



## COMPULSORY COMMUNITY SERVICE FOR DOCTORS IN SOUTH AFRICA — AN EVALUATION OF THE FIRST YEAR

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On 12 December 1997 the then State President, Mr Nelson Mandela, signed into law the Health Professions Amendment Act, sealing the debates that had raged for some time over compulsory community service (CS) and postgraduate vocational training for medical graduates in South Africa. The first cohort of 26 doctors started their CS in July 1998, followed by a larger cohort of 1 088 in January 1999. This report presents an attempt to evaluate the effects and impact of this scheme at the end of the first year of full operation.

### BACKGROUND

The recruitment and retention of professional health workers in underserved areas is a complex and global issue. In South Africa numerous studies in the past have drawn attention to the issue of the maldistribution of health professionals — in essence, the fewest doctors are found in areas where there is the greatest need.<sup>1,2</sup> Consequently, one of the broad policies outlined in the 1997 White Paper for the Transformation of the Health System in South Africa aims to 'distribute health personnel throughout the country in an equitable manner'.<sup>3</sup> However, in a detailed quantitative analysis of the distribution of health personnel in South Africa, comparing the situation in 1994/95 with 1998, Maken found that there had been 'very little, if any, shift towards the establishment of an equitable distribution of human resources in the South African public health sector'.<sup>4</sup>

The issue has in fact been addressed through a number of strategies. The introduction of compulsory CS for all medical graduates was preceded by a number of interventions aimed at strengthening human resources for peripheral health services.<sup>5</sup> These included the clinic building and upgrading programme, a significant rise in public sector salaries for doctors in 1995, the deployment of 300 Cuban doctors in rural hospitals on a government-to-government contract, as well as the introduction of a rural allowance as an incentive. In addition, the development of academic health service centres, some of

which are situated in rural areas, has aimed to build the capacity of district health services while educating future health workers.<sup>6</sup>

### DOH OBJECTIVES

The aim of the National Department of Health (DOH) in initiating CS has been stated as follows: 'The main objective of Community Service is to ensure improved provision of health services to all the citizens of our country. In the process this also provides our young professionals with an opportunity to develop skills, acquire knowledge, behaviour patterns and critical thinking that will help them in their professional development.'<sup>7</sup>

Although this is the department's main objective, key informants raised specific issues that they hoped this policy would address.<sup>8</sup> These issues included the emigration of qualified doctors, the lack of South African doctors in the public service working in rural or peripheral hospitals, as well as the public/private health sector imbalances. It was declared that CS is 'service and not training', which was clarified to mean that 'community service is different from internship and vocational training in that it is an attempt aimed at redressing the inequalities of the past'. However, the key informants from the DOH also highlighted this scheme as a learning exposure for the newly qualified doctors.<sup>8</sup> They said the objective is for the doctors to gain confidence, polish their skills and be able to deal with the challenges of working in the most needy areas with minimal resources. It was hoped that this exposure would address the fears of working without specialist support in the peripheral institutions, and therefore in future that more doctors would choose to work there.

This study aimed to evaluate the effects and impact of the first year of the CS intervention against these stated objectives.

### STUDY METHODS

The first phase of the study, qualitative and descriptive in design, consisted of semi-structured interviews with key informants in hospitals to which CS doctors had been allocated, as well as focus group discussions of CS doctors themselves. Data were captured in three provinces, namely KwaZulu-Natal, Eastern Cape and Northern Province, during August 1999. These provinces were chosen as they contain the largest proportion of their populations in rural areas, which was the initial focus of the scheme. District, regional and central hospitals were randomly chosen in each province. Hospital managers and senior nurses were interviewed, in addition to the CS doctors themselves and their colleagues, in order to gain as comprehensive a picture of the situation in each hospital as possible. One full day was spent in each of the 10 hospitals visited by the research team, and a total of 60 CS doctors were interviewed. Focus group discussions were tape recorded and

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transcribed, and analysed for major and minor themes by the researcher and assistant. These were then used to develop questions for inclusion in the second phase of the study.

