



## DOWNSIZING OF A PROVINCIAL DEPARTMENT OF HEALTH — CAUSES AND IMPLICATIONS FOR FISCAL POLICY

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*Objectives.* To analyse the financial basis for downsizing of a provincial health department and suggest implications for fiscal policy.

*Design.* Analysis of relevant departmental, provincial and national financing and expenditure trends from 1995/96 to 2002/03.

*Setting.* Western Cape (WC) Department of Health (DOH).

*Results.* Downsizing involving 9 282 health workers (27.9%) and closure of 3 601 hospital beds (24.4%) over 5 years.

Total aggregate provincial transfers (all provinces) remained fairly constant in real terms. The WC's share decreased from 11.8% in 1996/97 to 9.8% in 2002/03. This was offset by the DOH's share of the WC budget increasing from 25.6% to 29.6%, mainly because of an increase in national health conditional grants. The net effect of financing changes was that the DOH's allocation in real terms was similar in 2002/03 and 1995/96, which suggests that financing changes are not the major cause of downsizing. Expenditure analysis revealed a 39.7% real rise in the average cost of health personnel. Substantial interprovincial inequities remain.

*Conclusion.* The major cause of downsizing was wage growth, particularly following the 1996 wage agreement. Disjointed fiscal and wage policy has affected health services. Simultaneous application of policies of fiscal constraint, redistribution and substantial real wage growth has resulted in substantial downsizing with limited inroads into inequities. Inequities will continue to call for further redistribution, reduction in conditional grants and downsizing, much of which could have been avoided if fiscal and wage policy choices had been optimal.

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The Western Cape (WC) provincial Department of Health (DOH) experienced a period of rapid and substantial downsizing over 5 years. It downsized by 9 282 health and support personnel (27.9%), closed over 3 601 hospital beds

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(24.4%) and effectively closed or consolidated 8 hospitals, either completely or for inpatient services (Table I).<sup>1</sup> Inpatient days declined by 502 000 from 1995/96 to 1999/2000 (13.6%). This personnel downsizing is equivalent to an average annual expenditure reduction of approximately R150 million per year over the period. Service reductions occurred despite population growth (uninsured) of 218 396 (8%)<sup>2-4</sup> (Statistics South Africa — personal communication) and increasing HIV infection.

The financial basis for the downsizing was not well understood. Simple analysis suggests that expenditure in 1995/96 and 2002/03 was fairly similar in real terms. It was therefore difficult to target interventions appropriately.

Causes for the downsizing potentially include:

1. National fiscal constraints, within the context of the government's Growth Employment and Redistribution Strategy (GEAR).<sup>5</sup>
2. Progressive introduction of an inter-provincial equity formula. Substantial inequities remain.<sup>6-8</sup>
3. Limitations in the ability of the provincial treasury to protect the health budget.<sup>9</sup> The share of the provincial budget which the DOH received increased from 23.7% in 1995/96<sup>10</sup> to 29.6% in 1999/2000.<sup>9</sup>
4. Cost increases, since the previous number of items cannot be purchased for a given budget level.

The aim of the study was to analyse the financial basis for downsizing and to suggest implications for fiscal policy. Objectives included to analyse financing and expenditure trends and to derive relevant lessons.

The fact that downsizing of this magnitude has only resolved inter-provincial inequities to a limited degree,<sup>11,12</sup> and that substantial further downsizing might be required, suggests problems with fiscal policy. This paper will argue that disjuncture of fiscal and wage policy led to avoidable consequences.

### METHODOLOGY

**Financing trends of the Department.** Health departmental and provincial budget data were obtained from audited financial statements by the Auditor General and official (White Book) budgets.<sup>9,10,13-17</sup> Data were used from final appropriations accounts and audited financial statements since these reflected final budgets. The figures from the latter were identical but differed substantially from the White Book budgets since budgets changed over the course of each financial year.

