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## A step too far? Making health equity interventions in Namibia more sufficient

Anne Low\*<sup>1</sup>, Taati Ithindi<sup>2</sup> and Allan Low<sup>3</sup>

Address: <sup>1</sup>Directorate of Health Improvement, Derwentside Primary Care Trust, Shotley Bridge, England, <sup>2</sup>Windhoek Hospital Complex, Ministry of Health and Social Services, Windhoek, Namibia and <sup>3</sup>Freelance Health Economist, Chopwell, England

Email: Anne Low\* - [alow@btinternet.com](mailto:alow@btinternet.com); Taati Ithindi - [taati@mweb.com.na](mailto:taati@mweb.com.na); Allan Low - [alow@btinternet.com](mailto:alow@btinternet.com)

\* Corresponding author

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### Abstract

**Background:** Equality of health status is the health equity goal being pursued in developed countries and advocated by development agencies such as WHO and The Rockefeller Foundation for developing countries also. Other concepts of fair distribution of health such as equity of access to medical care may not be sufficient to equalise health outcomes but, nevertheless, they may be more practical and effective in advancing health equity in developing countries.

**Methods:** A framework for relating health equity goals to development strategies allowing progressive redistribution of primary health care resources towards the more deprived communities is formulated. The framework is applied to the development of primary health care in post-independence Namibia.

**Results:** In Namibia health equity has been advanced through the progressive application of health equity goals of equal distribution of primary care resources per head, equality of access for equal need and equality of utilisation for equal need. For practical and efficiency reasons it is unlikely that health equity would have been advanced further or more effectively by attempting to implement the goal of equality of health status.

**Conclusion:** The goal of equality of health status may not be appropriate in many developing country situations. A stepwise approach based on progressive redistribution of medical services and resources may be more appropriate. This conclusion challenges the views of health economists who emphasise the need to select a single health equality goal and of development agencies which stress that equality of health status is the most important dimension of health equity.

### Background

Inequalities in health between population groups exist in all countries. Some variations in health outcome are inevitable, such as those that result from age, sex and heredity. However, many inequalities are avoidable. Health inequalities exist largely because people have unequal access to society's resources including education, job security, clean air and water and health care – factors that society

can do something about. Inequalities that are unfair and are avoidable are considered inequities [1].

A number of definitions of health equity have been proposed. The four most prominent in the literature are 'equality of expenditure per capita', 'equality of access', 'distribution according to need' and 'equality of health status'. Economists have argued that these definitions are

mutually exclusive and that society therefore needs to choose between them [2-4]. Together with leading economists [4,5], the international community appears to have chosen 'equality of health status'. For example, the WHO Health Report 2000 [6] uses inequality in individual health status as one of five indicators in its index of national health systems' performance. The Rockefeller sponsored Global Health Enquiry Initiative (GHEI) has been conducted on the basis that the most important dimension of health equity is disparity in health outcome [7]. While economists acknowledge that equality of health status is an ultimate goal, which may not be practical in the here and now, programmes of development agencies do concern the here and now.

It is against the above background that the GHEI report emphasises that:

*Equitable access to health care is not a sufficient condition for achieving health equity.*

In this paper we argue from a practical perspective that in many developing country situations the *sufficiency* issue is likely to be of minor importance compared to issues of practicality, efficiency and focus in tackling health inequities. We suggest that while the goal of equality of health status may lead to the conclusion that equitable access to health care is an insufficient condition for health equity, it does not mean that equitable access and utilisation goals may not be more relevant and lead to more efficient interventions for tackling health inequalities.

The paper is arranged as follows. In the first section we advance the idea that from a practical development perspective the need to choose between equity goals is not critical. We suggest instead that it may be more helpful to view different equity goals as a sequence within a common direction of travel that implies increasing sufficiency in addressing health equity and an increasing level of discrimination in the allocation of resources towards the

most deprived. In the second section we illustrate this idea by drawing from the experience of health equity focused interventions undertaken in a developing country situation: that of Namibia.

Finally we discuss the implications for developing countries of moving from a health development focus on service provision to one based on addressing disparities in health status. We suggest that there are grounds for being cautious about focusing on the last step in our sequence of health equity goals and that for many developing countries it may represent a step too far.

