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South Pacific

Health services: a review and remedial strategy

S. Lieberman and P. Heywood

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n.a.	**Not applicable**
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abstract

Papua New Guinea was the scene of pioneering developments in the health sector in the two decades prior to independence in 1975. Its primary health care system was a forerunner of the type of health delivery arrangements now being established, usually with donor support, in other low-income countries. Striking health gains were recorded while this system was in place. But the advances have not been carried further.

This paper analyses the difficulties faced by the health care system in the past ten years, and proposes a package of reforms and policy initiatives aimed at enhancing the impact and sustainability of government health interventions.

Health services in Papua New Guinea: a review and remedial strategy

Papua New Guinea was the scene of pioneering developments in the health sector in the two decades prior to independence in 1975. Its primary health care system was a forerunner of the type of health delivery arrangements now being established, usually with donor support, in other low-income countries. Striking health gains were recorded while this system was in place. But the advances have not been carried further. Indeed, the country has experienced a decade or more of eroding—and recently, sharply deteriorating—health services. Central and provincial health officials and donor agencies are well aware of this worrisome service picture. But the remedies that are being used are inadequate, inappropriate and inconsistent, and do not comprise the needed response to a failed set of policies.

This paper analyses the difficulties faced by the health care system in the past ten years, and proposes a package of reforms and policy initiatives aimed at enhancing the impact and sustainability of government health interventions. The approach taken contrasts current health delivery arrangements with the system that was operating in the late 1970s, arguing that recovery and advance in the health sector will require significant expenditure reallocations; elimination of some facilities and scaling back of bed capacity and staffing in many health centres and subcentres; personnel cuts and redeployment and a move away from uniform, civil service employment arrangements; new efforts to foster decentralisation by vesting appropriate authority, resources and accountability in provincial health boards and hospital boards; the conversion of the National Department of Health into a powerful voice within the central government as an agency that negotiates global budget transfers to provinces and monitors performance; a new partnership with church-run health services; and the elimination of entry barriers and adoption of proactive measures to foster private provision of health services.

The health system in the late 1970s

The health care arrangements in place at independence took shape after World War II. Several factors contributed to the decision to provide basic curative and preventive health care in urban and rural facilities, relying on staff—including village-level workers—with limited training. The Australian colonial government was willing and able to invest substantial amounts in health—recurrent outlays accounted for 8–9 per cent of steadily rising government spending in the 1960s and early 1970s, with even higher shares recorded in the 1950s. In addition, the emerging system benefited from delivery approaches that had been tested during the pre-war period in German and later Australian-run New Guinea and in Australia's Papua colony. Health authorities were also able to coordinate effectively with church-run facilities and personnel, and to benefit from cheap and effective new medical technologies.

The following features of the health care system were notable (World Bank 1965; Bell 1973).

- The mix and quality of health services were consistent with needs and conditions. Most health problems were addressed in the more than 1,600 aid posts, village-level units staffed by aid post orderlies who often had a few years of primary school and had received some training and supervised work in health centres. Aid post orderlies, nearly all of whom were men, provided simple curative care for common diseases and assisted in preventive health work. A wider range of services, including some obstetric and other inpatient care, was offered at 175 health centres. These facilities, which were operated by a senior nurse or health extension officer assisted by nurses and aid post orderlies, were also responsible for aid post supervision, disease control and health education in service areas of 5,000 to 20,000 people. The small number of doctors in Papua New Guinea were assigned mainly to the 20 province-level hospitals, where they treated patients referred from aid posts and health centres.
- Local communities were involved in health care provision. Village councils typically selected one of their own number for training, and then built the aid post and the aid post orderly's house and prepared a vegetable garden for his use. The health department provided training and supervision, medicine, supplies and a salary equal to about half that of hospital orderlies. Local government councils, advisory boards and provincial health committees also helped to build and monitor the use of health centres and hospitals.
- Hospitals operated not only as referral units, but as resource centres and base points for supervision and training. Doctors from hospitals regularly visited health centres to conduct clinics and to provide technical guidance, supervision and informal training to workers assigned to peripheral facilities. Hospital staff were instrumental in preparing standard treatment guidelines for health workers practicing in remote localities.

- Managerial and supervisory responsibility rested with a provincial official, who had the authority and autonomy to use staff as he saw fit. Health centres were supervised by provincial staff with help from hospital personnel. Aid posts were supervised by health extension officers and nurses based at health centres. Communications and travel constraints granted supervisors at each level of the system considerable *de facto* autonomy and discretion.
- Strains on the public system were reduced by church-run facilities. Religious organisations—primarily Catholic, Lutheran and Anglican missions, but including at least twenty-one other denominations—operated nearly 30 per cent of Papua New Guinea's health centres and almost 15 per cent of the aid posts. This important role was recognised in the subsidies provided to church-run health activities (including training) and by the involvement of mission representatives in the embryonic provincial health boards.

Papua New Guinea's health accomplishments through the late 1970s were considerable (McDevitt 1991; Stanhope 1970). The infant mortality rate, a generally reliable indicator of overall health conditions, had fallen to an estimated 200 deaths per 1,000 live births by the late 1950s (from a post-World War II high of 300 to 500 deaths per 1,000 live births in many areas). Successive censuses revealed that the rate continued to fall, to an estimated 161 deaths per 1,000 live births in the mid-1960s, to 134 in the late 1960s, to 72 in 1975–79. These findings are corroborated by what is known about the incidence of particular diseases. In the 1940s the epidemiological pattern was dominated by infectious diseases of early childhood, resulting from and contributing to underlying protein-energy and micronutrient malnutrition. This disease profile remained largely unchanged through the late 1970s. But a significant drop was detected in fatality rates, especially for the major infectious diseases (pneumonia, diarrhea and malaria), for which effective treatment and community action became available.

Current problems and contributing factors

The health advances achieved by or immediately after independence have not been sustained or carried further in the past ten years. Indeed, there are many indications, especially with respect to coverage and related process variables, that health status and the effectiveness of the health service system have eroded substantially.

Outcome and process indicators

There are no reliable indicators of the current infant mortality rate. (For example, the World Bank estimate of 54 deaths per 1,000 live births for 1990–94 is extrapolated from 1980 census findings. This projection assumed a gradual improvement in health

conditions—a premise that does not appear to have been valid.) The 1991–95 National Health Plan contains a target for a rate of 50 per thousand, but it does not provide a base-period estimate. Instead, health planners assumed that the rate estimated for 1980—about 70 deaths per 1,000 live births—remained applicable in the early and mid-1990s. The National Department of Health assumes a current infant mortality rate of 72.

The assumption that a once-rapid decline in the infant mortality rate has stalled or even begun to reverse is consistent with disease indicators and health service statistics. Papua New Guinea's nutritional indicators are among the worst in the Pacific region. For example, a 1994 National Department of Health review found there had been a significant increase in malnutrition among children in the late 1980s and early 1990s, especially in the Highlands and in coastal provinces like Oro and East Sepik. In addition, there was an increase in the prevalence of immunisable diseases like measles, tetanus and pertussis, with a corresponding rise in admissions and deaths due to these diseases. Meanwhile, there is concern that malaria, pneumonia and chronic infectious diseases, such as tuberculosis and yaws, also are on the rise, and an upward trend in sickness and death from lifestyle-related illnesses has continued. Sexually transmitted diseases and AIDS are emerging as a significant health problem, while the incidence of heart disease, diabetes and hypertension has risen significantly in the past decade.

The review attributes increases in childhood diseases to deteriorating services, as evidenced by decreases in immunisation coverage and reductions in the number of clinic visits by young children. By 1993 immunisation coverage had dropped to 30–40 per cent, about half the level in 1989. Meanwhile, facility reports indicate that both the total number and average stay of inpatients fell in the late 1980s. As a result there is low utilisation of bed capacity—in 1990 only about one-third of available beds in hospitals and health centres were occupied.

Bank mission findings, recent studies (Thomason 1993; Beracochea et al. n.d.), and anecdotal accounts shed further light on the erosion in service coverage and effectiveness.

- Supervision arrangements and practices are in disarray. For example, many facilities at different levels had not been visited by appropriate supervisory staff during the previous year. Provincial health departments put little emphasis on sustaining the hierarchical supervision procedures that are a design feature of the current health system. Aid post closures, especially on an informal basis, are increasing.
- Facilities and equipment have deteriorated. Many buildings are in disrepair and are unhygienic, need remedial maintenance and lack standard treatment manuals, medicine, cleaning materials, syringes, reliable water supply, electricity, refrigerators and sterilising equipment. Meanwhile, a large percentage of patients is treated by orderlies and aides.

- Treatment practices often are erroneous, with drug prescriptions and dosages inconsistent with the needs and characteristics of patients. This points to low levels of clinical training and poor monitoring of skills after staff have taken up assignments. Health workers also seem to be poorly prepared to communicate messages to local communities.
- Staff often are tardy or absent from duty and lack discipline and commitment to treatment. Local communities play only a limited role in health care delivery. Community groups in many areas have noted the reduction or virtual disappearance of the health patrols and extension activities that were a feature of the health care system through the early 1980s.
- There are specific problems in the country's hospitals, including drug and equipment shortages, unhygienic patient accommodations, delays in obtaining laboratory results and in routine servicing and maintenance, and overreliance on staff with limited training. Moreover, hospitals are not providing regular feedback and supervision, including periodic visits by specialists, to lower-tier facilities, as was the case in earlier decades.
- The health information system is working poorly. Few workers appreciate why data are being collected and how information will be used. Forms and terms vary among provinces, there is some duplication in the reporting requirements, submissions often are delayed, few provinces provide a complete set of reports, and there is little feedback once information is processed in Port Moresby (Cibulskis 1994).