National budget and expenditure trends were obtained from data from national budget reviews of national Department of Finance<sup>18-20</sup> and other data sources.<sup>21-25</sup>

Trends in own revenue were analysed and potential for alternative sources of financing<sup>26-29</sup> and progress made around



Table I. Reductions in staff and beds, Department of Health, Western Cape province

Date	Filled posts (N)	Decrease since May 1995 (N)	Decrease since May 1995 (%)	Actual beds (N)	Cumulative reduction since March 1995 (N)	Reduction (%)
1 May 1995	33 295	0	0	14 744		
1 April 1996	32 557	738	2.2	14 380	364	2.5
1 April 1997	29 564	3 731	11.2	12 954	1 790	12.1
1 April 1998	26 988	6 307	18.9	11 908	2 836	19.2
1 April 1999	24 661	8 634	25.9	11 240	3 504	23.8
1 April 2000	24 013	9 282	27.9	11 143	3 601	24.4

Table II. Western Cape Department of Health budget (appropriations account) trends — nominal and real

Year	Budget nominal (R thousand)	Budget real* (R thousand)	Cumulative decrease since 1996/97 (R thousand)	Cumulative real decrease since 1996/97 (%)	Cumulative decrease since 1995/96 (R thousand)	% change since 1995/96
1995/1996	2 359 160	3 247 502				
1996/1997	2 761 900	3 539 938			292 436	9.0
1997/1998	2 917 791	3 444 670	95 268	2.7	197 168	6.1
1998/1999	3 019 998	3 336 419	203 519	5.7	88 917	2.7
1999/2000	3 072 888	3 226 532	313 406	8.9	-20 969	-0.6
2000/2001	3 322 532	3 322 532	217 406	6.1	75 030	2.3
2001/2002	3 481 229	3 315 456	224 482	6.3	67 954	2.1

\*Real figures are in prices for the year 2000/01.

revenue retention were briefly reviewed.<sup>30,31</sup>

The national Department of Finance's formula-based financing approach was briefly reviewed.<sup>18</sup>

Adjustments for inflation were made using data from the consumer price index (CPI) of Statistics South Africa. The CPI for metro areas was used as opposed to the index for all areas since close to 70% of the provincial population live in the metro and the higher metro inflator is likely to reflect medical inflation better. Real prices are given in year 2000 prices.

**Expenditure trend analysis.** Expenditure data by subprogramme, region and standard item (to the fourth level) were obtained from the financial information system (Financial Management System (FMS)) and departmental reports. Standard item trends were analysed and adjusted to exclude selected exceptional items.

Average salaries were determined by dividing total personnel expenditure by filled posts on a monthly basis over the period.

**Personnel numbers.** These were obtained from monthly reports drawn from the personnel information system (PERSAL).

**Hospital bed numbers and trends.** These were obtained from departmental annual reports and the database of the Directorate of Information Management.

## RESULTS

### Financing

Nominal and real budget trends of the DOH in the WC are shown in Table II and Fig 1. The net effect of a range of financing changes at various levels of government (described below) has been a small R21 million real decrease (0.6%) in funding to the DOH from 1995/96 to 1999/2000 or a somewhat larger R313 million reduction (8.9%) since 1996/97. Fig. 1 shows: (i) that budget levels in 1995/96, 1999/2000 and 2002/03 are fairly comparable in real terms; and (ii) a significant funding increase between 1995/96 and 1996/97, following which funding levels declined back towards the baseline.

Own revenue of the WC DOH declined significantly from R106 million in 1995/96 to R84.3 million in 1999/2000 in nominal terms (a 53.7% decrease in real terms). However, since (until very recently) all revenue went into the Provincial

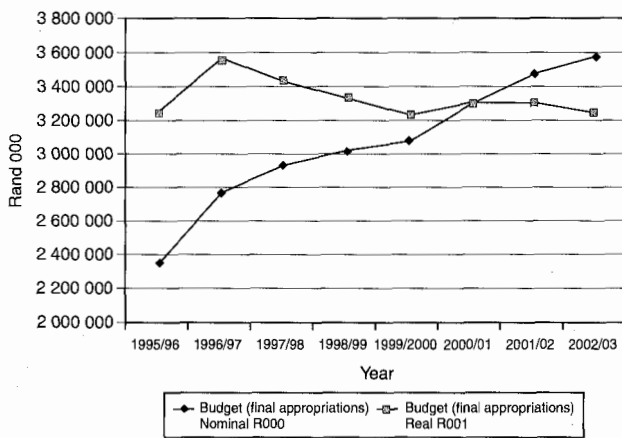


Fig. 1. Budget trends for the Western Cape Department of Health.

Revenue Fund this is not considered a direct cause of downsizing but rather part of total provincial own revenue and the DOH's share of the allocation thereof.