**Methods: The health equity goals continuum**

The health equity goals listed in column 1 of Table 1 are generally posited as being mutually exclusive and there are differences of opinion as to which is to be preferred [2,4]. Some argue that goal 5 should be viewed as being fundamental, with the others as instrumental in meeting the fundamental goal (A Williams, personal communication, February 2002). The problem with stressing the ultimate or fundamental goal is that it may distract policy makers and planners from what they can and should do now to address the instrumental goals. In contrast, we suggest that it may be more operationally useful in a development context if alternative equity goals are recognised as representing a continuum, which implies increasing allocation of health care resources towards the most disadvantaged groups in society. This continuum may be ordered as in table 1 from having no explicit equity goal, through equality in the provision of health care services on the basis of equality of expenditure per capita, through equality of access according to met need (expressed demand), through equality of utilisation according to need and, finally, equality of health status. Each of the first 4 steps may be viewed as being insufficient in some respect. In table 1 we have highlighted the area of insufficiency that the next step in the continuum seeks to address.

**Table 1: Health equity goals, resource allocation and sufficiency**

Health equity goal	Resource allocation examples	Reason for being insufficient
1. no equity goal (private insurance healthcare systems)	pre independence Namibia (private health insurance and limited state provision)	poor access by unemployed, urban, poor
2. equal provision per person	partial decentralisation (devolution of recurrent funding in Namibia)	populations with higher health needs are undersupplied
3. equal access for equal met need	full decentralisation (devolution of recurrent and capital funding in Namibia)	less mobile, less educated populations use services less
4. equal utilisation for equal need	targeted health promotion (CHW programme in Namibia)	determinants of poor health of socio-economically deprived groups not addressed
5. equality of health status	UK NHS funding allocation based on inequalities of health status	none: GHEI/WHO sufficiency criteria achieved

**Goal 1: no explicit equity objective**

Where there is no specific equity objective for the distribution of health care resources, expenditure will tend to go to where demand is highest and profit margins are greatest. In other words care will go to people and services where there is the most willingness and ability to pay and for whom the marginal cost of delivering care is relatively small.

This implies the goal of maximisation of utility of the population, given the existing distribution of purchasing power and is typical of private health care systems. Pre-independence Namibia had one of the highest wealth inequality ratings in the world, with political power in the hands of the white minority. Consequently, subsidised private health insurance funded much of the operating costs of the service and public expenditure was biased towards the needs of the white population who were more urban, better educated and earned higher incomes than the majority black population. The result was a health system typical of colonial Africa [8–10]: one that was largely curative, hospital-based and urban focused [11].

**Goals 2–4**

These are goals to which many developing countries subscribed, at least before World Bank structural adjustment and privatisation reforms [12,13]. Goals 2–4 focus on access to health care services. Goals 2 and 3 appeal to horizontal equity (allocation of equivalent services for equal need). Goal 4 appeals to vertical equity (allocation of different levels of resources to different levels of need). As will be illustrated below, independence and decentralisation of health services in Namibia have provided the opportunity to shift resource allocations in primary health care to be consistent with goals 2, 3 and 4.

**Goal 5**

Equity goal 5 moves beyond the traditional idea of "access to medical services" as a measure of fair distribution. It has two major implications. The first is the need to be able to measure disparities in health status directly. The second is that non-medical factors influencing health status need to be addressed in addition to the question of access to health services. Equity goal 5 has occupied the attention of researchers and politicians of developed countries such as Sweden, The Netherlands and the UK, where goals 2–4 have been largely achieved.

**Results: The Namibia Experience**

Before independence Windhoek (the capital of Namibia) was segregated along racial lines according to the policy of the apartheid government in South Africa. An area known as Katutura was the black township, and Khomasdal was the area designated for the coloured (mixed race) population. The white population lived in the other parts of the

city. In 1995, urban Windhoek had an estimated population of 181,000 and an annual growth rate of about 5.4%, resulting mainly from migration from the rural areas [14]. This has resulted in the physical expansion of the city to the north and west and the development of informal settlements of shacks, mainly at the periphery of Katutura, to accommodate the migrant population. Such communities have been shown to suffer high levels of poverty and consequent ill-health [15]. A survey of Windhoek residents, undertaken in 1995, provides evidence of the geographical distribution of poverty within the urban area (table 2).