The second phase, a cross-sectional analytical study, utilised an anonymous questionnaire sent to every CS doctor. Questions relating to the outcome and effect of the year were developed from the results of the qualitative phase of the study. The questionnaire was distributed through the provincial CS co-ordinators to hospital CS co-ordinators in November 1999. The respondents completed the questionnaire anonymously, and posted them directly to the researcher once completed. All provincial CS co-ordinators were contacted 2 weeks later by phone and fax, and were requested to follow up on hospitals that had not responded. The results were captured using the Epi-Info 6 programme, and respondents' feedback was analysed relative to the site of placement of the CS doctor, as well as demographic data.

## FINDINGS

Of the 1 182 interns in the country in 1998, 1 126 actually applied for CS — 56 therefore decided to either delay their CS year, go to another country, or not register at all. These 1 126 doctors were distributed among the provinces as shown in Table I. By 1 February 1999, a total of 1 088 CS doctors had reported for duty; 38 applicants had therefore dropped out. Overall, therefore, 92% of all of those who were initially eligible for CS took up posts.

**Table I. Provincial distribution of CS doctors in 1999**

Province	CS doctors, 1999 (N)
Eastern Cape	126
Free State	98
Northern Cape	17
Gauteng	169
Mpumalanga	79
KwaZulu-Natal	241
Northern Province	160
North-West Province	79
Western Cape	119
SA Military Health Services	38
<b>Total</b>	<b>1 126</b>

Of the 1 088 CS doctors who reported for duty in 1999, less than one-quarter (259) were placed in facilities that qualify for the rural allowance, indicating 'inhospitable' rural situations. As shown in Table II, 45% were placed in community health centres or district hospitals, and the rest (55%) were accommodated in regional, tertiary and specialised hospitals.

## Qualitative findings

The analytical framework that arose from analysis of the data gathered in the qualitative part of the study is represented in

**Table II. Distribution of CS doctors by allocation site**

Allocation site	CS doctors (N)	Proportion of CS doctors (%)
Community health centres	22	1.9
District hospitals	479	42.5
Regional hospitals	401	35.6
Tertiary and specialised hospitals	186	16.5
SA military health services	38	3.3

Fig. 1. It appeared that clear guidelines were not formulated to support the policy of compulsory CS before the first large group of post-interns were allocated to their community service posts in January 1999. This has led to some confusion and creative interpretations of what was originally intended by the concept 'community service'. Further to this, the implementation of the scheme devolved to institutional level, where managerial capacity is extremely variable. Some hospital managers and superintendents capitalised on the opportunities afforded by extra medical staff, and went out of their way to accommodate the CS doctors by incorporating them into an existing team. However, in other situations, particularly smaller hospitals and health centres where there is a lack of leadership, the medical services are poorly co-ordinated and the CS doctors found themselves forced to find their own place in the hospital system. Some institutions interpreted CS as meaning that these doctors were to be allocated primarily to community

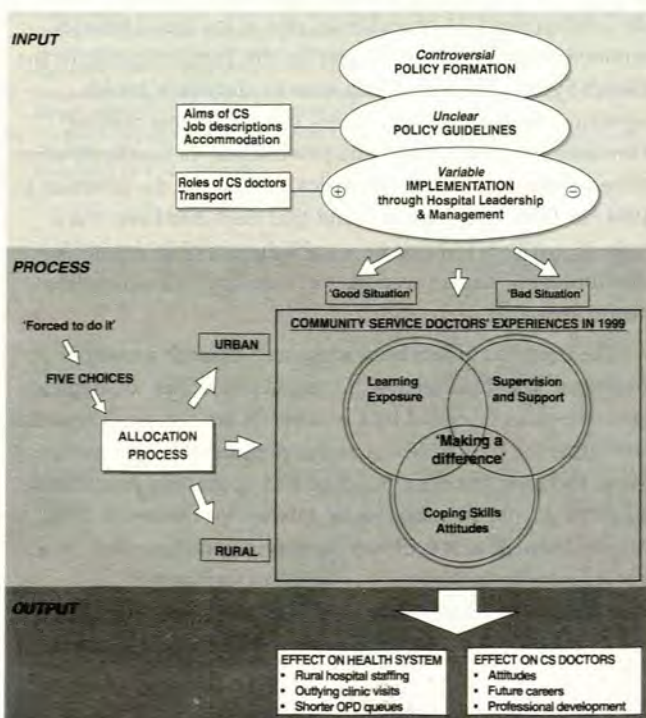


Fig. 1. Diagrammatic representation of the major and minor themes arising from the qualitative phase of the study.





health services, namely outlying clinic visits rather than the hospitals, with surprisingly beneficial results. Some clinics were visited that had never seen a doctor before, and the CS doctors themselves reported feeling that they were able to make a difference in that situation, which made it worthwhile.