Table III shows the DOH's share of the total WC provincial budget. This increased from 25.6% to 29.6% and has substantially offset the effect of the WC's reduced share of the total provincial pool.

This increase was associated with substantially increased conditional grants for health to the province, associated with the development of a new approach to these grants. The grants referred to here are the Central Hospitals Grant and the Grant for Health Professional Training and Research, and their predecessors the Supraregional Services Grant and the National Increment for Training and Research (NITER). Table III shows the DOH's proportion of the total when these grants are excluded from the analysis and increases in the total of these two grants over the period.

Analysis of nominal and real funding trends of the provincial administration of the WC (all departments) was undertaken. This showed a real decrease of R2.561 billion (19%) from 1996/97 to 2002/03 or a R1.754 billion reduction from 1995/96 (13.8%). Table III shows that this decrease coincided with the province's proportion of the total provincial transfers (including conditional grants) declining from 11.8% to 9.8% and a declining equitable share.

Analysis of consolidated provincial expenditure (i.e. all departments, all provinces) showed that total funding levels have been relatively stable with a 1.7% decline in real terms (from R108 billion in 1996/97 to R106.2 billion in 2002/03 — in nominal prices R84.2 billion in 1996/97 to R115.1 billion in 2002/03).

Underlying this fairly stable trend in consolidated provincial expenditure was a declining share of the vertical split going to the provinces but a small increase in total consolidated government spending. The share of national expenditure expended by provinces (i.e. vertical split) has declined from 59.2% (of R142.3 billion) in 1996/97 to 54.3% (of R215.7 billion) in 2002/03. Total national expenditure (excluding state debt cost) increased in real terms by 7.2% from 1996/97 to 2002/03 (R142.3 billion to R215.7 billion in nominal prices).

### Expenditure and cost drivers

While financing changes have had a relatively limited effect on real expenditure, cost drivers on the expenditure side have had a marked effect. Fig. 2 shows nominal standard item trends hinting at the problem of personnel expenditure, but it is Table IV that demonstrates substantial rise in average salary (including all benefits) per employee as the major cause of the downsizing. This has risen by 83.1% in nominal terms or 39.7% in real terms between 1995/96 and 1999/2000. The effect in 1996/97 is particularly marked, with personnel expenditure

Table III. Western Cape's share of provincial transfers, Department of Health's share of total Western Cape provincial budget and trends in national conditional grants

Year	% of WC budget allocated to DOH* (including conditional grants)	% allocated to DOH (excluding conditional grants)	Conditional grants to WC† (nominal) (R thousand)	Conditional grants† (real) (R thousand)	% of provincial transfers allocated to WC	Phasing in of the equitable share to WC (%)
1995/1996	25.6	21.6	469 000	645 602		N/A
1996/1997	26.2	22.5	509 485	653 009	11.8	N/A
1997/1998	27.1	Transitional	Transitional	Transitional	11.9	N/A
1998/1999	29.0	19.7	1 201 677	1 327 583	11.0	10.1
1999/2000	29.3	19.9	1 232 881	1 294 525	10.3	9.8
2000/2001	29.4	20.6	1 254 275	1 254 275	10.2	9.6
2001/2002	29.7	20.9	1 298 174	1 236 356	10.0	9.4
2002/2003	29.6	20.7	1 350 100	1 224 580	9.8	9.2
2003/2004	N/A	N/A	N/A	N/A	N/A	8.9

\* Final appropriations budgets. 1995/96 Initial White Book budget was 23.7%.

† Only central hospital grants and health professional teaching and research grants included.

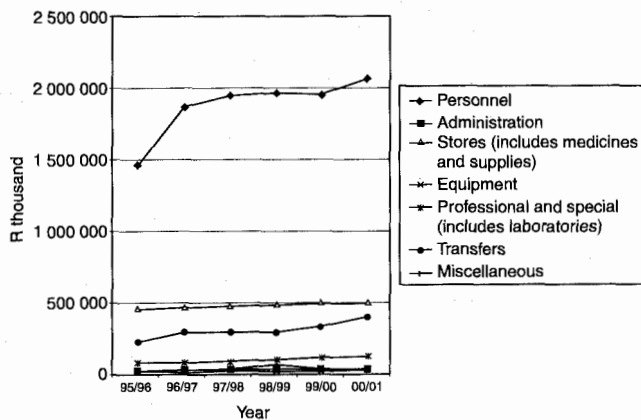


Fig. 2. Standard item trends nominal.

increasing by R360 million (31.1%) despite a reduction of 1 699 posts. This increase in personnel funding in 1996/97 is consistent with the large budgetary increase in that year shown in Fig 1. Transfer payments increased by 14.7% in real terms between 1995/96 and 2000/01, while stores (including medicines and surgical supplies) decreased by R123 million (20%) in real terms over the period. Other standard items did not change significantly.