**Goal 1 to Goal 2**

Following independence, the Ministry of Health and Social Services (MOHSS) adopted the primary health care (PHC) approach as the strategy for achieving the goal of Health for All [11]. Reforms included the decentralisation of responsibility for planning local resource allocation. Starting in 1994, thirteen Regional Health Management Teams (RMTs) were created to take over responsibility from four Health Directorates for the planning and management of local PHC services.

In Windhoek, PHC became the responsibility of the Khomas RMT. An early initiative of the Khomas RMT was to conduct a review of PHC services, which included a survey of clinic attendance in the six clinics within the former black and coloured areas, serving five catchment areas shown in Table 3. These catchment areas were devised by allocating census enumeration areas to their nearest clinic [16]. The review found that there were disparities between the pattern of utilisation of the services and the allocation of staff: the poorer localities were relatively underprovided. On the basis of these findings, nursing staff resources were reallocated across the clinics [16]. Table 3 shows how the distribution of the population between these catchment areas compared with the nursing allocation between clinics prior to the review and after it.

The redistribution that occurred was more closely in line with the known population distribution than before. This clearly represented a move from a no equity situation to one of consistency with equality of recurrent expenditure per capita (Goal 1 to Goal 2).

**Goal 2 to Goal 3**

Table 4 shows the number of attendances by residents of a locality. It also shows the correlation between PHC service utilisation rates and the proportion of households with monthly incomes below subsistence level ( $r=0.90$ ,  $p < .05$  on a two tailed test). Because lower income areas were shown to have higher met needs, the Khomas RMT argued that equality of access for equal met need could be approximated by the distribution of attendances at clinics

**Table 2: Socioeconomic characteristics of localities within urban Windhoek**

Indicator	Outer Katutura (north and west)	Inner Katutura	Khomasdal & Windhoek NW	Southern Windhoek
Individuals over 15 & unemployed (%)	33.3	27.3	10.9	3.4
Population over 5 & never attended school (%)	9.8	6.3	1.7	0.8
Households living in informal housing (%)	97.4	7.6	0.6	0.2
Average household size	3.7	5.0	4.1	3.0
Households with monthly average income <Rand 800 (subsistence level) (%)	71.2	32.5	13.7	4.0
Households with monthly average income <Rand 500 (%)	99.5	89.2	59.5	19.1

Source: 1995 sample census [14]

**Table 3: Clinic catchment areas and population versus nursing distributions pre and post review**

Locality (catchment area)	Local clinic/s	Estimated pop- ulation (1995)*	Population distribution %	Nursing distribution pre review %	Nursing distribution post review %	Distribution required for equality of attendance %
Outer north Katutura	Okuryangava	29,073	22	9	19	30
Outer west Katutura	Wanaheda	19,780	15	8	12	17
Outer northwest Katutura	Hakahana	6,737	5	8	10	11
Inner Katutura	Katutura HC & Donkerhoek	53,205	41	60	43	35
Khomasdal & Otjomusie	Khomasdal	20,710	16	8	9	7

\* calculated for each clinic from 1995 sample census data by allocating census enumeration areas to their nearest clinic [16]

by residents of each locality. This distribution is shown in the last column of Table 3.

The redistribution that the Khomas RMT was initially able to make was limited to that approximating population distribution, because of the physical capacity of the clinics. The allocation of the capital budget was decided at central level, representing the partial decentralisation situation in Table 1. Recent investments had reinforced previous inequities by building the biggest extensions in the clinics serving the least poor areas [16]. Khomas RMT is seeking to influence capital development decisions by arguing for more investment in Okuryangava in particular, in order to be able to further reallocate nursing staff according to attendance (equal access for equal met need).

#### Goal 3 to Goal 4

The Khomas RMT recognised that their review of PHC services only looked at the supply side of the equity problem. They recognised that in the more deprived areas there would be a greater unmet need than in the less deprived areas. Reasons for this would include mobility, personal health care knowledge and literacy (services were free for the poor). Thus equality of access for equal met need

would not be the same as equality of utilisation for equal need. In order to achieve equality of utilisation for equal need, therefore, more PHC resources needed to be allocated to the more deprived areas to compensate for or mitigate the lower levels of demand in these areas.