From the CS doctors' point of view, the allocation process, which allowed for five options in order of choice, was based on insufficient information to enable informed choices. The allocation procedure was felt to be less than fair by most CS doctors interviewed. Within the circumscribed boundary of the CS year, indicated by the outline of the box in Fig. 1, CS doctors reported their experiences in terms of three major themes: learning, supervision and attitudes. Other issues such as conditions of service and social factors were highly dependent on the situation — they were major problems for some, and not an issue for others. These themes were investigated quantitatively in the second phase of the study.

#### Supervision and support

It was found that the level of supervision available to CS doctors was extremely variable in different situations, ranging from the formal supervision characteristic of teaching hospitals, where first-year medical officers are given very little opportunity for independent decision-making, to isolated rural hospitals with no full-time medical staff apart from the CS doctors themselves. This latter situation pertained in many of the Western Cape and Northern Cape ex-provincial hospitals formerly run by part-time general practitioners. These experienced doctors were not present during most of the working day, coming in only for surgical operations, when they would teach the CS doctors surgical and anaesthetic skills. In some KwaZulu-Natal hospitals, other doctors were hesitant to supervise the CS doctors as they did not feel experienced enough themselves ('*We are not specialists, we just have experience*').

#### Learning exposure

With a few exceptions, most CS doctors reported that during this year they learned to make independent decisions for the first time. Most of this learning was in the area of gaining confidence and insight into themselves as practitioners, as opposed to formal learning of clinical skills from supervisors. Where supervision was available, the fortunate ones learned new skills. '*I have not learned anything new medically, but I have gained an enormous amount of confidence.*'

The attitude of a number of CS doctors became one of 'we are here to serve but not to learn'. This has meant that they have missed the learning opportunities presented to them by their clinical experiences (in any context) as a result of lack of guiding supervision by more experienced clinicians. '*I am not sure of some things and there is no-one to help me learn from these experiences.*' One CS doctor, alone in an Eastern Cape hospital with eight Cuban colleagues, chose to make the most of the

year's experience: '*This is a life experience which I'm not in a hurry to repeat. But at least I've learnt how to do a caesar — in Spanish!*'

#### Coping skills and attitudes

The realisation by many CS doctors that they are actually making a difference in their situations, is a huge motivation to them. '*Even the way that patients greet you [when visiting a clinic] makes you feel that it is worthwhile.*' The development of self confidence was a critical factor in maintaining a positive attitude to the year. In the context of taking progressively more responsibility for clinical decisions, often alone, CS doctors run the risk of emotional stress when things go wrong and they feel guilty. Here again, their internships prepared many of them for the situation: '*Our internships prepared us for this — we were hardened emotionally, and just learned how to cope.*'

On the other hand, a minority of CS doctors experienced insurmountable difficulties in isolated circumstances, and have felt demoralised by the situation. Despite their initial enthusiasm and attempts to introduce positive changes, they have been drained by the experience and now feel frustrated and powerless to make an impact on their situation. '*We have run out of ways of handling the frustrations involved in working out here.*'

#### Outputs and effects of CS system

In terms of the output of the scheme, the district hospitals felt the presence of the CS doctors more than the larger hospitals; in the smaller hospitals the CS doctors were more needed and appreciated by the staff and community. This was not the case with the larger hospitals where sometimes the hospital staff did not even know there were CS doctors, assuming they were just new doctors. The effect of the whole scheme on the health system was seen in better staffing levels in many rural hospitals, more frequent visits to outlying clinics and shorter outpatient queues in some instances. In terms of communication, those CS doctors who could speak local languages brought an additional bonus to their patients, and to the nurses who did not need to interpret. The main effects of the scheme on the CS doctors themselves were identified in terms of their attitudes, their professional development and their choice of future career. These aspects were explored more thoroughly by means of the questionnaire in the quantitative phase of the study.

#### Quantitative findings

A total of 292 questionnaires were returned out of a possible 1 088, giving a 26.8% response rate. Most returns came from KwaZulu-Natal (35%), Mpumalanga (14%) and the North-West Province (12%), and the balance of 39% from the other six provinces. The profile of respondents closely corresponded with the profile of the total CS doctor population in terms of gender, rural versus urban location (as indicated by the rural allowance), level of hospital and ranking of their choice of hospital allocation (Fig. 2).