**Equity**

The issue of equity is critical in analysing the basis for downsizing. Both the Health Function Committee formula (which was used to derive allocations in 1995/96<sup>25</sup> and 1996/97<sup>32</sup>) and the Department of Finance's formula were based on determining an equitable horizontal division between provinces. Table V shows nominal trends in expenditure per uninsured person by province. The upper part of the table includes conditional grants and the lower portion excludes them. The table shows that in 1995/96 the WC was 74.3% above the national average or 61.3% above average excluding conditional grants.

Put differently, if the WC had downsized by 42.6% in 1995/96 it would have reached the average or 38% if conditional grants are excluded. However, after downsizing 27.9% of personnel and 24% of beds by the end of 1999/2000 the DOH would still have to downsize by 35% (after 1999) to

reach the national average. However, these inequities are now largely attributed to conditional grants.

**DISCUSSION**

There have been several contributory factors to this decline of approximately one-quarter of the department. The study reveals some highly unexpected findings, especially that the major cause of the downsizing does not appear to have been substantial budget reductions but has rather been predominantly due to uncontrolled cost drivers on the expenditure side. Uncontrolled labour costs, mainly a factor of central policy decisions (particularly the 1996 wage agreement), within the context of fiscal constraint and interprovincial redistribution have been the critical causative factor. Further internal redistribution in favour of primary health care is likely to have caused a more pronounced effect on hospitals.

**Financing**

National fiscal constraints within the context of the GEAR policy do not appear to have contributed significantly to the downsizing, given that there has been real expenditure growth in the fiscus (7.2%) after deducting debt costs. Simultaneous application of substantial real wage increases along with redistribution has in this case had serious implications for services in a climate of fiscal constraint. An expansionary fiscal policy based on substantial national reconstruction would in the short term have been more favourable to health service delivery, if government intended to implement the various policy choices described simultaneously. This is not to argue the case for expansionary fiscal policy, but rather to emphasise that in a climate of fiscal constraint, budgets and policy decisions that affect expenditure such as wage policies need to be aligned carefully.

Trends in the vertical split suggest that provinces are receiving a somewhat reduced share; however, this together with the upward trend in total national spending has contributed to relatively stable total provincial funding.

A key factor contributing to the downsizing has been the declining share of the provincial pool going to the WC (Table III) resulting in a 19% real decline in the WC's total

Table IV. Trends in average cost per post

	Average filled posts (N)	Personnel expenditure (R thousand)	Average cost per post (R)	Change since 1995/96 (%)	Real cost per post (R)	% change in real cost
1995/96	32 860	1 480 448	45 053		62 018	
1996/97	31 161	1 840 705	59 071	31.1	75 711	22.1
1997/98	28 241	1 975 630	69 956	55.3	82 588	33.2
1998/99	25 676	2 003 255	78 021	73.2	86 195	39.0
1999/00	23 682	1 953 673	82 497	83.1	86 622	39.7



Table V. Expenditure/public sector population (R/capita)\*

	1995/96 outcome	1996/97 outcome	1997/98 outcome	1998/99 estimate	1999/2000 estimate	2000/01 budget	2001/02 MTEF
<b>Including conditional grants</b>							
Eastern Cape	359	492	474	466	536	508	547
Free State	562	685	757	756	720	808	828
Gauteng	910	1 059	1 183	1 197	1 198	1 310	1 385
KwaZulu-Natal	451	566	632	641	658	741	762
Mpumalanga	236	341	427	421	444	459	475
Northern Cape	421	497	561	567	621	622	649
Northern Province	314	438	440	432	460	480	485
North West	333	419	458	449	453	527	569
Western Cape	855	995	1 021	1 042	1 049	1 101	1 132
Subtotal	491	613	658	660	681	716	742
Western Cape							
% above average	74.3	62.2	55.1	58.0	53.9	53.8	52.7
Reduction that would bring Western Cape to average (%)	42.6	38.4	35.5	36.7	35.0	35.0	34.5
<b>Excluding conditional grants</b>							
Western Cape							
% above average	61.3	50.7	53.5	19.4	15.6	19.2	15.9
Reduction that would bring Western Cape to average (%)	38.0	33.6	34.8	16.2	13.5	16.1	13.7

\* Data sources: refs 2-4, 13-18, 21-25.