Accordingly, a pilot community health worker (CHW) programme was implemented in one of the most deprived wards in the Okuryangava area. The programme trained community members as local health workers. It provided them with a manual, based on an assessment of health needs, and equipped them with a medical kit. The planning process involved the Khomas RMT as well as the Municipality of Windhoek, Khomas Regional Council, community leaders and donors [17].

The programme was evaluated by an independent consultant and the beneficial impacts of the programme were reported to have included the following:

1. Wider coverage of PHC, with community leaders reporting that the CHWs contribute to three main areas of activity: health education, the promotion of hygiene and growth monitoring [18].

**Table 4: Distribution of poverty and service utilisation**

Local clinic/s	Estimated population (1995)	Households with monthly average income <Rand 800* (%)	Number of attendances	Utilisation rate (Attendances per 1000 population)
Okuryangava	29,073	61.5	2268	78
Wanaheda	19,780	38.8	1251	63
Hakahana	6,737	58.5	793	117
Katutura HC & Donkerhoek	53,205	35.1	2657	50
Khomasdal	20,710	5.7	566	27

\*Subsistence level

**Table 5: Comparative annual costs of formal PHC and the CHW Programme and % incremental costs of targeted CHW programme**

	Number of households	Allowance <sup>1</sup>	Other <sup>2</sup>	Total	Cost Rand/hhld Per annum
			R'000 per annum		
Formal PHC	41682			8000.0	191.9
CHW	10861	194.4	137.6	321.0	29.6
Incremental cost of targeted CHW programme				+ 4%	

Source: [[18] p.28] 1. assumes 100 households per CHW at R150 per month 2. represents other costs, less the salary of staff seconded from the RHMT

2. Improved environmental hygiene: the CHWs said the Municipality responds to their written requests for section cleaning. They also claimed that after their visits there was evidence of cleaner kitchens, toilets and yards [18].

3. The most vulnerable sections of society are provided with a service they would otherwise not have. The clinic staff indicated that some of the problems CHWs reported to them concerned people who were too sick and too poor to access services without assistance. The CHWs therefore organised an ambulance or paid for a taxi from their allowance for those who had no money. They also referred neglected elderly and/or disabled people, and malnourished babies and children to local clinics [18].

4. There was improved knowledge and practice in relation to hygiene and prevention of common diseases. The fact that community members asked to read the manual, indicates their interest in gaining health knowledge when they have easy access to it [18].

The value for money of the CHW programme may be assessed by examining the marginal cost of adding the CHW Programme to the PHC services supplied by the formal public health services in the Region. Table 5 provides a comparison of the cost of formal PHC services supplied

across the Region, with the cost of the CHW programme implemented in the pilot area.

Supplementing formal PHC with a CHW programme adds 16% to the cost per household in the areas where the Programme is implemented. CHW programmes have the potential to enhance health equity at very low marginal cost as they can be targeted to the most disadvantaged groups in a community. For example, with the programme targeted to wards containing the 25% most deprived proportion of the population, only 4% was added to the overall cost of formal PHC. This marginal additional cost had a significant effect on equity of access and utilisation. The CHW programme adopted a vertical equity approach by allocating more resources to those with greatest unmet need. It represents a move from equity goal 3 to equity goal 4.

### Discussion: A step too far?

In relation to primary care services, Namibia has achieved some success in progressing through equity goals 2–4. However the achievement has been partial to date. Work remains to be done in relation to achieving equity goal 3 and equity goal 4 has been addressed on a pilot basis only. Should Namibia now listen to health economists and development agencies, who see disparity in health outcome as the most important dimension of health equity, and

focus its health development agenda on moving from equity goal 4 to 5? We suggest the answer is no for reasons that are to do with practicality, efficiency and focus.