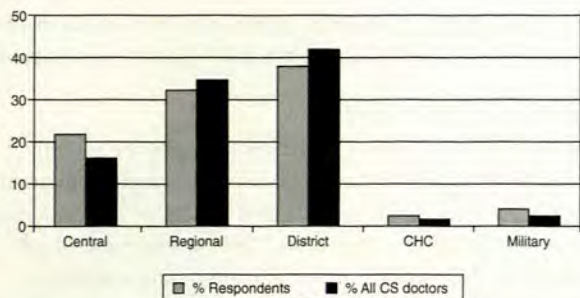


Fig. 2. Profile of questionnaire respondents by hospital allocation site.

Across the board, the majority of respondents felt that they had been well orientated (59%), that the year had been worthwhile (65%), that they had made a difference (70%), that they had coped well psychologically (60%), and that they had developed professionally (64%) (Figs 3 and 4). However, a significant minority (23%) felt that the clinical supervision they had received was poor or non-existent. When analysed in terms of location, it was found that those in hospitals with a rural allowance were significantly more negative regarding clinical supervision compared with those in institutions that did not qualify for a rural allowance ( $P < 0.05$ ) (Fig. 5). The majority (55%) reported that their attitudes towards CS had not changed over the course of the year, and that they were generally positive about it. This was not related to the ranking of their choice of allocation site — in other words, those who were allocated to hospitals which were not among their first five choices, were equally positive in reported attitude when

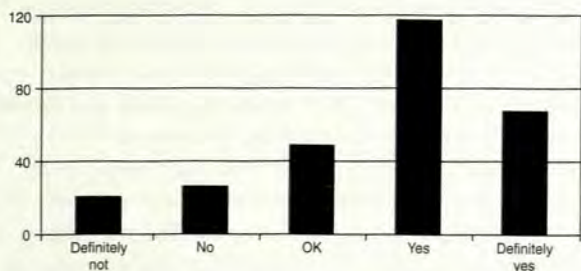


Fig. 3. Frequency distribution of responses to the question: 'Has this year been worthwhile for you?'

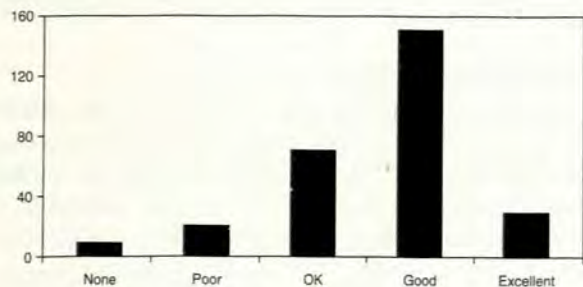


Fig. 4. Frequency distribution of responses to the question: 'Rate your professional development this year.'

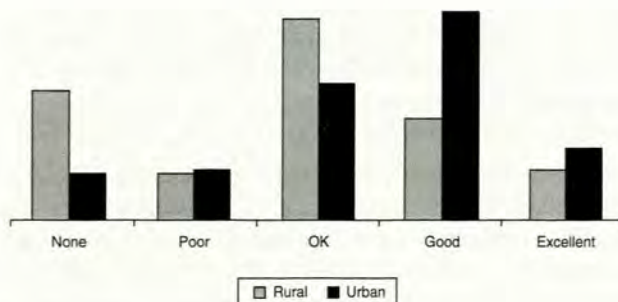


Fig. 5. Frequency distribution of the rating by CS doctors of their clinical supervision, as a proportion of the total according to the allocation site (Note: rural defined by rural allowance).

compared with those who had been placed at the institution of their first choice. A minority of respondents (15%) were able to study towards a postgraduate qualification during the year. Although a majority of respondents felt that CS had not put them at increased risk in terms of their personal safety, more females than males reported that it had. Of the 145 respondents for whom accommodation was supplied by the hospital, most (84) were satisfied with it, but a significant number (30) were not, while the rest were indifferent.

With regard to future career plans, 34% of respondents stated that they intended to work outside South Africa upon completion of CS, 42% intended to remain in the public service, 13% intended to go into private practice, and 11% were undecided (Fig. 6). In summary, one-third of respondents intended to work overseas, and of those remaining in the country, two-thirds planned to work in the public service.

