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Acceptability to general practitioners of national health insurance and capitation as a reimbursement mechanism

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Objective. To determine general practitioners' attitudes to national health insurance (NHI) and to capitation as a mechanism of reimbursement. To explore determinants of these attitudes.

Design. Cross-sectional survey by means of telephone interviews; four focus group discussions.

Setting. Cape Peninsula.

Participants. 174 GPs randomly sampled from a total population of 874.

Main outcome measures. Acceptance of NHI, acceptance of capitation.

Main results. 63,3% approved of NHI. More than 81% approved of NHI if GPs would be able to maintain their independent status, e.g. own premises and working hours; 82,3% said NHI would be a more equitable system of health care, 88% approved of the fact that NHI would make care by GPs more accessible, and 73% said they would have the capacity to treat more patients. However, 61,3% of GPs disapproved of capitation as a form of reimbursement.

Conclusions. Most GPs in the Cape Peninsula were amenable to some form of NHI. However, the proportion of GPs who approved the introduction of NHI varied depending on details of the NHI system such as payment mechanisms, workload, income and effects on professional autonomy. A national survey of medical practitioners is recommended. The implications of GPs' preferences concerning the reimbursement mechanism for the feasibility of implementing a NHI system in South Africa require serious consideration by policy-makers.

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National health insurance (NHI) is one of the most common forms of health care financing worldwide. At last count 87 countries had some form of national or social insurance scheme including many developed countries (much of Europe, Canada, Australia) and a considerable number of middle-income and developing countries, particularly in South America.[1-3] International proponents of NHI include the International Labour Organisation (ILO) and the World Bank.[1,4-6] During the current process of political transition in South Africa debates have arisen about alternative systems of health financing and provision.[7-10] NHI represents one of the few feasible options available which could significantly change the public-private mix in the financing and delivery of health care, and the possibility of an NHI for South Africa has been raised by many, including the African National Congress,[11,12] the Department of Health[13] and academics.[8,14-16] The Minister of Health recently established a Committee of Inquiry into NHI.

An important aspect of health system restructuring that is currently not well understood is whether stakeholders would accept the various systems proposed. Powerful lobby groups, including the medical profession, may influence the acceptability and workability of the various models. In the UK in the 1940s, considerable resistance was expressed by doctors and the British Medical Association to the formation of the National Health Service. Many of the recommendations of the Gluckman Commission, which proposed a National Health Service for South Africa, were opposed by professional organisations. Changes in the structure of health systems in Zimbabwe and Mocambique saw very high rates of emigration of doctors and medical graduates.

NHI systems vary considerably between countries, and when an NHI system is designed, there are many issues that need to be considered, such as membership, contributions, benefit packages, administration and mechanisms of cost-containment.[1,4] Reimbursement mechanisms are critical determinants of cost-containment, sustainability, equity and acceptability of NHI. Both fee-for-service and capitation have been used in many countries, the latter in Holland, Italy and the UK[17,18] and in managed care systems. While all systems of reimbursement have particular advantages and disadvantages, capitation provides an incentive to health workers to provide care for more patients but to restrict the cost of managing each patient. These are important considerations in South Africa where 52 - 59% of doctors[8,19] and 61% of total health care expenditure[20] are in the private sector, but only 22,8% of the population are covered by some form of medical scheme, medical insurance policy or employer-provided health service.[20]

This study attempts to aid the overall assessment of the feasibility of NHI by describing doctors' attitudes to it and to capitation as a system of remuneration; it also explores determinants of these attitudes.

Methodology

The study population consisted of all general practitioners (GPs) in private practice in the Cape Peninsula during the study period (January - March 1994). A combination of quantitative and qualitative methods (triangulation) was used to improve the validity of the study.

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The quantitative method involved a cross-sectional survey by means of telephone interviews. A sampling frame, consisting of 874 GPs, was compiled by combining a database from a private pharmaceutical company with the medical section of the Cape Town telephone directory. Sample size calculations (Epi Info[21]) yielded a desirable sample size of 130. Systematic random sampling was used and yielded a sample of 174 GPs. The questionnaire was developed on the basis of various behavioural models[22-24] that have been used to predict and explain behaviour and attitudes, a literature review of similar international studies[25-28] and the findings of the qualitative methodology. A pilot study was conducted.

The qualitative method entailed four focus group interviews (FGIs).[29,30] The groups chosen were an Independent Practitioners' Association in the northern suburbs, a group sympathetic to the African National Congress, and two subgroups of the Academy of Family Practice. Each group consisted of approximately 10 GPs from diverse areas of the Cape Peninsula. Interviews were tape-recorded and transcribed.