### **Practicality**

The first practical difficulty faced by developing countries in addressing inequality of health status is the lack of good information on health outcomes for different groups of the population. In Namibia, as in many other developing countries [19,20], reliable routine data collection systems do not exist on which to base strategies and targets for reducing inequalities in health status. Even where such information might exist, there is lack of consensus on what should be measured. Some argue that measures of health inequality should focus on the differences between the sickest and healthiest individuals in society [21]. Others argue that the inequalities that matter are the disparities in health between groups defined by socio-economic circumstances [22].

The second practical difficulty is that, even if one can obtain acceptable measures of inequality in health status, there is a dearth of evidence on what interventions will reduce inequalities in health status, once equality of utilisation for equal need is achieved. While research over the last decade has substantially advanced our understanding of the causes of health inequalities, it has also revealed that these are complex, involving material deprivation, psychosocial stress and biological embedding in early life. As Robert Evans [23] says: the evidence continues to strengthen, that patterns of health in a particular society are deeply rooted in the social and economic structure of that society. The same evidence suggests that there is no limited set of well defined policies to change these deep-rooted patterns.

### **Efficiency**

While the epidemiological transition is shifting the burden of disease in most countries from communicable to non-communicable conditions, this process is still at an early stage in many developing countries. South Asia, the Middle East and sub-Saharan Africa are still at early stages of the transition [24]. In Eastern and Southern Africa, there is evidence that the AIDS epidemic may have delayed the onset of the epidemiological transition [25]. The WHO [6] argues that reducing communicable diseases is both more cost-effective and globally more equalising than reducing non-communicable diseases. There is, moreover, a strong evidence base for the public health and personal health care interventions needed to reduce communicable diseases. This contrasts with the very limited evidence on the effectiveness of non-health care interventions aimed at reducing the socio-economic causes of inequalities in chronic diseases [26-29].

Moreover, the main causes of health inequalities may also be different in developed compared with developing countries. In OECD countries, where access to personal health care services is universal, inequalities in health status have been shown to be related to income and other socio-economic factors [30,31]. However in developing countries improved health among richer urban populations has been found to be due to access to improved health care knowledge and services, rather than higher incomes [6].

Evidence from OECD countries shows that lower income groups use health services more than the better off [32,33]. For these countries it is not underutilisation of health services that is a major factor in inequalities in health status between high and low income groups. In contrast the evidence suggests that in developing countries the cause of inequalities in health outcomes may well be a reflection of the failure of health care services to reach the poor [34]. Gatkin et al. [35] have shown that while diarrhoea is invariably highly concentrated among poorer children, in most countries oral rehydration therapy (ORT) is only slightly biased towards the poor. In some countries the use of ORT is higher among better off children.

### **Focus**

Leon and Walt [20] point out that in developing countries inequalities in health continue to be seen as principally a matter of inequitable access to health services. They contrast this with the situation in Western Europe, where the issue is viewed in terms of socio-economic determinants of differences in health status. We have suggested that on practicality and efficiency grounds there are good reasons for developing countries to focus their health equity development programmes on improving fairness in the allocation of health care resources. The evidence from Namibia demonstrates how a stepwise development strategy, which does not require the selection of any single equity goal to the exclusion of others, is a valid approach to achieving health equity improvements.

There is, to be sure, a need to understand why inequalities in health status persist even after equality of utilisation for equal need has been achieved. The logical locus for this aetiological research, as well as the application of its findings, is in situations where equality of utilisation for equal need has been achieved. There is a need to keep this new research area in perspective, however, especially in relation to developing country situations.

There is a danger that high profile international research on inequalities in health status, which stresses that equitable access to health care is not a *sufficient* condition for achieving health equity, will divert attention away from

the most obvious areas for intervention in many developing countries. For example, the widely publicised GHEI research on the socio-economic determinants of inequality in health status has been conducted on the premise that the most important dimension of health equity is disparity in health outcomes. In the fickle and non-evidence based world of international development ideology and fashion [36], the effect could well be to shift both government and donor health development funds and attention out of programmes focused on improving the equity of utilisation of health care services into other, as yet unproven, non-health care based programmes in order to meet sufficiency criteria for achieving equality of health status. Such a shift of attention could seriously undermine consolidation of the work being done in countries like Namibia to make personal health care more equitably utilised. If so, that would be a step too far.

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