Favourable developments

Some disruption of health services was probably unavoidable during the transition from colonial rule in the late 1970s and early 1980s. Emerging law and order problems also probably inhibited both service providers and potential clients. And the departure during a five-to seven-year period of many of the expatriates who occupied key health management and service delivery positions made the inherited arrangements unsustainable.

But these unsettling changes should have been offset by a number of positive developments in the 1980s and early 1990s. First, the number of aid posts and health centres and subcentres continued to grow, as did the bed capacity of the health facilities (Table 1). The number of doctors, nurses and extension officers increased as well. Also of significance was a 1986 decision that began to replace aid post orderlies, hospital orderlies and nurse aides, many of whom had been employed since the 1950s, with a single, multipurpose category, the community health worker. Higher entry standards were set for this new cadre. Unlike the often minimally schooled hospital and aid post orderlies, community health workers are expected to have completed tenth grade. In addition, they are provided with more extensive and sophisticated training than their predecessors. A two year course, prepares community health workers for the many

Table 1 **Number of health facilities, beds and staff, 1973–90**

	1973	1979	1985	1990
Facilities				
Hospitals	29	20	19	19
Health centres	137	161	190	191
Subcentres	198	209	270	294
Aid posts	1,547	1,916	2,231	2,290
Beds				
Hospitals	4,358	4,170	4,478	4,767
Health centres	6,599[a]	6,293	6,875	7,516
Subcentres	n.a.	2,234	2,231	3,166
Total	10,957	12,697	13,884	15,449
Health workers				
Doctors				
Government	165	159	205	260
Church-employed	27	18	22	19[b]
Nurse officers				
Government	909	1,198	1,822	2,447
Church-employed	640	483	641	707[b]
Health extension officers				
Government	180	196	294	320
Church-employed	8	1	7	10
Aid post orderlies/community health workers				
Government	1,383	1,718	1,999	1,344
Church-employed	164	125	109	..
Nurse aides				
Government	850	1,234	1,404	..
Church-employed	170	313	574	697
Hospital orderlies				
Government	1,560	1,148	764	1,184
Church-employed	154	75	..	..

a Includes subcentres.
b 1989.
Source: Department of Health, Papua New Guinea (unpublished data).

tasks arising in general outpatient and maternal and child health clinics, routine obstetric cases and sample nursing assignments in aid posts and health centres and subcentres. By 1993 an estimated 1,655 community health workers had completed formal training requirements and entered public service, bringing new skills and a youthful outlook to a health force rapidly aging.

Table 2 **Government health expenditures, 1975–94**

	Government health expenditures (million kina)	Total government expenditures (million kina)	Health expenditures as a percentage of govt expenditures	Health expenditures as percentage of GDP	Total population (millions)	Per capita health expenditures (kina)
1975	26.60	369.80	7.19	2.9	2.64	10.08
1976	31.00	416.30	7.45	2.9	2.70	11.49
1977	36.60	457.80	7.99	3.0	2.77	13.20
1978	42.40	494.30	8.58	3.0	2.85	14.90
1979	45.10	537.60	8.39	2.8	2.91	15.50
1980	54.70	623.50	8.77	3.2	2.97	18.40
1981	61.20	692.90	8.83	3.6	3.04	20.10
1982	62.30	732.30	8.51	3.6	3.12	20.00
1983	67.90	780.40	8.70	3.4	3.19	21.30
1984	73.30	830.70	8.82	3.4	3.26	22.50
1985	80.90	921.80	8.78	3.5	3.34	24.20
1986	87.40	930.00	9.40	3.5	3.41	25.60
1987	87.50	868.70	10.07	3.1	3.50	25.00
1988	88.30	935.30	9.44	2.8	3.57	24.70
1989	107.90	1047.60	10.30	3.5	3.66	29.50
1990	96.30	1094.30	8.80	3.1	3.75	25.70
1991	99.20	1180.90	8.40	2.8	3.82	26.00
1992	101.10	1366.20	7.40	2.4	3.90	25.90
1993	142.90	1418.70	10.07	2.9	3.98	35.91
1994	152.80	1536.30	9.95	2.7	4.06	37.66

Note: Figures for 1993 are expenditure estimates.
Figures for 1994 are budget estimates.
Provincial government expenditures are not included.

Source: Department of Health, Papua New Guinea (unpublished data).

This enhancement of capacity and skills was made possible by the sustained allocation of substantial funds to health. Many of the observed problems are typical of health systems that have been receiving small and declining allocations. This has not been the case in Papua New Guinea. Real per capita expenditures administered by central government agencies remained steady between 1975 and 1993 averaging 26 kina (US$27.30) (Tables 2 and 3 and Figures 1 and 2). Actual per capita outlays in the 1990s were higher than in the mid-1970s and only slightly below the average for the mid-1980s.

Table 3 **Government health expenditures, 1975–94** (1990 prices)

	Government health expenditures (million kina)	Total government expenditures (million kina)	Per capita health expenditures (kina)	Per capita health expenditures (US$)
1975	52.61	731.43	19.94	20.87
1976	58.25	782.23	21.59	22.60
1977	65.68	821.59	23.69	24.80
1978	70.07	816.88	24.62	25.77
1979	69.69	830.72	23.95	25.07
1980	77.11	878.89	25.94	27.15
1981	82.79	937.34	27.19	28.46
1982	80.29	943.75	25.00	26.98
1983	82.69	950.34	25.94	27.15
1984	86.79	983.54	26.64	27.88
1985	93.60	1066.54	28.00	29.31
1986	97.93	1042.02	28.68	30.02
1987	96.15	954.55	27.47	28.75
1988	94.06	996.27	26.31	27.54
1989	112.08	1088.14	30.64	32.07
1990	96.30	1094.30	25.70	26.90
1991	95.64	1138.05	25.07	26.24
1992	95.36	1288.70	24.43	25.57
1993	133.63	1328.88	33.63	35.20
1994	138.63	1393.87	34.16	35.78

Source: International Monetary Fund, July 1992. *International Financial Statistics*, IMF, Washington, DC.

Figure 1 **Trends in Papua New Guinea health expenditures, 1975–93** (million kina)

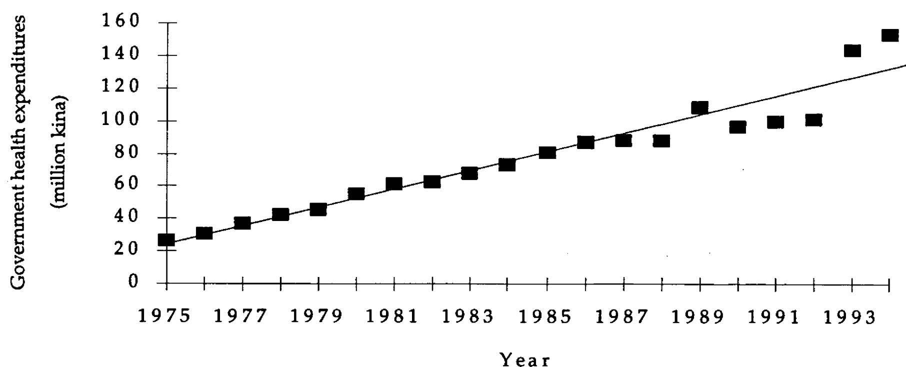
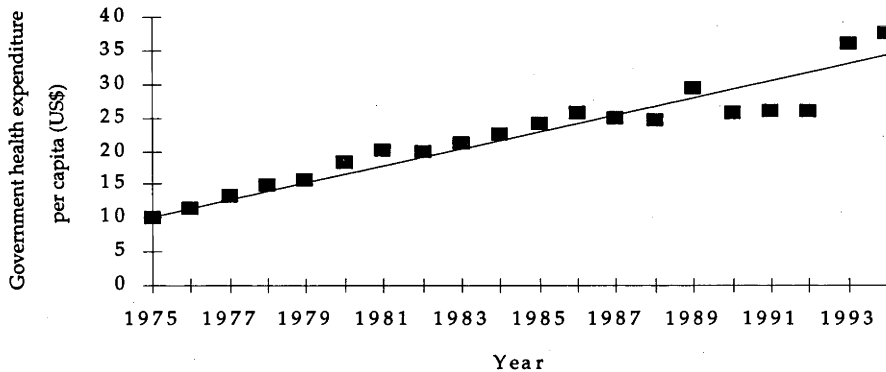
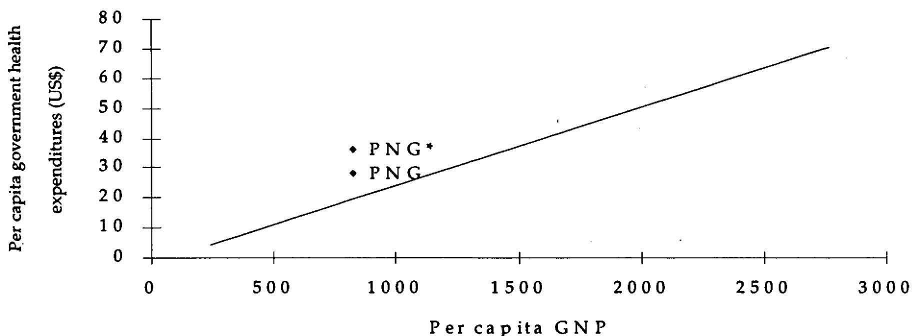


Figure 2 **Trends in Papua New Guinea health expenditures per capita, 1975–93** (US$)



Health expenditures have also continued to capture a sizable share of overall government spending. Health has accounted for more than 8 per cent of total public outlays in most years since the mid-1970s (Table 2). At an estimated US$26.9 per person in 1990, government health outlays were much larger than in Indonesia (US$4.2) and the Philippines (US$7), two neighbouring countries whose mean per capita incomes are somewhat below the estimated average for Papua New Guinea (Figure 3). Government health spending in Papua New Guinea is greater than or roughly equivalent to per capita outlays in a number of developing countries with higher

Figure 3 **Per capita government spending: Papua New Guinea and a sample of developing economies** (US$)



* includes estimated provincial government health spending

estimated mean incomes, including Guatemala, Dominican Republic, Ecuador, Jordan, Peru and Thailand.