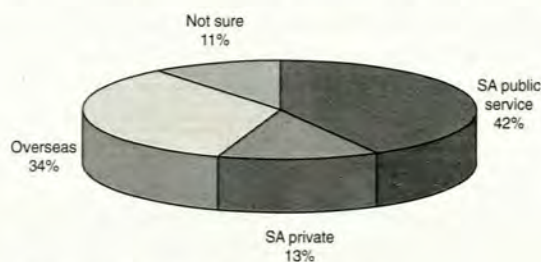


Fig. 6. Intentions of doctors after community service.

## DISCUSSION

This study gives some useful insights into the results and effects of the first year of CS, despite the small sample size. The purposive sampling of the qualitative phase, in which three largely rural provinces were targeted, limits the generalisability of the results to other provinces, and particularly to urban situations. The low response rate to the questionnaire in the second phase undermines the statistical validity of the results, as those who responded are probably more likely to have been positive about their experiences, whereas those CS doctors who





were unhappy about their situations are more likely to have ignored the questionnaire. The results reported therefore probably reflect a generally more positive situation than the reality. However, the fact that the quantitative results confirmed the qualitative findings of the first phase of the study contributes to the validity of the findings through methodological triangulation. Secondly, the close correspondence of the profile of the questionnaire respondents with the total population of CS doctors, indicates that the results of the second phase are likely to approximate the responses of most CS doctors.

### DOH objectives — met or unmet?

The interviews and focus group discussions revealed the individual situations in which CS doctors found themselves. The response of many CS doctors to difficult and trying circumstances in isolated hospitals was surprisingly positive, as they decided to make the most of a challenging situation. Unclear policy guidelines in this first year of implementation, not unexpected in the light of the pressure to start, led to the highly variable situations in which CS doctors found themselves in this first year. Nevertheless, in terms of the original objectives of the DOH the scheme must be analysed in terms of the fact that less than one-quarter of the CS doctors were placed in rural hospitals (as designated by the rural allowance), while 55% were placed in regional, tertiary and specialised hospitals. Therefore the aim 'to distribute health personnel throughout the country in an equitable manner' has only been partially addressed by this policy so far, as it must be qualified by the number of CS doctors actually placed in underserved situations. A further quantitative analysis of the distribution of doctors in the public service, such as that done by Makan in 1998,<sup>4</sup> would need to be repeated to demonstrate any real changes.

The aim of ensuring 'improved provision of health services to all the citizens of our country' has most probably been met, according to the findings of this study. All health facilities in this study that received CS doctors reported positive effects, except for one tertiary hospital which regarded them as a 'nuisance'. The interpretation of the policy as meaning that CS doctors should work primarily in the community health services of some districts, has resulted in many of them visiting outlying clinics regularly, with surprisingly beneficial results for the district health system as well as the CS doctors themselves.

The result of the secondary aim, 'to provide our young professionals with an opportunity to develop skills, acquire knowledge, behaviour patterns and critical thinking that will help them in their professional development', has applied to some but not all of the CS doctors. This related to the level of supervision available, as well as the attitude with which the individual approached the year. The huge variation in the type of experience available in different situations was felt to be

unfair. Those in rural hospitals felt relatively disadvantaged in terms of clinical supervision, opportunities to study and psychological coping. In general, however, the response of CS doctors to the challenges and difficulties in public service hospitals around the country has been encouragingly positive, particularly in terms of professional development, as they have found meaning in 'making a difference' in their situations. A minority found their environment demoralising, and felt resentful at the unfairness of the allocation process which placed them there. A number of issues relating to inadequate hospital management, including accommodation and conditions of service, surfaced in this study, and need to be addressed. Where the level of leadership and management skills are lacking in the health system, the negative effects are far-reaching.