NHI was defined as a system of large-scale health financing based on insurance principles, but covering far larger groups of people than private medical schemes. This is achieved by making membership compulsory and contributions income-related (usually proportional to income and deducted from the payroll), and by not using risk-rating. Those covered are entitled to a defined package of benefits. In the study the terms NHI and social health insurance were used interchangeably, but it was made clear that a range of coverage options was possible.

Several additional measures were utilised to improve validity. Every GP to be interviewed was sent an introductory article on NHI,[31] specially compiled for this study, because it emerged during the FGIs that GPs' understanding of the concept was incomplete. Several GP stakeholder groups were consulted in the course of the study. The value-laden nature of many terms required careful use of the terminology and the maintenance of a non-judgemental approach.

Informed consent was obtained from each respondent and confidentiality was maintained. Statistical analysis was done by means of SAS version 6. Multiple logistic regression was used to deal with the issue of confounding. Forward, backward and stepwise selection options were used, and the best-fitting model chosen.

Results

Of the sample, 22 were no longer in practice; 126 of the remaining GPs consented, giving a response rate of 82,9%.

Characteristics of GPs

Eighty-three per cent of the sample were men and 17% women. The median age was 42,5 years (range 26 - 82 years). The universities from which they had graduated included Cape Town (50,8%), Stellenbosch (23%), Witwatersrand (6,3%) and Natal (4%).

The median number of patients seen per GP per day was 25 (range 2 - 70). The median coverage of patients by medical schemes was 80% (range 1 - 100%). The majority of GPs charged Representative Association of Medical Schemes (RAMS) Scale of Benefits rates (88,2%), with only 9,2% charging higher and 2,5% lower. Many (47,2%) had at some stage worked as a panel doctor for a sick fund or medical benefit scheme.

Attitudes to NHI

When asked how they would feel about the introduction of a system of NHI in South Africa, 63,4% (95% confidence interval 54,9 - 71,9%) said they approved or strongly approved, 14,6% disapproved or strongly disapproved, and 22% were uncertain. Of those who disapproved or were uncertain, the majority said they would be in favour of NHI under certain conditions. The proportion of these that would be in favour of NHI if any person who wished to could take out additional private top-up insurance was 79,2%, if GPs were to maintain their independent status, e.g. own premises and working hours, the proportion in favour was 81,2%, and if payment was by fee-for-service it was 89,6%.

The majority of GPs approved of the basic principles of NHI, namely that contributions be proportional to income (79,4% approved), that membership be compulsory for persons employed in the formal sector (77% approved), that individual risk-rating (i.e. higher-risk persons pay larger premiums) not be used (76% approved), and that there be a standard minimum benefit package (88,8% approved).

Many GPs (49,6%) would prefer an NHI to cover the entire population, whereas 45,6% would prefer an NHI to cover contributors (and their dependants) only. The majority (76,4%) would prefer NHI to be administered through one large scheme whereas 22,6% preferred multiple schemes.

Determinants of support for NHI

GPs were asked, by means of an open-ended question, the reasons for their opinion on NHI. Their responses are shown in Table I. They were then asked a series of closed questions about NHI. In response to these, GPs overwhelmingly (82,3%) said that NHI would lead to a more equitable system of health care in South Africa. The great majority (88,1%) approved of the likelihood that NHI would result in more patients being able to consult GPs, and 73% said that they had the capacity to treat more patients; 51,2% said that NHI was compatible with free-enterprise principles, while 32,5% believed it was not compatible. GPs were less certain about the effect NHI would have on their income, with 21,3% believing it would increase and 18% that it would decrease (the remainder were uncertain or gave other responses). They were also uncertain about the effect of NHI on doctors' control over medical and professional decisions, with 33,1% believing that this would decrease and 17,7% that it would increase.

Various beliefs were significantly associated with approval of NHI on bivariate analysis, and these are shown in Table II. GPs who had read the article sent to them did not differ from those who had not in respect of their approval of NHI. After multivariate analysis (multiple logistic regression) the only variables that remained significant determinants of approval of NHI were the beliefs that it would lead to a more equitable system of health care (odds ratio (OR) = 11,2), and that it is compatible with free-enterprise principles (OR = 12).