Health spending by provincial governments

In short, health expenditure levels in Papua New Guinea are and have remained high, viewed alternatively from temporal, cross-sectoral and cross-country perspectives. But the figures cited above refer only to central government outlays in support of different national, delegated and transferred health functions. National functions include supply of pharmaceuticals and medical equipment to all facilities, training, technical support and the operation of major hospitals in Port Moresby, Lae and Madang. These activities are financed and administered by the the National Department of Health. Delegated functions are funded and administered through the national departments and located in each province. In health these functions comprise malaria control, rural water supply and sanitation, extension services, hospitals and, until 1994, church health activities. In the eleven provinces that do not have full financial autonomy, the delegated functions also include rural health services, such as the delivery of curative and preventive treatment through health centres, subcentres and aid posts. But in the eight provinces with full financial responsibility, rural health services are 'transferred functions', for which expenditure responsibility has been handed over to the provincial government. The central government continues to set staff ceilings and to fund the salaries of civil servants assigned to rural health services in these provinces.

What is not included in the health outlays shown in Tables 2 and 3 are expenditures decided on and allocated by provincial governments, drawing on funds directly under their control. These resources include fees, commercial income and tax revenues generated and controlled locally, as well as various unconditional grants and special transfers provided by the central government. Provincial health spending is used to supplement central outlays on delegated and national functions and in the eight autonomous provinces, to pay for the non-salary costs of the transferred function (the rural health service network). Provincial funding decisions are of special interest in these financially autonomous provinces. Governments in these provinces have the authority to reallocate expenditure between activities, such as between rural health services and non-health outlays, and within rural health, between line items in the budget.

Levels of provincial spending on health vary widely. At one end of the spectrum is Morobe, a financially autonomous province which also has substantial revenues from fees, local taxes and other sources. At roughly 7 kina (US$7.42) per capita in 1993, provincial spending in Morobe accounted for 21 per cent of all health outlays and exceeded that allocated by the central government for transferred and delegated functions (Table 4). By contrast, provincial expenditures comprised 7 per cent or less

of overall health spending in Gulf (1.6 kina, US$1.8 per capita) and Western Highlands (1.3 kina, US$1.4 per capita) provinces (Table 4). These provinces have not been granted financial autonomy and do not collect large local revenues.

In sum, health spending totals derived from central outlays and transfers, although substantial, underestimate total expenditures by 10 per cent or more. Including provincial outlays in spending totals would increase real per capita spending to well over US$30 in the early 1990s, further reinforcing the country's outlier position in cross-country comparisons (Figure 3).

Table 4 **Health spending in four provinces, 1993**

	Central transfers				
	National functions	Transferred functions	Delegated functions	Provincially funded activities	Total
Morobe Province					
Personnel	4,414,000	1,066,199	510,858	2,345,863	8,336,920
Operations	3,969,663	-	723,320	650,012	5,342,995
Total	8,383,663	1,066,199	1,234,178	2,995,875	13,679,915
Central Province and National Capital District					
Personnel	7,814,287	-	1,195,085	551,300	9,560,672
Operations	4,780,406	-	321,936	195,000	5,297,342
Total	12,594,693	-	1,517,021	746,300	14,858,014
Western Highlands Province					
Personnel	-	-	4,110,995	210,141	4,321,136
Operations	-	-	1,407,269	227,227	1,634,496
Total	-	-	5,518,264	437,368	5,955,632
Gulf Province					
Personnel	-	-	2,131,277	52,139	2,183,416
Operations	-	-	449,731	77,568	527,299
Total	-	-	2,581,008	129,707	2,710,715

Source: National and provincial government documents.

Personnel costs and operational problems

Compared with the late 1970s, the current health sector features expanded facility coverage and capacity, a larger and better-trained work force and continuing high levels of public spending. So what accounts for the deterioration in services? The answer

Table 5 **Recurrent health spending from central transfers by province, region, and function, 1992**

Province	Salaries personnel	Total	Operations	Total (thousands)	Population /personnel	Salaries /total	Personnel per capita	Personnel per capita	Operations per capita	Total
Papua	13614.3	17814.5	6016.2	23830.7	785	0.76	0.75	22.69	7.66	30.36
Western	1173.6	1910.0	892.4	2802.4	107	0.61	0.68	17.85	8.34	26.19
Gulf	1134.3	1598.9	399.7	1998.6	80	0.71	0.80	19.99	5.00	24.98
Central	6735.6	8532.1	3836.8	12368.9	318	0.79	0.69	26.83	12.07	38.90
Milne Bay	2974.5	3601.8	434.3	4036.1	175	0.83	0.89	20.58	2.48	23.06
Oro	1596.3	2171.7	453.0	2624.7	105	0.74	0.83	20.68	4.31	25.00
Highlands	12644.2	15186.0	31928.0	18378.8	1353	0.83	0.83	11.22	2.36	13.58
Southern Highlands	2362.9	3456.9	469	3925.9	288	0.68	0.88	12.00	1.63	13.63
Enga	2327.2	2547.2	178.2	2725.4	196	0.91	0.93	13.00	0.91	13.91
Western Highlands	2356.4	2956.7	1339.4	4296.1	336	0.80	0.69	8.80	3.99	12.79
Simbu	1291.2	1454.4	418.1	1872.5	195	0.89	0.78	7.46	2.14	9.60
Eastern Highlands	4306.5	4770.8	788.1	5558.9	338	0.90	0.86	4.11	2.33	16.45
New Guinea Mainland	8634.1	10390.2	3364.4	13754.6	853	0.83	0.76	12.18	3.94	16.12
Morobe	3888	4656.1	1604.4	6260.5	413	0.84	0.74	11.27	3.88	15.16
Madang	..	..	..	..	..	..	..	..	..	..
East Sepik	3732.1	4109.1	1197.1	5306.2	296	0.91	0.77	13.88	4.04	17.93
West Sepik	1014	1625.0	562.9	2187.9	144	0.62	0.74	11.28	3.91	15.19
Islands	6665.5	7690.8	1501.1	9191.9	626	0.87	0.84	12.29	2.40	14.68
Manus	1054.1	1165.5	163.8	1329.3	35	0.90	0.88	33.30	4.68	37.98
New Ireland	1588.8	1747.3	270.5	2017.8	91	0.91	0.87	19.20	2.97	22.17
East New Britain	1673.3	2057.9	661.5	2719.4	181	0.81	0.76	11.37	3.65	15.02
West New Britain	1532.3	1792.6	316.3	2108.9	130	0.85	0.85	13.79	2.43	16.22
North Solomons	817	927.5	89.0	1016.5	189	0.88	0.91	4.91	0.47	5.38
Net National Dept of Health	5291.8	9496.0	20670.9	30166.9	..	0.56	0.31	..	..	..
TOTAL	46849.9	60577.5	34745.4	95322.9	3617.0	0.77	0.64	16.75	9.61	26.35

Source: Papua New Guinea, Department of Finance and Planning, 1994, estimates of revenue and expenditure.

lies in the difficulties encountered in operating a health system that has not only grown in size and complexity, but that has also lost much of its flexibility and sensitivity to local conditions.

Some of the persistent management and supervision problems arise from a lack of recurrent funds for operational purposes. This has been due primarily to increases in personnel expenses in a context since the mid-1980s, of negligible real growth in health spending. At the provincial level, the share of labour-related expenditures in recurrent funds transferred from the centre varied between 68 per cent and 93 per cent in 1992 (Table 5). As a group, provinces allocated 80 per cent of the recurrent resources received to salaries, wages and related items. This figure was well above the 68 per cent reported for 1977 and the 71 per cent recorded in 1986 (Thomason and Newbrander 1991). Also noteworthy is the high share of personnel outlays spent on salaries. Eighty-two per cent of labour outlays from centrally transferred funds were allocated to salaries, which comprised a fixed and inflexible component of the budget. In Enga this figure was 91 per cent.

The continuing rise in the staff salary and benefits component of the budget was caused in part by an index-driven, upward trend in civil service pay scales. This trend is also attributable to a decision to absorb existing aid post orderlies and new community health workers into the civil service at prevailing salary scales. In effect, outlays on fuel, equipment and vehicle maintenance, drugs and other supplies, travel allowances and miscellaneous expenses have been funded only after provision was made for personnel costs.

This spending pattern affects the availability of operational funds and creates significant differences among provinces in overall outlays per capita (Table 5). Average spending has been especially low in the Highlands, even after taking account of provincial government outlays (Table 4). Some provinces were unable to allocate more than 2 kina per capita for operational purposes (Table 5), and the average for the Highlands and the Islands was 2.4 kina. The Gulf and Western Highlands provinces used their provincially funded budget to offset the large share of central resources devoted to personnel expenses (Table 4), while Morobe and National Central District/ Central province devoted locally controlled resources disproportionately to labour costs (Table 4).