MTEF = medium term expenditure framework budgets.

All figures are in nominal prices (i.e. not adjusted for inflation).

provincial budget since 1996/97. However, this substantial financing pressure was offset by the WC Treasury increasing the DOH's share of its budget from 25.6% to 29.6% (Table III). This relative protection of health funding caused the DOH budget to decrease less (8.9%) than the overall provincial budget (19%) from 1996/97 to 1999/2000. Substantially underlying the increase in the DOH's share was the upward revision in the DOH conditional grants for health services allocated to the province under a new funding dispensation. These upward revisions occurred at a time of significant downsizing in the academic hospitals in the WC and substantial national pressure to avoid collapse in academic hospital services.

### Expenditure and cost drivers

The study shows an 83.1% nominal increase in average costs per employee from 1995/96 to 1999/2000 — 39.7% real increase. Given that personnel expenditure comprises approximately 66% of total expenditure, the real rise in average salaries of 39.7% might be expected to cause a 26.2% reduction in personnel for a given budget level. This is remarkably close to the 27.9% reduction in personnel actually described. Therefore real wage growth (including all benefits) has played a major role in the progressive personnel losses over the period

as the Department attempted to contain personnel expenditure while the real budget level returned to its baseline (Fig. 1).

Many factors influence personnel expenditure. Most of them are negotiated in the central bargaining chamber and are beyond provincial control. They include: (i) salary increases; (ii) the notch increase system; (iii) the rank promotion system; (iv) housing subsidies; (v) over-time payment system; (vi) equalisation of benefits across gender; (vii) medical scheme; (viii) voluntary severance package costs; and (ix) differential loss of lower paid personnel.

There has also been a slight crowding out by transfer payments equivalent to 1.6% of total expenditure (based on proportion of total expenditure spent on transfer payments). The crowding out of medicines and medical and surgical supplies expenditure is of concern.

### Interprovincial equity

The substantial downsizing of the WC Department has not eradicated interprovincial inequities and large inequities still exist. As we approach the 2003/04 targets for full implementation of the Department of Finance's horizontal share formula, remaining inequities are now largely rationalised on the basis of the conditional grants and



provincial prioritisation within the framework of fiscal federalism.

However, despite downsizing by 27.9% (of personnel) the Department has only reduced its funding level per capita to 53.1% above the national average by 1999/2000.

Further analysis of interprovincial inequities is presented elsewhere.<sup>21,22,23</sup>

## Implications for fiscal policy

It is evident from the data that if the Provincial Treasury had not relatively protected the health budget and had national conditional grants not substantially increased, the downsizing would have been even greater. Indeed with no relative protection the DOH might have downsized a further 4 461 posts (13.8% budget reduction equivalent to that of the province overall). This would have brought the total downsizing to 13 743 posts or 41.3% of the total, in a period of less than 5 years.

At the time of transition in 1994, equity was possibly the most important fiscal policy priority and the WC needed to downsize accordingly. Now it has downsized very substantially, but mainly to fund wage and benefit increases, which have been accorded the greatest funding priority. Substantial inequity remains. The data suggest that had the average real cost of employment not risen so substantially, the same funding could have been used to address the issue of inequities very substantially, if not solve the issue. However, the magnitude of inequities will continue to call for further redistribution, reduction in conditional grants and downsizing, much of which could have been avoided if fiscal and wage policy choices had been optimal.

These findings suggest an incoherence of fiscal and wage policy — several policies have been applied simultaneously. These include: (i) fiscal constraint within the context of GEAR; (ii) inter-provincial equity redress; (iii) shifting of funds within the DOH to primary health care; and (iv) significant improvements in the wages and benefits of health workers.

