4 HEALTH CLINICS: 2002 TO 2012

4.1 Introduction

This chapter assesses the state of PNG's primary health care clinics in both 2002 and 2012 to assess progress over the last decade. The analysis covers patient visits (Section 4.2), medical supplies (Section 4.3), health worker numbers and conditions (Section 4.4), health facility infrastructure and utilities (Section 4.5), outreach and mobility (Section 4.6), user satisfaction (Section 4.7), and supervision and community engagement (Section 4.8).

The 2002 PESD survey did not cover health in as much detail as education, so we are unable to conduct comparative analysis for all these aspects. For some of the latter sections of the chapter, we only have 2012 data. As noted in Chapter 2, the number of health clinics surveyed was increased from 117 in the 2002 survey to 142 in the PEPE survey. Survey teams attempted to visit the same 117 primary health care facilities surveyed in 2002. However, many health clinics visited in 2002 were either no longer operational or closed at the time of the survey. To a lesser extent, difficulties in travelling to facility sites because key roads, bridges and airstrips had deteriorated or because of tribal fighting, prevented survey teams from visiting some PESD health facilities. All this meant that survey teams were only able to visit 63 out of the 117 health clinics surveyed under the PESD (see Table 2-6).

When only 2012 data is presented, the full sample size is used (142 health clinics). Comparisons with 2002 data have been undertaken using both the full sample and the matching sample. The same picture emerges from both. As explained in Chapter 2, this chapter uses the full sample for the comparisons over time so that results are based on a larger sample size. Unless otherwise indicated, the results draw on the interviews with the Officers in Charge (OIC). The year, if not otherwise indicated, is 2012.

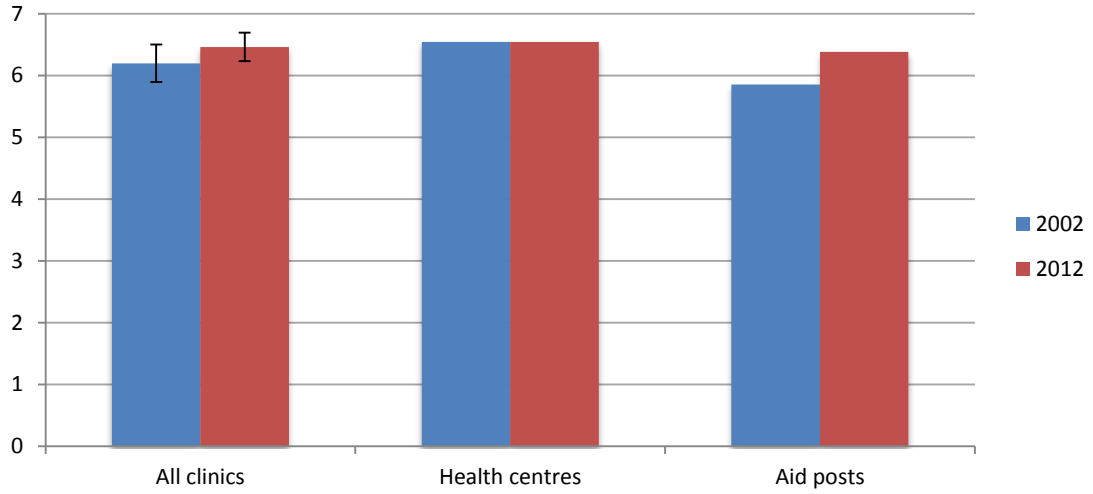
Due to the large differences between health centres and aid posts, we often show results for them separately. Health centres in fact cover sub health centres, urban clinics as well as health centres proper, and we refer to this enlarged group as 'HC+', or simply 'health centres'. The term 'health clinic' is used to cover both health centres and aid posts.

A comparison of results from the 2002 and 2012 surveys indicates health services have declined over the last decade. Health clinics struggle to provide core services due to poor operational infrastructure, a lack of basic utilities, supplies and workforce problems. There is widespread variation in health service provision across provinces, and church-run clinics outperform government clinics on a number of dimensions.

4.2 Days open and patient visits

The average number of days health clinics are open in a week increased marginally from 6.2 days in 2002 to 6.5 days in a week in 2012 (Figure 4-1). While the number of days the surveyed health centres were open remained the same, aid posts were open for half a day longer. A larger health centre in a town setting normally has specific opening hours, which may or may not include alternative arrangements for after-hours care. But survey teams encountered some aid posts, especially those operating in more remote communities, that did not have regular operating hours and instead operated more informally on a "needs basis", that is, opening when there are patients. They were open, on this basis, to treat patients every day of the week.