The shortfall in operational funds has been felt through the health system in a number of ways.

- Supervision of aid posts from health centres has decreased in frequency and regularity. Outreach in the form of public health and mother and child health patrols no longer occurs at regular intervals. These developments have had adverse effects on community relations and on the availability and quality of care at aid posts.

- The morale and performance of community health workers has been affected. These workers have higher expectations than the aid post orderlies. The lack of regular supervision and feedback has limited the possibility of working out an attractive and productive agenda for this new staff category.
- Supervision and other support activities at health centres and subcentres by Provincial Departments of Health and hospital staff have declined sharply. Together with drug and equipment shortages, this has led many patients to travel directly to the nearest hospital. As a result there is considerable under-utilisation of health centre beds, equipment and staff.
- The role of hospitals in provincial health systems has narrowed to that of treating uncomplicated, self-referral cases, often on an outpatient basis. Hospital staff now define their roles and goals largely in terms of practicing clinical medicine, as opposed to supporting the larger health effort. And, the scaling back of hospital-health centre contacts has increased hospital admissions by undermining confidence in smaller facilities.
- Provincial Departments of Health staff have been unable to maintain close links with church-operated facilities. During the 1980s church-run networks experienced their own funding and related operational problems. An opportunity has been lost for joint government-church planning and coordinated delivery of services.

Who is accountable for health? Recurrent operational problems also stem from the country's idiosyncratic and ineffective allocation of budgetary, personnel and management responsibilities in health. In this regard, the country provides an example of contested and aborted decentralisation, on the heels of which there is no consensus on the roles of the Provincial Departments of Health, other provincial stakeholders (such as hospitals and church health services) and various central agencies involved directly or indirectly in health matters.

At the provincial level, the Assistant Secretary for Health retains technical supervisory responsibilities for the performance of aid posts, health centre and subcentre-based staff and for technical units within Provincial Departments of Health. The position has many challenges since it wields considerably less authority than it did in the 1970s. For instance, an Assistant Secretary for Health often retains little or no technical or managerial responsibilities in hospital matters. Hospital administrators and staff prefer to deal directly with the National Department of Health. (This tendency was reinforced by a 1994 decision to again include the funding of a number of hospitals in the central health budget.) Likewise, for other functions funded by the centre but notionally delegated to the provinces, such as malaria control and family planning, local staff seem to be accountable to the national units rather than the provincial authority.

In addition, provincial health officials have little influence on funding levels and allocations. Between 80 and 90 per cent of the provincial health budget is allocated through centrally controlled funding channels. Indeed, the provincial share of overall health outlays, which is determined by the various grants transferred by the centre and by locally controlled revenues, may have fallen over time due to decisions on which provinces were not consulted effectively. For instance, the National Executive Council ruling that aid post orderlies and community health workers should be absorbed into the civil service has cut into the provincially controlled budget by reducing the size of the minimum unconditional grant that is transferred from the centre according to an agreed formula.

Similarly, provincial health departments have limited say in personnel matters. The Assistant Secretary for Health is prevented by civil service rules and by his position as advisor to the Provincial Secretary from directly disciplining staff members who are not casual workers. In effect, provincial supervisors can do very little to prevent absenteeism and other forms of misconduct or to improve worker productivity and effectiveness, apart from writing a formal letter and recommending that a drawn-out and usually futile investigative process be initiated. In some provinces (such as Morobe) the authority and influence of provincial health officials have been limited further by the transfer of implementation responsibilities to district-level administrators. In these provinces health staff are accountable directly to the district assistant secretary, while the provincial assistant secretary 'advises' on technical matters.

Thus, there is considerable ambiguity and occasionally open tension concerning the role and authority of provincial health staff. The situation varies to some extent among provinces. In the Western Highlands province, for instance, the Assistant Secretary for Health has used his formal and advisory powers to strengthen provincial health operations. Provincial health staff elsewhere have been unable to prevent a deterioration in health system performance.

Helping to perpetuate this situation is the uncoordinated dispersal of responsibility among central agencies (Thomason et al. 1991). The major players at the national level are the Departments of Health, Finance and Planning and Personnel Management. In many ways, the National Department of Health has become increasingly isolated from and irrelevant to the delivery of health services. Its senior staff have limited experience in the administration of services at the provincial and subprovincial levels. The department has not established effective mechanisms to lobby for health objectives, formulate policies and support health planning at the national level. Nor has it been able to maintain an adequate health information system. It does not appear to be providing adequate technical advice to the provinces, and has lost or ceded any claims to provincial-level manpower planning to the Department of Personnel Management. The National Department of Health has been unable to significantly influence a resource

transfer process that continues to allocate health funds to provinces that were better off in 1975, it has little, if any, input into the budget allocation process for provincial health spending, and it appears to be unable to analyse the current budget crisis and its implications for health. Despite these problems, and the lack of real output, the number of staff at headquarters continues to increase, and there are now proposals to recentralise some of the functions that have been transferred or delegated to the provinces.

The Department of Personnel Management plays a key, but unacknowledged, role in health planning by virtue of its 1982 ruling that the National Department of Health had no formal jurisdiction over provincial staff working on delegated functions. Provincial officials have assumed that the Department of Personnel Management's reviews of provincial establishment proposals use clearly established guidelines. This has not been the case. Indeed, especially at the provincial level, the Department has contributed to the existing crisis by failing to analyse the staff situation in health, by not assessing workloads and actual personnel needs, and by operating, in effect, as an in-house advocate for public employees in matters of pay and employment conditions. As the need for restructuring in health, and in the public sector generally, has become more apparent, the Department of Personnel Management has failed to advise the government on how this goal might be achieved in an orderly and systematic manner. Its main concern is the avoidance of controversy rather than the provision of high-quality advice to the government on the most appropriate use of human resources in the provision of public services.

The real locus of decisions about the health sector is the Department of Finance and Planning, which makes allocations to the National Department of Health and to the provinces. It sets ceilings for provincial staff and other resources, but each province is dealt with separately. As a result, health sector financing is addressed only in the context of individual provincial budgets, never for the country as a whole. The Department of Finance and Planning's operating processes contain no mechanisms for making transparent and accessible the funding and allocation process for the sector as a whole. Because of the lack of such mechanisms, the National Department of Health has minimal impact on health financing and priorities.

In sum, the role of different levels of government remains uncertain because of the limited and disputed decentralisation that took place in the early 1980s. The current scene is characterised by a multiplicity of actors—the National Department of Health, the Department of Finance and Planning and the Department of Personnel Management—in the centre and in the provinces (Provincial Departments of Health, provincial hospitals). Each of these players has a partial mandate and point of view, but is capable of impeding service delivery through its own decisions and actions.

Table 6 **Breakdown of government health expenditures, 1981–94**

	Government health expenditures (million kina)	Recurrent health expenditures (million kina)	Development health expenditures (million kina)[a]	Proportion of recurrent health expenditures to total government health expenditures	Development expenditures as a percentage of total government health expenditures
1981	61.2	60.9	0.3	99.5	0.5
1982	62.3	61.9	0.4	99.4	0.6
1983	67.9	67.4	0.5	99.3	0.7
1984	73.3	71.5	1.8	97.5	2.5
1985	80.9	77.8	3.1	96.2	3.8
1986	87.4	84.5	2.9	96.7	3.3
1987	87.5	86.1	1.4	98.4	1.6
1988	88.3	86.8	1.5	98.3	1.7
1989	107.9	105.8	2.1	98.1	2.0
1990	96.3	84.2	12.1	87.4	12.6
1991	99.2	85.2	14.0	85.9	14.1
1992	101.1	87.3	13.8	86.4	13.7
1993	142.9	124.4	18.5	98.1	13.0
1994	152.8	139.0	13.8	91.0	9.0

[a] Includes capital projects such as building and construction, some of which are funded through the Ministry of Works.
Note: Does not include expenditures by provincial governments.
Source: Department of Health, Papua New Guinea (unpublished data).

Despite much rhetoric about decentralisation, the central government controls resource allocation in the sector. However, within the centre the National Department of Health is excluded from provincial budget discussions, with the Department of Finance and Planning playing the key role (but operating without a global view). The National Department of Health is also not extensively involved in staffing and personnel-related matters—the Department of Personnel Management is far more influential.

At the provincial level, the situation is also unsatisfactory. The authority of most provincial departments of health has been eroded due to directives from Port Moresby and developments at the provincial government level. Supervision and management of peripheral facilities have deteriorated, and field staff are unsure as to whom they are accountable. Hospitals have been 'unplugged' in most settings from the larger health scene. Meanwhile, church services have also been affected. Church authorities are unsure whom to relate to and what role they should be playing.