Table I. Reasons given by 109 GPs for their opinion on NHI (%)

Reasons for approval of NHI		
More equitable and accessible	45,9	
Current medical scheme system not viable	4,6	
Patient base will increase	2,8	
Support cross-subsidisation	2,8	
Relieve public health system and state hospitals	2,8	
Total		58,9
Reasons for disapproval of NHI		
NHI may not be viable for South Africa	3,7	
System will be open to abuse	3,7	
Opposed to cross-subsidisation	2,8	
Quality of care will decrease	2,8	
Prefer private fee-for-service	2,8	
Decreased choice of patient	2,8	
Concerns about physician autonomy (independence, choice)	2,8	
Total		21,4
Reasons for uncertainty about NHI		
Depends on how it works including reimbursement mechanism, fee, administration, benefit package	11,9	
Doesn't understand NHI well enough	8,3	
Total		20,2

Table II. Beliefs associated with support for NHI

Beliefs about NHI	In favour of NHI (%)	χ^2	*P*-value
More equitable system of health care			
Yes (*N* = 81)	90,1	34,6	< 0,001
No (*N* = 9)	11,1		
Compatible with free enterprise			
Yes (*N* = 51)	94,1	21,9	< 0,001
No (*N* = 27)	48,1		
Membership compulsory			
Approve (*N* = 74)	87,8	9,2	0,002
Disapprove (*N* = 22)	59,1		
Contributions proportional to income			
Approve (*N* = 73)	87,7	5,9	0,015
Disapprove (*N* = 16)	62,5		
Control over professional decisions			
Increase (*N* = 18)	94,4	7,9	0,005
Decrease (*N* = 27)	55,6		
GPs' income			
Increase (*N* = 23)	91,3	4,8	0,023
Decrease (*N* = 16)	62,5		
University attended			
UCT (*N* = 46)	87	6,7	0,01
Stellenbosch (*N* = 22)	59,1		
Served as panel doctor			
Yes (*N* = 47)	89,4	4,2	0,04
No (*N* = 48)	72,9		

The table should be read as follows: Of those who said that NHI would lead to a more equitable system of health care, 90,1% approved of NHI whereas of those who disagreed with the statement, 11,1% approved of NHI. This difference is statistically significant. Data in this table exclude non-responders and those who were uncertain on either question in the bivariate analysis.

GPs were asked if there were any conditions that would be essential for their supporting the introduction of NHI. Their responses are shown in Table III.

Table III. Conditions given by 101 GPs for support of NHI (%)

GP must retain autonomy	24,8
Fee-for-service reimbursement	15,8
Reimbursement must be adequate	14,9
Patients must retain choice including choice of GP	11,9
Mechanisms to stop abuse of the system by patients and doctors	7,9
Private practice and private top-up insurance should be allowed	7,9
Quality of care should not drop	5,9
Efficient administration	5,0
There should be peer review and auditing	4,0
All doctors should be allowed to see NHI patients	2,0

Attitudes to capitation as a mechanism of reimbursement

The majority (61,3%) of GPs disapproved of capitation as a method of reimbursement, with only 16,9% approving.

Of those who disapproved of capitation or were uncertain, a proportion would accept capitation under certain conditions, i.e. if total income were the same as is currently received, 27% would accept capitation (44,8% would not). Under some kind of private managed care option, 43,3% would accept capitation (41,3% would not). However, 71,8% would accept payment by capitation from NHI if they could continue to receive payments on a fee-for-service basis from patients with private insurance or medical scheme cover.

GPs' beliefs about capitation are shown in Table IV. On hypothesis testing, using the χ^2-test, approval of capitation was statistically significantly associated with each of the first six beliefs listed in Table IV ($P < 0,05$). More detailed bivariate and multivariate analyses of the data on GPs' attitudes to capitation are available from the authors.

Table IV. GPs' beliefs about capitation as a reimbursement mechanism (%)*

Belief about capitation	Increase	Decrease
Quality of care	4,8	71,0
Incentive to work hard	12,1	73,4
Continuity of care	13,0	52,0
Clinical independence	6,5	49,2
Unnecessary minor ailments	85,6	2,4
Personal freedom	3,2	68,8
Security of income	72,4	12,2
Total monthly income	7,5	35,0
Financial risks	21,0	54,0
Working hours	38,2	30,5

* The table should be read as follows: 4,8% said capitation would lead to an increase in quality of care, whereas 71% said quality would decrease.