While individually each of these policies is laudable and reasonable, their collective application had the potential to cause service collapse, with a potential 41.3% personnel reduction in under 5 years. The most significant problem was agreement to major wage and benefit increases at the same time as a significant redistribution and national fiscal constraint. The generous 1996 wage agreement and the onset of GEAR occurred within the same period and it is likely that government did not adequately consider the potential implication of the simultaneous application of these policies, given the context of the redistributive equitable share formula.

The effects of this collective policy stance in poorer provinces is likely to reflect the bulk of redistributory gains going to improved salaries and staff benefits, rather than on expanded improved services and on addressing apartheid backlogs.

It is probably unwise to make significant deductions from this study to broader levels of public sector employment and unemployment. However, it is interesting to note that while unemployment is among government's top stated priorities, its own policies of 'rightsizing' and wage policies have, in this sectoral example, led to personnel losses (9 282) of similar magnitude (27.9%) (but in the opposite direction) to real wage growth.

## CONCLUSIONS AND RECOMMENDATIONS

A limited number of macro-economic fiscal and wage policy decisions have had a large impact on the DOH. A key fiscal and wage policy problem has been demonstrated. Simultaneous implementation of a range of fiscal policies with implications for the budget (e.g. redistribution, fiscal constraints) and expenditure (e.g. real wage growth) have had serious effects on basic social services.

Whereas the WC needed to rationalise and downsize to address the key policy priority of interprovincial equity, it has now downsized mainly because of wage growth and substantial inequities remain. Implications for the sector nationally are likely to include that the major benefits of redistribution and funding increases have largely been expended on wage increases and this is likely to have limited the service expansion intended in the Reconstruction and Development Programme.

Recommendations include: (i) in determining macro fiscal policy careful consideration must be given to the cumulative effect of multiple policies influencing budgetary allocations, expenditure and cost; (ii) if government is to proceed with an overarching fiscal policy framework of constraint, particular caution needs to be exercised as optimising resource allocation decisions becomes crucial and policy disjunctures are more likely to lead to service problems; (iii) wage and benefit costs are a crucial determinant of expenditure and therefore cannot be negotiated as independently of the budget process as is presently the case; (iv) provincial governments need to have a significant say in negotiations in the central bargaining chamber since they bear the costs of most of the decisions reached; (v) in the health sector control of factor costs is essential to allow adequate funding for redistribution and shift to primary health care without causing collapse of hospital services; and (vi) future policy decisions affecting the WC's funding need to recognise that it has already downsized by over 9 000 health workers (27.9%).

This report has implications for fiscal and wage policy decisions in other developing and lower middle income countries and for countries implementing structural adjustment policies.

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## SUSPECTED PULMONARY TUBERCULOSIS IN RURAL SOUTH AFRICA — SPUTUM INDUCTION AS A SIMPLE DIAGNOSTIC TOOL?

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**Objectives.** To assess the value of sputum induction (SI) as a diagnostic tool for patients with suspected pulmonary tuberculosis (PTB) who are unable to expectorate or who have a negative sputum smear.

**Design.** Study of an inpatient cohort undergoing SI.

**Setting.** Mseleni Hospital, a rural district hospital in northern KwaZulu-Natal.

**Subjects.** All adult patients with suspected TB seen at the hospital over a 4-month period.

**Outcome measures.** (i) Successful SI; (ii) sputum acid-fast smear result; (iii) change of admission diagnosis as a result of the induction procedure; and (iv) number of patients discharged with a diagnosis other than TB who re-presented within 4 months with TB.

**Results.** A total of 51 patients (31 female) underwent SI; of these 36 (71%) were able to produce a sputum sample. Fifteen (42%) of those were acid-fast smear-positive (29% of all patients included). The admission diagnosis was changed in 16 (44%) of the patients who were able to give an induced sputum sample as opposed to 4 (27%) who had been unable to expectorate despite an induction attempt ( $P = 0.38$ ). Three (12.5%) of the 24 patients with a discharge diagnosis other than TB (17 pneumonia, 3 old TB, 2 carcinoma of the lung, 1 bronchiectasis) turned out to have TB within the follow-up period; 2 of those had extra-pulmonary TB.

**Conclusion.** SI produced a positive smear result in 29% of patients with suspected TB who had previously been smear-negative or unable to expectorate. The method proved an aid to clinical decision making.

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