Table 7 **Hospital indicators by province, 1990**

Province	Hospital	Number of beds	Number of inpatients	Bed turnover rate	Average length of stay (days)	Inpatient days	Occupancy rate (per cent)
Western	Daru	110	1,177	10.7	9.9	11,652	29
Gulf	Kerema	80	1,115	13.9	9.1	10,147	35
Central	Port Moresby General Hospital	700	23,915	34.2	6.0	143,490	56
Milne Bay	Alotau	150	2,414	16.1	10.6	25,588	47
Oro	Popondetta	150	2,577	17.2	8.8	22,678	41
Simbu	Kundiawa	180	4,915	27.3	6.7	32,931	50
Eastern Highlands	Goroka	600	7,729	12.9	7.2	55,649	25
Morobe	Angau	480	12,230	25.5	9.1	111,293	64
Madang	Madang	372	5,317	14.3	8.6	45,726	34
East Sepik	Wewak	320	6,736	21.1	9.1	61,298	52
Manus	Lorengau	100	933	9.3	8.9	8,304	23
New Ireland	Kavieng	130	2,295	17.7	9.8	22,491	47
East New Britain	Nonga	480	9,723	20.3	7.8	75,839	43
West New Britain	Kimbe	191	5,026	26.3	7.9	39,705	57

Source: Department of Health, Papua New Guinea (unpublished data).

Other issues

Investment spending. High personnel outlays have crowded out not just operational spending but also investment expenditures (Table 6). During the 1980s only 1.8 per cent (13 million kina) of total central health transfers was allocated for capital projects (Thomason and Newbrander 1991). This pattern was reversed quite sharply in the early 1990s, reflecting the availability of Japanese aid funds. Still, there is a pent-up demand for capital spending—hospitals, health centres, and other facilities need refurbishing and upgrading. Such outlays should proceed within province-specific service delivery plans, which need to be prepared once various steps to tackle personnel costs are in place.

Hospital spending. At roughly 40 per cent, the hospital share of total recurrent health expenditures is well below that in many developing countries. Still, hospital

Table 8 **Value of medical supplies allocated to selected provinces, kina per capita, 1992–94 (1990 prices)**

Province	1992	1993	1994[a]
Central	1.86	1.99	1.69
Gulf	2.23	1.90	1.86
Western	2.17	2.83	2.81
Milne Bay	2.89	1.64	1.75
Port Moresby	8.89	7.26	6.10
Morobe	..	2.82	..
W. Highlands	..	1.54	..

a Through September 30, 1994

Source: Department of Health, Papua New Guinea (unpublished data).

Table 9 **Hospital user fees collected, by province, 1990–92 ('000 kina)**

Province	Hospital	1990	1991	1992
Western	Daru	14,284	11,577	13,122
Gulf	Kerema	5,379	172	1,637
Milne Bay	Alotau	17,912	15,226	14,887
Oro	Popondetta	27,246	22,585	28,750
Southern Highlands	Mendi	10,180	11,695	11,785
Simbu	Kundiawa	29,310	24,965	20,115
Eastern Highlands	Goroka	73,852	109,514	987,312
Madang	Madang	27,192	..	..
East Sepik	Wewak	26,695	18,753	18,316
Sandaun	Vanimo	12,949	8,963	8,616
Manus	Lorengau	6,640	4,268	6,034
New Ireland	Kavieng	25,583	29,051	29,962
East New Britain	Nonga	50,119		
West New Britain	Kimbe	25,571	24,070	24,043
North Solomons	Arawa	6,041	..	..
Central	Port Moresby General Hospital	312,559	320,143	36,215
Morobe	Angau	124,502		
Total		796,014	600,982	1,500,794

Source: Department of Health, Papua New Guinea (unpublished data).

Table 10 **Hospital user fees and expenditures per inpatient, by province, 1990**

Province	Hospital	User fee per capita	Expenditures per inpatient (kina)	
Western	Daru	12.79	535	479
Gulf	Kerema	4.82	436	391
Milne Bay	Alotau	0.43	1,044	25
Oro	Popondetta	11.29	956	396
Southern Highlands	Mendi	3.68	984	356
Simbu	Kundiawa	5.96	766	156
Eastern Highlands	Goroka	9.56	2,607	337
Madang	Madang	5.11	1,720	324
East Sepik	Wewak	3.96	..	..
Sandaun	Vanimo	2.74	505	107
Manus	Lorengau	7.12	440	472
New Ireland	Kavieng	11.15	618	269
East New Britain	Nonga	5.15	2,392	246
West New Britain	Kimbe	5.09	999	199
Central	Port Moresby	..	..	..
	General Hospital	13.07	7,655	20
Morobe	Angau	10.18	3,806	311

Source: Department of Health, Papua New Guinea (unpublished data).

spending grew disproportionately during the 1980s—the period in which the contacts between hospitals and lower-level health activities diminished (Table 6). Also of concern are the wide per capita variations in hospital spending by province. Spending ranged from nearly 30 kina per capita in 1992 in Central province (including the National Capital District), which is served by the Port Moresby General Hospital, to 4 kina per capita in Oro province. Despite high and rising levels of spending, occupancy rates are low on average (Table 7). Another indication of inefficiency is the length of hospital stays and the low bed turnover rates (Table 7). In most countries occupancy and bed turnover rates are higher in lower-level hospitals. This is not the case in Papua New Guinea, where Port Moresby General Hospital, a national referral hospital, outranks many provincial facilities in terms of occupancy and turnover rates.

A rethinking of the role of hospitals is needed. Port Moresby General Hospital and Angau Hospital (in Lae) together absorb a large share (more than 15 per cent in some years) of the national health budget, but operate primarily as provincial facilities. That is, they provide extensive outpatient and some inpatient care to nearby residents. As noted, hospitals in most provinces have lost their once-close links to the local health

system. Revised hospital spending plans are needed once the appropriate role of hospitals within the local delivery structure is worked out.

Drugs. Outlays on pharmaceuticals, a key component of operational spending, amounted to 1.4 kina in 1992 and 2.3 kina in 1993 on a per capita basis. These figures are low considering epidemiological patterns, the high costs of transporting and storing drugs, and expenditure levels in other developing countries (Saxenian 1994). Drug outlays also vary substantially, with Port Moresby, not surprisingly, ranking first in a sample of provinces (Table 8) and accounting for more than 12 per cent of national medical supply expenditures (half of which are for drugs). Drug spending needs to rise. But before allocations are increased, major efficiency improvements are needed in the system of ordering, stocking and distributing drugs. For instance, the six area medical stores, each serving a cluster of provinces, all suffer from security problems, poor quality control and inadequate information on outlays, costs, stocks and expiration dates. In addition, some prescription and vaccination practices appear to be wasteful (Bass 1993). The government has not produced a written policy on Essential Drugs that provides clear priorities on the drugs to be purchased, along with pricing and prescription policies and a realistic plan for distributing medicine to patients.

Cost recovery. In many countries operational outlays are funded partially through user fees. These price signals also help to direct client demand to appropriate service centres. Papua New Guinea has not turned to cost recovery mechanisms for such purposes (Thomason, Mulois and Bass 1992). Revenues from user fees in hospitals and other facilities account for an unusually low share —about 1 per cent—of health spending (Table 9). The fee schedule has not altered since it was introduced in 1978 despite several cabinet-level efforts to raise hospital charges. Hospitals are supposed to collect modest fees from outpatients and for a number of inpatient services and drugs. Hospitals vary in revenues collected per capita (Table 10). This may be due to exceptions for some categories of patients, such as students, the poor and family planning clients. But fee receipts also are constrained by weak collection and enforcement systems, which reflect a lack of incentives within hospitals to improve revenue collection. A related problem is the non-payment of charges by private doctors making use of hospital facilities, and by patients occupying beds in improved 'intermediate' wards. One result of low hospital fees is that many patients prefer to bypass lower tier clinics, contributing to overuse of referral centres and underuse of other facilities.

Modest levels of cost recovery are the rule in many health centres, subcentres and aid posts. Fee schedules for these facilities are determined at the provincial level. Revenues have usually been used to supplement funds available for operational purposes. Church health services appear to charge and receive higher fees than government facilities.

A new strategy

There is now widespread acknowledgment within Papua New Guinea of health system problems. This recognition has been expressed in public statements by recent health ministers and secretaries, and is reiterated in several donor-funded studies and overviews. An awareness of health problems is also evident in various policy innovations and proposals that have emerged during the past two years.

Recent developments

Prompted by then-Prime Minister Wingti, the Village Studies and Provincial Affairs (VSPA) Department entered the health arena with a plan to reintroduce periodic village patrols. These outreach visits would be led by the district administrator and would include a full complement of staff from different sectors, including health. Another important initiative was the Public Hospitals Act, passed by Parliament in 1994. The Act is intended to enhance the accountability of hospitals to patients' needs. This will be achieved by creating boards made up largely of local business and community leaders, and by establishing each hospital as an independent entity.

There have also been noteworthy developments at the provincial level and in the non-government sector. For example, several provinces are piloting local delivery and training initiatives: in Gulf Province the Assistant Secretary for Health is testing ways of improving the effectiveness of community health workers in community development. In Morobe the Health Department is experimenting with village health aides, who are given three months' training and small stocks of medicine. The most promising initiative is the Provincial Health Board, which Western Highlands introduced through a 1991 Provincial Parliament Act. The Assistant Secretary for Health is using the Provincial Board, which consists of twelve people, many working in health-related activities (including a church representative), to serve as a review body and to provide a forum to consider key decisions, such as the amount of support to Mount Hagen hospital, whether to open or close facilities in different localities, and the level of transfers to church health services.

Meanwhile, the Churches Medical Council, which represents twenty-three different denominations, asked the Minister of Health to greatly expand public support to church-run services. In a 1994 brief, the Council described a funding crisis which has disrupted the large share—80 per cent—of rural health services for which it claimed to be responsible. This financing problem was attributed to declining contributions from abroad and to the government's reliance on unadjusted, 1982 payment scales in calculating stipends and transfers to church operations. The Council has asked for a 50 per cent increase in government support, during a time of overall budget stringency.