The following themes emerged in the focus group interviews. Most of the GPs were cautiously positive about NHI, seeing it as more equitable and accessible than the current system, and as likely to increase the patient base and thus the role of the independent practitioner. Key issues that emerged were the importance of maintaining professional autonomy, e.g. involvement of physicians in choice of medications, investigations; adequate

remuneration; and quality of care. NHI was seen as a possible alternative to the current medical scheme system, which was perceived as profit-driven and, with over 200 schemes, excessively fragmented, and to managed care systems which were seen to threaten doctors' autonomy. Additional private top-up insurance should remain available for those who wished to use it.

Discussion

This study shows considerable support for the establishment of a NHI from GPs in the Cape Peninsula. If a NHI were established in South Africa, top-up insurance would probably be allowed, and doctors would be likely to maintain their independent status. Approval of NHI was therefore well above the 63,3% level. These results are not necessarily generalisable to the rest of South Africa, given the high density of doctors in the Cape Peninsula area (which is reflected in the relatively low median daily patient number), and that GPs' attitudes to NHI vary according to the university attended. The results may also not be generalisable to specialists, given that NHI in South Africa might not cover private specialists and private hospital care.

Studies in other countries of the attitudes of physicians to NHI and other social issues[2-5,26-28,32,33] have described three broad axes of beliefs which were important determinants of these attitudes, viz. political ideology, economic self-interest and professional autonomy. In this study, most of the beliefs which were significantly associated with GPs' attitudes to NHI can be located within this framework.

Political ideology encompasses physicians' beliefs about issues concerning support of the well-being of the collective, the role of government in financing and administration of health care, competition and welfare. GPs, in this study, perceived NHI to be a more equitable system of health care than the present system, and this emerged as one of the most important predictors of support for NHI. However, at the same time they were more likely to support it if they saw NHI as compatible with free-enterprise principles.

Beliefs about economic self-interest relate to physicians' perceptions of their economic position. According to Normand and Weber, pressure for the introduction of NHI in many countries came from health care professionals' attempts to create higher levels of funding for health, as well as a desire to improve their incomes.[4] In this study those who believed that NHI would increase GPs' incomes were significantly more likely to approve of it, and maintenance of income emerged as an important condition for GPs' support of NHI in both the qualitative and quantitative studies.

Beliefs about professional ideology and autonomy relate to physicians' views of professional control over decisions, independence, power, rights and status. According to Globerman, Canadian physicians supported the introduction of NHI to ensure the hegemony of the profession and reinforce a medical monopoly.[28] In this study maintenance of professional autonomy was the most common condition on which GPs would support NHI; those who saw NHI as likely to increase doctors' control over professional and medical decisions were also more likely to support it.

A recent national study of private GPs also reported that many were opposed to capitation.[34] While some of the concerns expressed about capitation may be valid, such as a potential decrease in quality of care, there are many misconceptions, e.g. beliefs that capitation will reduce clinical independence (autonomy) and continuity of care.

Only a minority of GPs mentioned the benefits of capitation, such as its potential for cost-containment and equity effects. Controlling of costs is a major problem of NHI systems worldwide.[1-4] Supply side strategies for cost-containment are widely used, and Normand and Weber argue that the reimbursement method is singularly important in this regard.[4] Ron *et al.* concur, adding that 'in developing countries where the level of contribution is an overriding consideration if the scheme is to achieve wide coverage, there is a strong case for avoiding fee-for-service reimbursement'.[1] Rejection of capitation would necessitate other mechanisms of cost-containment, and may substantially affect the type of NHI introduced. For example, a multiple schemes approach (similar to the German model) would allow competition between schemes. The introduction of demand measures such as substantial user charges (in Korea cost-sharing constitutes 51% of the fee[35]) would probably selectively deter poor beneficiaries from using care and thus undermine the whole purpose of the insurance scheme. Some authors have suggested that a combination of reimbursement mechanisms may be best with, for example, the major component of payment by means of capitation, and fee-for-service payments for services whose provision should be particularly encouraged, e.g. immunisation and certain other preventive services.

Conclusions and recommendations

The study provides evidence that most GPs in the Cape Peninsula would support the introduction of an NHI. Given the difficulty in generalising these results to the rest of the country, a national study would be worthwhile.

The majority of GPs saw NHI as a more equitable system of health care operating within a free enterprise (social democratic) framework. The involvement of physicians in planning for an NHI (professional autonomy) and recognition of their need for financial security would be consistent with their beliefs.

A significant proportion of GPs are however opposed to capitation as a mechanism of reimbursement. Given the international experience of cost escalation associated with fee-for-service remuneration in NHI systems, further research on cost-containment mechanisms (including the implications of reimbursement methods) will need to be considered if a potential South African NHI is to be a viable and sustainable option.

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