### Post CS — *quo vadis?*

The finding that one-third of the respondents intend to seek employment outside South Africa after completing the year, is disturbing. It would appear that CS has no effect on the career plans of the doctors, but merely delays them by a year. Bearing in mind that those who responded to the questionnaire are likely to be a more responsible sample than those who did not, the actual proportion may be even higher. One of the implicit aims of the DOH in introducing CS was to slow down the exodus of young South African medical graduates to greener pastures overseas, but longer-term studies will be needed to monitor this trend. This brings into question the long-term effects of CS, which may even be exacerbating rather than lessening the tendency of young doctors to leave the country.<sup>9</sup>

### International approaches

Three major approaches have been used internationally to improve the supply of professional manpower in underserved areas: incentives, coercion, and facilitation.<sup>10</sup> It must be noted that there are a number of other strategies that have been shown to be more successful than coercion in recruiting and retaining doctors in areas of need. These include the selection of medical students from rural areas, meaningful community-based experiences during the undergraduate years, support for postgraduate development through distance educational methods, and attractive conditions of service.<sup>11</sup>

Nigeria has had a National Youth Service Corps (NYSC) since 1975, which allocates all graduates from tertiary institutions, including medical schools, to compulsory service for 1 year.<sup>12,13</sup> This is now accepted without question, even with pride, and an NYSC certificate is a prerequisite for employment or postgraduate studies. These 'Youth Corpers' are given no choice as to where they are allocated, and over 90% end up in needy rural areas. Little or no attention is given to supervision, but the placements are monitored and corrective action is taken as required. In terms of contribution to health care, it is commonly regarded as the only way to provide rural areas





with professional expertise. The natural history, as it were, of this kind of intervention can be seen in the Nigerian experience — after a number of years it is accepted as a part of every professional's career, with most graduates making the best of it.

In Pakistan there is no compulsory community service policy, but preference is given to those who have completed 3 years' service in the underserved areas when it comes to training posts for specialisation. The linking of community service in underserved areas to opportunities for postgraduate specialisation is an incentive strategy that bears serious consideration by South African planners.

Canada has integrated educational programmes at a number of the universities that aim to increase students' and residents' participation in rural health care and encourage them to take up practice in rural areas.<sup>14</sup> The main components of successful programmes include reliable funding from the government, adequate infrastructure, and long-term commitments by the university, rural physicians and communities. In the USA the National Health Service Corps (NHSC) provides a means through which medical graduates can repay their study loans by working in a federally-funded underserved area health facility. This programme is not only designed to supply physicians to medically underserved areas, but also to promote the long-term retention of physicians in the areas to which they were initially assigned. However, one study has shown that the retention of NHSC doctors is poor compared with non-NHSC doctors working in comparable rural settings.<sup>15</sup> In other words, once their obligations are completed, NHSC doctors do not stay on as long as those who practise in rural areas entirely of their own volition, a finding that has direct implications for South Africa.

Another strategy used in the USA is the Physician Shortage Area Programme (PSAP) of Jefferson Medical College, which places an emphasis on selecting the students most likely to choose rural practice once qualified, as well as other educational strategies within the curriculum.<sup>16</sup> In a study to determine the impact of this programme, it was found to have had a 'disproportionately large impact on the rural physician workforce and this effect had persisted over time'. This programme is one example of how universities and policy makers can work together towards making an impact on the rural physician workforce, using educational approaches to prepare and motivate graduates to choose a career in a rural or underserved area.

### Comprehensive health planning

It is important to remember that 'health manpower planning is an integral part of comprehensive health planning and should not become an independent activity', and that 'planning, production and management of human resources must be brought into closer and more functional relationship with each other'.<sup>9</sup> CS cannot achieve the goals for which it was introduced unless a number of other issues are addressed at the

same time; appropriate educational precursors and workplace support mechanisms need to be put in place in order for the maximum benefit of the scheme to be realised.<sup>17</sup> Universities need to supply graduates with the appropriate knowledge, skills and attitudes, and provincial health departments need to manage their human resources in an efficient and equitable manner. A comprehensive policy on human resources for medically underserved areas in South Africa is needed, with obligatory CS for doctors constituting only a part of this policy. As we proceed through the next round of CS placements, as well as the expansion of the scheme to other professional groups, it is imperative that the experiences and lessons of the first year of implementation are taken account of and used as the basis for long-term planning. Judging by the initial feedback from this first year, and the support shown by most of those involved, there is a solid basis from which to work.