These measures and proposals remain partial and unproven, and in some instances rather flawed. For example, doubts arose early on about the financial and technical sustainability of VSPA's efforts to use revitalised patrols to deliver child survival services. The hospital boards got off to a slow start amid spending cuts and unclear policy direction from the National Department of Health. And the Churches Medical Council's case for large, direct funding increases seems to ignore church overinvestment in some physical facilities, now underutilised, and wage pressures coming from staff who want parity with government workers.

The draft policy paper

Current initiatives need to be pursued and evaluated within a broader framework. Fortunately, such a framework is emerging within the National Department of Health. Recent policy advances are discernible in a February 1995 draft policy paper, which brings some fresh thinking to the country's health crisis.

One of the notable features of this document is the transparent and consultative process employed to arrive at a consensus approach. Health Minister, Peter Barter and the National Department of Health drafting committee reached out to a wide range of health stakeholders through special meetings. An effort also was made to use the media to generate public support for new health policies. For instance, a full-page newspaper announcement declared 1995 to be the 'Year of Health Promotion and Education'. This advertisement and other public statements have been candid both about the country's health problems and policy failures, including the weak National Department of Health and Provincial Departments of Health management, and about the government's limited ability to overcome these constraints without proactive, voluntary efforts by private citizens.

The draft policy statement makes a strong case for a number of policy steps, some of which have already been taken.

- Hospital user charges are set to rise sharply. In Port Moresby General Hospital, the fee for admissions and inpatient services (for the first five days) is due to rise from 2 kina to 10 kina on July 1, 1995. Other charges, such as for specialist clinics, outpatient visits, diagnostic tests and accommodation, also will increase significantly.
- Legislative amendments have been drafted to strengthen hospital boards and improve community representation, enabling them to receive funds (through a separate national vote) directly from the national government, allowing them to recommend tariffs on an annual basis, and making them the responsibility of the Minister of Health.
- Government spending on hospitals is to be contained, and channeled on contractual terms in return for specified services, such as training and outreach to rural clinics. Cost reductions and financial autonomy and management are

to be promoted within hospitals and other facilities, in part by permitting greater retention of fee revenue.

- A fully functional monitoring and evaluation unit will be established within the National Department of Health.
- A special promotion unit will be set up to launch and sustain a massive health education effort involving various audiences and stakeholders.
- Funding for the procurement and distribution of medical supplies and equipment will be protected, and the feasibility of privatizing distribution of these inputs will be explored.
- Efforts such as newsletters and radio contacts are planned to improve communications among health staff.

Also praiseworthy is the draft document's stated priority of shifting attention and resources to the delivery of preventive rural health services. The paper promises to eliminate low-priority services if required by outstanding constraints. However, the analysis and specific proposals with respect to this objective are not fully persuasive. The draft policy paper reverts to the traditional National Department of Health tendency to attribute problems in rural health services to excessive decentralisation and to its limited mandate to take remedial measures. Provinces are seen as possessing broad authority in health matters but are not held accountable. A related problem in the draft is that the health roles and responsibilities of different levels of government are poorly defined. At the same time, the document criticises the Department of Personnel Management which retains 'ultimate authority' but has failed to tend to its responsibilities in personnel matters. Similarly, 'the complexity and bureaucratic tangle' of financing mechanisms are seen as contributing to health system decline: 'Responsibility is bounced between different government levels as a continuous debate on power sharing, delegation and the transfer of functions make action less likely' (p10).

The draft document looks to legislative measures as a means of restoring leadership and authority to the National Department of Health. Parliamentary action will be proposed to 'streamline' the health system; to develop and implement 'standard provincial health structures'; to reassert the Department's legal and financial authority over disease control, nutrition, family and environmental health, and all other preventive health services; to establish standards for health delivery at all levels; to give the Department the power to appoint provincial assistant health secretaries and other key staff; and to set up provincial committees to 'coordinate' health activity and liase between the National Department of Health and district-level services. In addition, the draft paper suggests that the delegation of personnel matters to the Department of Personnel Management be ended, and that a human resource division with a strong mandate be created within the National Department of Health.

Assessment. The draft policy paper offers some questionable diagnosis and prescriptions. First, the blame ascribed to decentralisation is misplaced. As discussed above, the provincial health departments have little actual authority or influence over financial and personnel matters and retain at best only partial managerial and supervisory responsibility for service delivery. The real institutional backlog lies within Port Moresby in the unsatisfactory division of authority among the National Department of Health, Department of Personnel Management and the Department of Finance and Planning. This problem is alluded to in the draft paper, but the proposed remedies are mainly a reassertion of the National Department of Health's authority over the provinces, rather than a critique of its dealings with Finance and Personnel.

Second, it remains unclear how the National Department of Health would exercise the 'recentralised' powers in health service delivery it feels it needs. What instruments and mechanisms would be used? Would central and provincial staff be absorbed and given direct instructions by the centre? How would the various components of primary health care be integrated and by whom? How would the time of workers be allocated among different 'high priority' tasks? How would performance be judged and by whom? Would any tasks or responsibilities be retained by or delegated to the provincial health departments? If so, how would problems of dual authority and management be overcome? And how extensive will the mandate of the central human resource division be? That is, would it cover hospitals? Would it promote discipline and professional standards? And what would be the role of provincial and district officials? Would the National Department of Health attempt, against all odds, to orchestrate manpower deployment, transfers and attrition from the centre? Despite concerns about the ambiguity in current health roles of different levels of government, the paper does not offer clear-cut alternatives or a realistic timetable and implementation plan. At one extreme is a vision of a powerful and competent centre, able to micro-manage health service delivery directly. At other times, e.g., the suggested establishment of provincial health committees to coordinate and liase, the scenario laid out in the draft paper is merely a modified version of current day arrangements.

Of equal concern is the way expenditure issues are addressed in the draft note. There is no acknowledgment of the large amounts already being spent on health. Instead numerous references are made to funding shortfalls, particularly for operational materials and purposes, and it is stated that curative services, especially hospitals, receive a disproportionate share of funding. For solutions, the draft looks to hospital fee increases and cost reductions, and to separate votes for preventive services as a way of earmarking funds. Reference is also made to the possibility of eliminating unspecified, low-priority services should funds not be available.

What is missing is a sense of the overall expenditures increases that are implied in the paper's plan to revitalise rural health services. The document refers to 'massive'

efforts in health education and promotion, supported by intensive operations research, facility rehabilitation, a radio network linking peripheral facilities with provincial and district offices, transformation of some health centres into rural hospitals (over a five-year period), improved maintenance, timely provision of drugs and equipment, upgraded personnel standards and training, institutional housing for staff, and investment in an effective health information system. How large an increase is entailed and how will it be financed? Here the draft states only that the National Department of Health will seek 'adequate levels of funding' from the central government.

Personnel-related outlays. The draft document is silent on what this paper has identified as the country's overriding health expenditure issue: the large share of health outlays tied up in personnel-related payments. This labour component of the health budget continues to increase even though it has been the subject of different approaches and jurisdictional bargaining among the National Department of Health, the Department of Finance and Planning, the Department of Personnel Management and the provinces. The large and growing proportion of health outlays going to personnel costs is attributable to generous allowances and salary scales which have been enhanced through regular indexation and periodic renegotiation of agreements with doctors, nurses and other worker associations, including the Public Employee Association. A second factor has been the willingness of the government to absorb staff, such as aid post orderlies, that once were employed at relatively low wages. A third reason for rising labour costs has been the difficulty experienced in defining and monitoring worker performance, particularly in peripheral facilities that have not been supervised regularly.

Employment conditions and pay scales are notoriously difficult to unbundle. It is not surprising, therefore, that the draft paper's proposal to raise spending on rural health services and other items fails to touch on how to reallocate the funds now tied up in personnel costs. Yet such a shift in spending will be essential if sustained increases in operational and other outlays are to be achieved. The likelihood of real reductions in overall health expenditures and the relatively limited prospects for rapid growth in retained health sector revenues make such a reallocation all the more unavoidable. Accordingly, current remedial proposals, including those in the draft paper, must be seen as flawed if they lack realistic and comprehensive plans for shifting expenditures away from personnel costs and for engendering cost-saving efficiency gains. Three sets of questions should be addressed in the preparation of sustainable plans.

How can personnel costs be reduced? The best way to augment and protect operational costs is to decrease 'competition' from staff expenditures. This can be done by closing some facilities, scaling back services and capacity in other facilities, using more regular and supportive supervision, and redefining performance expectations to improve worker productivity. These steps should be feasible, in government as

well as church service networks, given the low average utilisation levels, especially in health centres, and the fact that some aid posts have fallen out of use. Staff affected by such cuts could be redeployed if jobs are available, or retrenched. Many provinces may have to continue to pay salaries to over age workers who have not retired because no provision has been made for termination grants.

Measures also should be employed to lower salary and benefit scales, or at least the rate of increase in these scales. These efforts could include attempts to renegotiate existing labour agreements. Inducements to health workers could be offered, such as allowing government staff to engage in private practice after regular working hours, in return for an adjustment of pay scales. Related measures could include hiring some doctors and other staff on contractual terms, creating province-level civil service cadres, requiring workers to enter into facility-specific (for hospitals) or province-specific pay agreements where feasible and appropriate, widening the coverage of church-provided services using non-unionised staff, and relying increasingly on new, lower-paid, casual worker categories (such as village health aides).

