future anticipated needs and global trends. The proportion of the pie and the size of the pie both are increasing. Similarly due to a current low tax to GDP ratio, and sharply rising number of workers in the organised sector (easy to tax) there is considerable scope for increased financing in future.

The Danish health care system is acknowledged to provide good "value for money" and reports have indicated that the relationship between overall expenditure levels and service levels is acceptable in comparison to other European countries. [4, 5]

Thus in view of the breakdown of existing health care system in India, current concerns in PHC reforms and Denmark being a good example of a working healthcare system it could be a good example for India to model its future healthcare system. This massive overhaul would involve a detailed and careful centralized planning and its subsequent decentralized implementation. The plan would attempt to plug the shortcomings by:

· Financing: a common tax for healthcare and increased budgetary allocation towards health

· Provision: network of high quality facilities and an option of inclusion of existing private facilities in public system with various reimbursement mechanisms.

· Resources: incentives to human resources by increasing salaries and working conditions and removing administrative bottlenecks.

· Stewardship: unified central long term research based planning and guidance for the state level implementation.

Some of the possible barriers which are foreseen could be:

· Economic: Due to the massive amount of funds needed for this sea change in the health system a very strong and continued financial commitment is required. Health has been neglected in India for several decades. Another major economic impediment is the endemic systemic corruption present in India. At the current rates this would potentially waste massive resources. Rajiv Gandhi, as Prime Minister of India, once helplessly said that "*out of every rupee spent for development only 17 per cent actually reached the poor*".

· Political: Numerous stakeholders and lobbying groups which are a part of any democratic establishment make it difficult to effect any changes in

the existing scheme of things. This is apparent from the current healthcare "debate" in US. Also there is a strong tendency in India to have a centralized power structure and asking for municipalities to manage healthcare could be difficult as bureaucrats and ministers are not comfortable in sharing "power".

· Logistic: compared to Denmark, India is a huge country. Implementing such a big change would require many years of preparation and implementation.

· Cultural: Welfare system in Denmark is based on a strong belief in cooperation and sharing due to a strong national identity. Denmark is also largely an ethnically homogenous society. India on the other hand is ethnically and linguistically extremely diverse and there are regular conflicts due to these issues. This may prove to be a big hurdle to overcome.

However, the time is right and in view of the recent call to action by Public Health Foundation of India this seems to be the best way forward in light of the existing evidence.[1]

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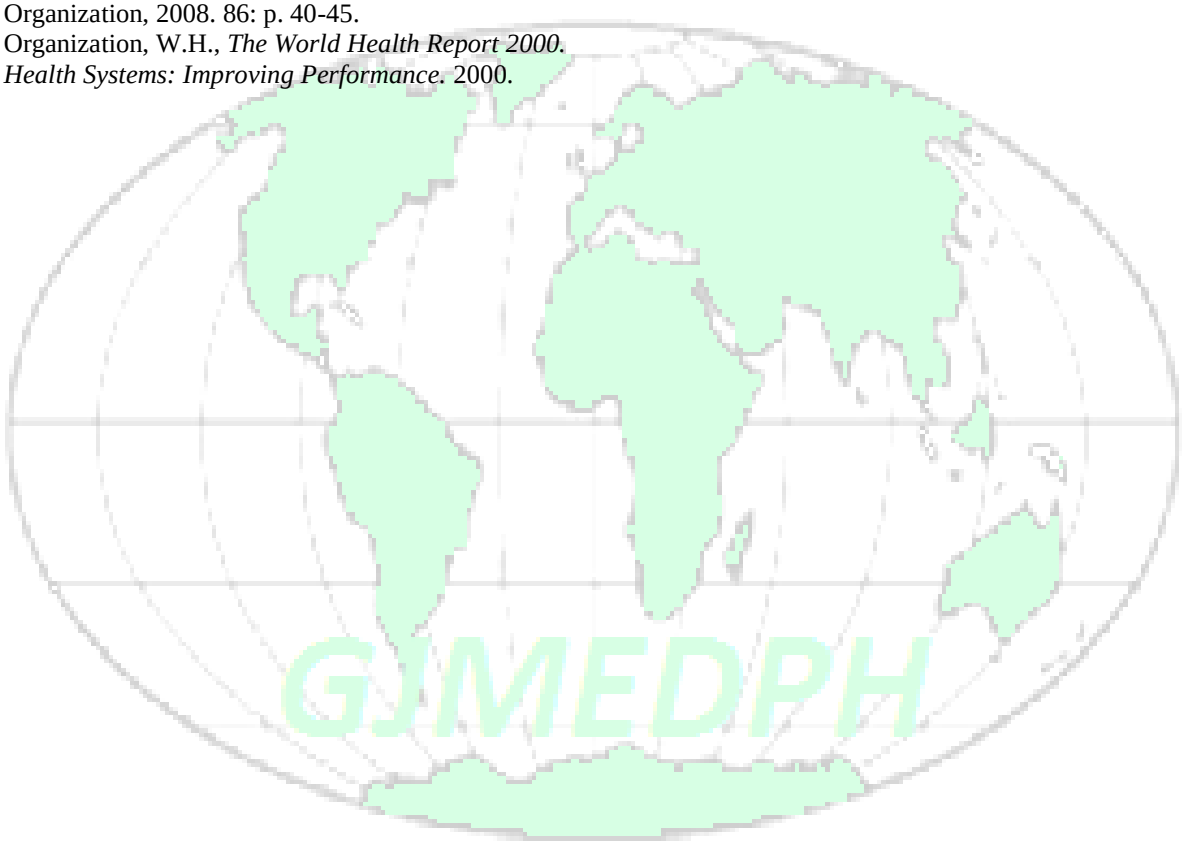

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