## RECOMMENDATIONS

### Policy-related recommendations

- The development of a comprehensive human resource policy for the distribution of medical personnel, and an explicit strategy for meeting the medical needs in rural and underserved areas in the country.
- The definition of a medically underserved district, or health personnel shortage area needs to be developed.
- A clear definition of community service is needed in order to ensure greater standardisation and equity across the country.
- Clear guidelines that will serve as job descriptions to ensure that CS doctors are involved in areas of need in districts and not just used as additional medical officers in hospitals that are already adequately staffed. In order to ensure equity, these descriptions should be developed in relation to norms for services offered by district and regional hospitals.
- Clear criteria for health facilities that CS doctors should be allocated to. For example, those hospitals able to sustain a ratio of senior doctors to CS doctors of not less than 1:1, for the purposes of adequate supervision. The criteria should also clarify the type of services rendered by the facility, so that the doctors can be fully utilised.
- Discussions should be held with stakeholders with regard to the suggestion of excluding the tertiary and central hospitals from receiving CS doctors, and only deploying CS doctors in areas of need. This would return to the original goals of the scheme, namely to address maldistribution, and would also be fairer to those who are currently allocated to peripheral hospitals and who do not have access to specialist departments. CS doctors with genuine reasons for staying in urban areas could be placed at regional hospitals rather than central hospitals.





- Preference for registrar training posts for specialisation could be given to those who have served their CS year plus an additional year in an underserved area.
- Universities should work more closely with national policy makers to create alternative medical curricula that better prepare students to work in rural and underserved areas.

### Conditions of service

- Accommodation: Rural hospitals with no alternative accommodation need to upgrade existing accommodation facilities, sufficient for all professional health personnel, including places that are suitable for married people or families. An official policy on accommodation is needed in some provinces.
- Salaries, transfers and rural allowances must be administered without delay.
- There must be a formal induction process for all CS doctors during their first week.

### Supervision and support

- A training component to CS must be acknowledged by all stakeholders. At a minimum this would amount to in-service training in order for CS doctors to fulfil their duties adequately in the institutions in which they are placed, as for any other public servant. Ideally this should form part of the more comprehensive plan for postgraduate vocational training.
- There should be an adequate ratio of experienced senior doctors to CS doctors in each hospital in order to ensure proper supervision. There should be at least one and preferably two senior doctors to every CS doctor in each hospital.
- The support, development and retention of senior medical staff is an issue that needs urgent attention if standards of care are to be maintained, particularly in rural hospitals. This includes academic support, incentives and a career structure. The development of trainers for the envisaged postgraduate vocational training is also dependent on this level of worker.
- A support system needs to be put in place locally, including regular meetings of CS doctors with peers and seniors to discuss problems and provide opportunities for mentoring.
- Undergraduate training and internship need to be reviewed in the light of the demands made on CS doctors.

### Allocation process

- Information: More detailed information about each of the approved health facilities for community service needs to be made available by means of a web page.
- Choices: The interns will need adequate time to deliberate on their choices of health facility for the year of community

service. At least a month should be given to accommodate this.

- Family considerations: The allocation process should double the effort in placing CS doctors with their spouses. Unmarried parents should also be accommodated.
- Superintendents' role: The CS doctors suggested that the process of application should involve the hospital superintendent, in complete transparency. The superintendents are in a better situation to select appropriate candidates according to the needs of the hospital.
- Internship experience: CS doctors allocated to rural hospitals with no specialist support should ideally be chosen from the pool of interns who are gaining experience in the regional and smaller hospitals, rather than from those who complete their internships at central and academic hospitals.
- Regional rotations: CS doctors should be rotated from the medium/large hospitals to the small hospitals. Further to this, CS doctors in rural district hospitals should be released for in-service training courses in specific skills at regional or central hospitals, for short periods of time according to the needs of the hospital (e.g. anaesthetics, obstetrics).

### Management

- There is an urgent need to develop leadership and management skills in public hospitals, as this is the key to maintaining doctors in the rural and remote areas, as well as developing the health system and the quality of service delivery. The transport of patients and referral system need particular attention.

### Retention of CS doctors in the public sector

- Those CS doctors who express an interest in long-term service in rural or underserved areas should be encouraged to do so through contractual agreements with provincial health departments, which include incentives. This could include a motivation from the district health council recommending that the doctor continue to serve in that district.
- Preferential selection of medical students from rural areas, linked to bursaries and academic support programmes, need to be considered in longer-term planning.

Permission to conduct the study was obtained from the Director-General of the Department of Health, as well as from the provincial directors responsible for community service doctors in the three provinces visited by the research team.

I am grateful to the Health Systems Trust for supporting this project, as well as to the provincial co-ordinators and respective hospital superintendents for their co-operation.