Who should take the lead in designing and implementing expenditure reallocations and efficiency-enhancing steps? Responsibility for formulating, negotiating and operationalising these expenditure and service delivery adjustments should be delegated to provinces with sufficient capacity. Provincial Departments of Health play an important role in putting together a reform program that commands wide support. But the basic decisions should be made by Provincial Health Boards, which would include representatives from local church health services, the business community and the hospital board, as well as political leaders. These boards could be responsible for allocating the overall health budget, made up of a single global transfer from the centre, as well as for funds made available by the provincial government. The size of the grant, which would replace funds previously spent in the province on national, delegated and transferred functions, would be determined on the basis of provincial plans, capacity and progress in meeting agreed-upon targets. The health boards would determine the coverage and quality of services to be offered; the best mix of government, church and private care providers; the role of hospitals in the local system; supervision, liaison and regulatory practices; how to purchase, stock and distribute pharmaceuticals and medical equipment; and the feasible personnel terms and conditions. Boards also should be created to run hospitals within a framework laid out by the Provincial Health Board. Hospital boards should negotiate a program of technical support activities by hospital staff in return for a stipend from the Board.

In effect, this strategy suggests an orderly and phased decentralisation, governed by transparent rules and a sustainable division of labour between key agencies. At the provincial level, accountability for service delivery and use of funds would rest with the Provincial Health Boards, with Provincial Departments of Health providing

secretarial and coordination functions. The level and form of support to church health services would be determined within the provincial setting, under the aegis of the Board. Each provincial board also would explore ways of expanding the private provision of health services, including lifting restrictions on moonlighting by government health workers. The boards would also decide how to organise the purchase and distribution of drugs for public facilities. One option would be to contract out such activities to private firms.

What role should be played by the National Department of Health? A small, empowered, and highly effective Department would have a number of important functions to attend to within a reformed, financially sustainable health system. First, the current exclusion of the Central Ministry from province-related budgetary and personnel discussions needs to end. The Department must become a powerful advocate for health within the government, and the minister of health needs to play an analogous role within the Cabinet. Institutional arrangements should be devised that give the National Department of Health an influential voice in all financial, technical, and manpower decisions relating to health. In this capacity, the Department should draw attention to persistent provincial-level inequalities in per capita health spending and should participate in national discussions on how best to use central transfers to aid poor provinces. Second, the National Department of Health should review provincial health plans, objectives and recent performance, and agree with the Provincial Health Boards on the size of the overall transfers for health. The Department can be authorised to reduce these allocations to tie allocations to improved performance. Finally, the Department should re-establish and manage an effective health information system, and serve as a clearing-house for information on provincial experiences and lessons in regard to new service delivery modalities, efficiency improvements and community involvement. The Department also should support research on public health priorities in different regions.

Cost recovery and private provision. An effective remedial strategy also needs to encourage private provision of health services together with cost recovery and revenue retention in public facilities. As mentioned, there are plans to raise fees for health services in July 1995. Private provision of the health services, though still limited, has grown rapidly and appears to be capable of significant further expansion (Thomason 1994). Most private doctors, comprising about a quarter of the national total, are based in Port Moresby, Lae and other large cities. The country's twenty-five privately owned pharmacies also are located in urban centres.

It is difficult to ascertain the volume of privately provided services. Bank mission visits and small surveys suggest that most of these are drawn from low to middle-income urban households. In most cases the patients who typically pay 15 kina per consultation, are attracted by the higher-quality treatment available in private facilities.

Some patients are reimbursed by their insurance plans. Health insurance has been available for some years to Public Employees Association (PEA) members for roughly 104 kina per year per family—a price that has remained unchanged since the mid-1980s. There are more than 15,000 Public Employees Association health insurance subscribers whose visits to private doctors' offices are reimbursable. In addition, the Employer's Federation, with more than 100 member companies, sponsors an optional health insurance scheme that relies on payroll deductions. Like the Association plan, there is a 10 per cent co-insurance rate. A wide range of hospital and outpatient services are covered. As of June 1992, some 6,900 workers were enrolled in this scheme.

The 1991–95 national health plan suggests some interim measures to encourage private provision of health services. The topic is also touched on in the draft health paper, where reference is made to allowing private specialists to practice on a part-time basis in public facilities. This agenda needs to be expanded to include

- removing the restrictions on limited private practice by doctors who are civil servants, and on provision of care by nurses and health extension officers
- establishing transparent and fair arrangements for use of public hospital facilities by private physicians
- hiring not only private specialists doctors but also general physicians and other staff on an as-needed basis
- encouraging the National Department of Health, Provincial Health Boards, leading private providers and insurance firms to develop an incentive and regulatory framework governing entry into private health service provision, standards of care and malpractice options
- offering inducements to private mining and other firms, which already provide health care to their employees, to offer services to residents in the remote, underserved areas near mines and plantations.

The private sector also can be tapped to overcome problems in the drug supply and distribution system. In contrast to the six area medical stores, private pharmaceutical firms and warehouses are well stocked and appear to use appropriate monitoring and accounting practices. As mentioned, the draft paper proposes the possibility of privatising medical supply distribution. One possible approach would be to eliminate the area medical stores and allow hospitals in commercial centres to contract with private companies to supply pharmaceuticals. In each province, the Provincial Departments of Health could follow a similar course for its network of rural facilities. In addition, hospitals and health centres in urban areas should not fill prescriptions—this should be done in nearby or in-house private pharmacies. Poor patients could be given prescription coupons acceptable to private drug suppliers who would be reimbursed. This option could be piloted in Port Moresby, Lae and a few other areas, and then extended to other provinces.

A phased reform program

As noted, the draft health policy paper prepared by the National Department of Health has a number of strong points, including the proposal to turn the central ministry into a powerful advocacy, policymaking and review body. Nevertheless, implementation of the draft document would involve large expenditure increases in a setting where per capita health outlays already are very high and where tight budgetary constraints are likely to continue. The draft paper does not offer a realistic view of expenditure priorities. Nor does it touch on the high personnel and salary costs in health spending. Instead the paper looks to increased donor-funded expenditure on training, upgraded personnel standards, and the establishment of a human resource planning division. Expanded spending on human resource development should be postponed until a future, sustainable configuration of delivery arrangements, public and private, has been sorted out. Finally, the draft document endorses an expanded role for the National Department of Health in service delivery without acknowledging the costly administration and supervision that this would entail.

As an alternative to the view articulated in the National Department of Health's draft document, this paper suggests a focused effort to endow provinces with the capacity and authority to deliver health services. This approach allocates a crucial advocacy, policymaking, allocation and performance review role to the Department and recognises that the National Department of Health needs to develop appropriate 'steering mechanisms', including conditional allocation of block grants, joint planning, review procedures, technical support mechanisms and so on.

The first year

The aim in the first year would be to revive service delivery in peripheral areas and facilities and to initiate important policy and organisational changes. This can be accomplished by

- protecting health spending by allocating the equivalent of 1992 real expenditures to the sector, and by earmarking funds to ensure a significant increase in outlays for operational purposes, including drug supplies. Calculations suggest that, depending on where the exchange rate stabilises, an additional 1–2.2 million kina will be needed to reach 1992 drug import levels. In addition to pharmaceuticals, a committee of national and provincial health staff should propose emergency resource transfers to finance and protect immunisation, antenatal care, growth monitoring and nutrition surveillance. The essential spending categories that need to be funded include outreach patrols, supervision of aid posts and subcentres, and other operational items.
- creating and empowering health boards in five to seven provinces, such as Western and Eastern Highlands, NCD/Central Provinces, New Ireland, Manus,

Madang and West New Britain, to plan and implement local health programs and to handle all staff-related matters. These boards should include church health service and local business representatives. Mechanisms will need to be developed for consolidating and allocating (as block grants) to these provinces funds now budgeted by the centre for national, delegated, and transferred functions.

- the Boards preparing, against a backdrop of budget ceilings reflecting 1992 real spending levels, annual service delivery and expenditure proposals detailing coverage, utilisation, and rough outcome targets, and required facility-level and supervision inputs. This exercise should result in clear priorities regarding the pattern of sustainable service delivery and drug consumption, and indicate needed facility rehabilitation and closures, staff transfers, and the anticipated role of different providers (church services, private clinics). This first year also should result in mechanisms through which the National Department of Health can efficiently evaluate and approve proposals prepared by Provincial Health Boards. A key criterion in reviewing such proposals would be the extent to which basic health services in remote and peripheral areas are protected or re-established.
- beginning to restructure the National Department of Health to take on provincial review and monitoring, resource allocation, policy guidance, and administrative and technical support functions, and to become the principal voice for health in central policy and expenditure allocation discussions. Required steps include downsizing and reconfiguring the department; establishing new mechanisms and procedures, for example, between the National Department of Health and Department of Finance and Planning and the Department of Personnel Management, within the central government overall; developing detailed guidelines for provincial proposal preparation, review and reporting; training staff to assess and monitor provincial programs and to give technical advice and support to Provincial Health Boards; rationalising the health information system; and undertaking timely analysis and research on the cost-effectiveness of different health delivery and staffing approaches, epidemiological trends, and other program matters.
- transferring authority for government health workers to Provincial Health Boards and hospital boards, which should be encouraged to enter into collective bargaining with staff unions to arrive at sustainable, locally applicable employment and wage agreements. The centre should assist by funding pensions for post-retirement age staff and retrenchment bonuses and training for redundant workers.
- taking steps to improve pharmaceutical quality control, cost accounting, and information systems. In Port Moresby, Lae and other large cities, private wholesalers and retailers should be used to purchase and supply drugs to public facilities on a pilot basis. Coupons should be issued to the poor patients to cover the costs of prescriptions in such areas.

- strengthening enforcement and collection mechanisms for cost recovery, especially in hospitals, and taking other measures to generate and retain revenue for operational needs. As determined by each Provincial Health Board, revenue could be generated by adjusting fee schedules, especially for hospital-based services, ending the practice of feeding hospital staff's family for free, and giving facility-level committees a voice in the allocation of revenues.
- removing restrictions on limited private practice by government doctors, nurses and health extension officers, and taking other steps to encourage the private health sector, for example, making greater use of private providers in public facilities and increased cost recovery in public hospitals.
- requiring the hospital boards for Port Moresby General Hospital and Angau Memorial Hospital (Lae) to prepare revised service delivery and staffing plans to reflect reduced central funding. Hospital authorities need to respond to constraints affecting facility performance, as well as opportunities and options for service reorientation. Hospital proposals should be assessed in light of broader plans developed by individual Provincial Health Boards.

The second year

The goal for the second year is to consolidate and extend the policy and institutional changes introduced in the first year, and to establish Provincial Health Boards in several additional provinces. By the end of the second year, the transformation of the National Department of Health into a smaller, technically able review, coordination and support body should be completed. The reassignment of redundant staff should be finalised, and a reoriented organisational set-up with strengthened management should be in place, along with revised health information and performance monitoring systems. New guidelines, procedures, and performance criteria should have been adopted for reviewing provincial proposals, setting funding levels, channeling resources and deciding on remedial steps if targets are not reached. A new structure for health policy and decision-making should have emerged, giving the National Department of Health a strong voice in determining overall finding levels and the interprovince allocation of central funds. Guidelines and procedures should be in place that achieve greater equity in the distribution of public health funds. Relevant criteria could include epidemiological need, poverty levels, local management capacity, and population density and accessibility. Finally, the National Department of Health should have established itself as a clearinghouse for province-level lessons regarding cost-effective service delivery; incentive packages to induce staff to work in remote areas; development of new job descriptions, personnel practices, and performance assessment guidelines; in-service training; and cooperation with church services and private providers. A special fund could be established that allows the National Department of Health to support promising pilot initiatives, using a competitive proposal process, with selection decided by expert committees.

Other broad initiatives are needed to foster reform during the program's second year. First, the Department of Health needs to push for major revisions of current civil service codes and salary and benefit agreements with the Public Employees Association and the various health worker groups. The objective should not be to discourage collective bargaining, but to eliminate unsustainable national agreements. Instead, individual employment units—Provincial Health Boards, hospital boards and church services—should negotiate their own incentive packages with staff. The National Department of Health also needs to push for a broad review and revision of current restraints on private practice, currently highly restrictive. Government health staff should be allowed greater scope for moonlighting, and in their private practice should be permitted to offer the same treatment and prescriptions that they provide as public employees. Private practice can be further stimulated by encouraging public and private employers to consider health insurance and health maintenance plans, and by asking mining companies and plantations to expand health services, with appropriate cost recovery, in their catchment areas.

At the provincial level, a number of new Provincial Health Boards should be established, given broad authority for allocation and staffing decisions (subject to budget ceilings), and assisted in preparing service delivery and expenditure proposals. The boards set up in the first year should be presented detailed operational funding proposals that indicate which facilities will be closed or scaled back; the number of staff to be redeployed or retrenched; how hospitals, private providers and church services will be linked to the larger delivery system; training needs; achievements in and opportunities for cost recovery in facilities; and requirements for facility rehabilitation, new investment and capacity building.

The third year and beyond

Provincial Health Boards would be formed in the remaining provinces in the third year, and the decentralised health planning and service delivery system would be established throughout the country. Central support for provincial health services should reflect program achievements and agreed goals, as well as equity and epidemiological considerations. The National Department of Health should have completed its transformation into an agency handling provincial support and oversight, policy development and program review functions. To perform these review responsibilities, the Department will need to collate and prioritise the investment and training proposals that emerge from the health planning exercises conducted by each Provincial Health Board. During this period the National Department of Health should complete an assessment of current training activities and formation needs for staff likely to be employed in the emerging mixed, decentralised health delivery system.

Recommendations should be provided regarding the nature of training to be subsidised and the most appropriate arrangements for such activities.

Donor coordination

This phased set of policy changes, activities and expenditures constitutes a framework within which aid flows can be prioritised and coordinated. To date, donors have provided considerable health resources (see Annex Table 1), but this support has not been directed to the most pressing needs in the sector. This should change once donors and the government using the decentralised planning process, generate high-priority, bankable expenditures. The provincial planning and budgeting exercises would yield yearly investment and recurrent spending proposals which could, after the National Department of Health review, be presented in an annual consultation attended by all key donors. The National Department of Health could make a presentation at this meeting providing a status report on health reforms and achievements and planned actions. This gathering could assess proposals and outlays in light of recent performance and policy objectives, and agree on the levels and directions of health support for the following year.

Annex

Donor Assistance

1. Bilateral and multilateral donors have been important sources of assistance in the health sector (Annex Table 1). Of the bilaterals, Australia and Japan have been the most significant. Most of the multilateral support has come from the Asian Development Bank (ADB), with the World Bank, World Health Organization and the United Nation : Children's Fund (UNICEF) providing some assistance.

2. Bilateral assistance. The high level of colonial budgetary assistance provided by Australia continued after independence as a general grant-in-aid. Of the A$305 million in assistance provided by Australia in 1987/88, 90 per cent was in the form of an untied grant-in-aid. Since then there has been a significant push by the Australian government to link assistance to individual projects and, at the same time, to reduce the amount of untied support. By 1991/92, although the total support provided by Australia had risen to A$335 million, the grant-in-aid proportion had fallen to 80 per cent. Since health is one of the designated priority sectors for project-based aid, growth has been rapid in this sector. In 1987/88 the total amount of tied aid from Australia for health was A$239,955; by 1991/92 this figure had risen to A$1.599 million.

3. Grants from Japan for the health sector between 1986 and 1992 exceeded 50 million kina. This tied aid was used to rehabilitate hospitals in Port Moresby and selected provinces and to purchase medical equipment. USAID has also been a significant health donor, with levels of project assistance running at approximately 2 million kina a year, primarily in child survival and family planning.

4. Multilateral assistance. The largest volume of multilateral assistance, both technical and financial, has come from the ADB. Three rural health services projects, the first beginning in 1983, have provided soft loans totaling 45 million kina. These projects have emphasised the construction and upgrading of health facilities in rural areas, water supply and sanitation systems and institutional strengthening. The ADB is also jointly involved with the World Bank and the Australian aid agency AIDAB (now AusAID) in the Population and Family Planning Project. Total ADB support for the project is expected to be US$6.8 million, the World Bank's financing is expected to be US$6.9 million, and AusAID is expected to provide US$10 million in grant financing. Other multilateral donors (WHO, UNICEF, UNDP and the EC) provide some technical assistance and small amounts of financial aid.

Annex Table 1 **Donor assistance to the health sector, various years**

Donor	Project	Project period	Donor commitment ('000 kina/US$)
Australia (grants)	Hospital Management Project	1993–98	7,886
	UNICEF Immunisation Program	1989	369
	Medical Officers Training Phase 1	1988–90	2,001
	Medical Officers Training Phase 2	1991–93	4,898
	Daru Hospital Upgrading	1992–93	200
	AIDS Blood Testing Equipment	1988	110
	Population and Family Planning (with World Bank)	1994–99	US$10,000
	Child Survival Program	1994	1,600
	STD/HIV Prevention and Care	1995–98	7,295
	Malaria Vaccine Trial	1994–95	600
Japan (grants)	Medical Equipment Supply	1986–88	3,800
	Port Moresby General Hospital Redevelopment I	1988–90	9,500
	Port Moresby General Hospital Redevelopment II	1989–91	14,000
	Provincial Hospital Redevelopment I	1990–92	13,000
	Provincial Hospital Redevelopment II	1991–93	11,400
	Medical Equipment for Provincial Hospital	1991–92	2,000
United States (grants)	Population		
	SEATS	1990–94	1,900
	AIDS Prevention	1990–94	170
	Family Planning Support	1990–94	210
	Social Marketing	1989–93	620
	Health		
	Malaria Vaccine Trial	1987–92	7,620
	Child Survival Support	1987–92	8,980
	Delivering Essential	1988–91	
	Health Services		30
	Village Health Program	1989–92	350
	Village Birth Attendant Training	1986–93	1,050
ADB (technical assistance)	Rural Health Service	1980–81	170
	Second Rural Health Service	1984–85	150
	Hospital Service	1987–88	304
	Health Sector Financing	1990–91	250
	Strengthening of Monitoring of	1991–93	
	Rural Health Services Delivery		350
	Strengthening Monitoring of Health	1991	

	Service Delivery	US$350,000	
	Review of Health Services Delivery	1993	US$100,00
	National Health Plan Development	1994	US$450,000
Asian Development Bank (loans)			
	Rural Health Services	1983–87	11,540
	Second Rural Health Services	1985–91	13,370
	Third Rural Health Services	1991–97	20,190
	Population and Family Planning (with World Bank)	1994–99	US$6,800
World Bank (loan)	Population and Family Planning Project	1994–99	US$6,900

Sources: AIDAB, 1992. *Details of Australian ODA Expenditure*, AIDAB, Canberra; World Bank, 1993. *Papua New Guinea: population and family planning project*, Report No. 11264-PNG, Washington, DC.

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