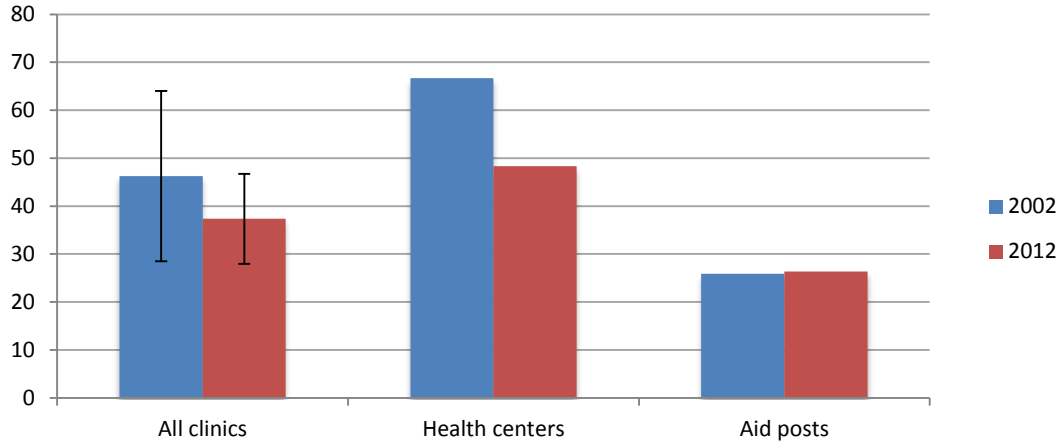
Figure 4-1: Average number of days per week health clinic open



Note: In this and the other figures in this chapter, error bars show 90 per cent confidence intervals. Numbers and t-test statistics for Figures 4-1 to 4-5 and 4-7 can be found in Annex Table 4-A1.

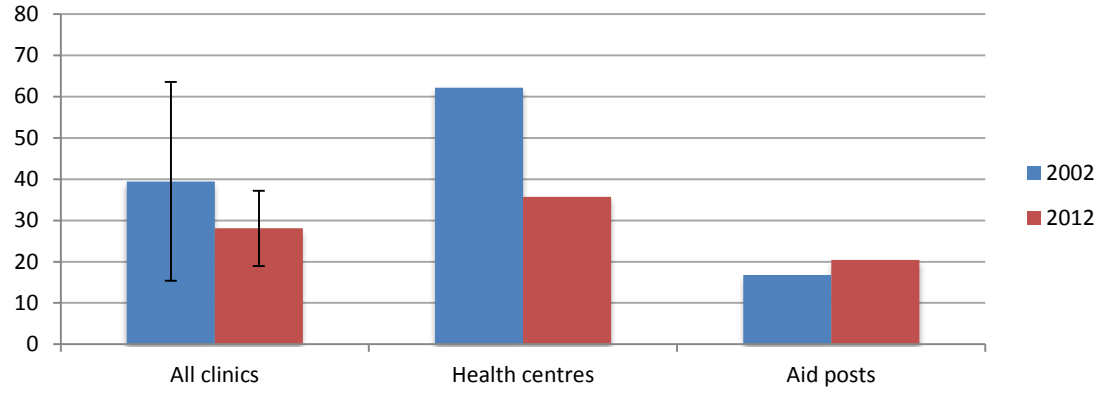
Even if some health clinics are open for slightly longer, this does not necessarily mean that more patients seek treatment. Figure 4-2 shows that an average of 37 patients visited health clinics in 2012, 19 per cent less than the 46 patient visit average in 2002. While this change is not significant at the 90 per cent level, it is certainly worrying, especially given estimated population growth of about 30 per cent. Patient visits to surveyed health centres fell by 28 per cent, while visits to aid posts slightly increased by 2 per cent.

Figure 4-2: Patient visits to health clinics in a typical day



Health clinics surveyed in 2002 and 2012 were also asked for the number of patient visits the day before the survey was carried out. Figure 4-3 indicates that patient visits "yesterday" fell from 39 visits a day in 2012 to just 28 visits in 2002. Again, while this decline is not significant, it is nevertheless of concern. It fits a pattern of reduced service delivery volume – and it is a large decline, almost 30 per cent. Health centres on average had 26 patient visits less the day before, but aid posts had close to four more.

Figure 4-3: Patient visits to health clinics "yesterday"



The decline in patient visits on the day prior to the survey is more pronounced across the 10-year period than that of patient visits on a typical day. Since the PEPE and PESD carried out survey implementation at different times of the year in 2002 and 2012, this could have influenced responses. On the other hand, responses for typical-day visits may embed more optimism.

Whichever estimate is taken – a decline of 19 per cent or of 29 per cent in patient visits – since population growth was in the vicinity of 30 per cent over the last ten years, the survey suggests that, even allowing for slightly longer opening hours, the population utilisation rate of health clinics roughly halved over this period. This rapid decline in effective patient demand for primary health care services suggests a loss of

confidence by the population in their primary health care system. Ordinary citizens are voting with their feet, and staying away.

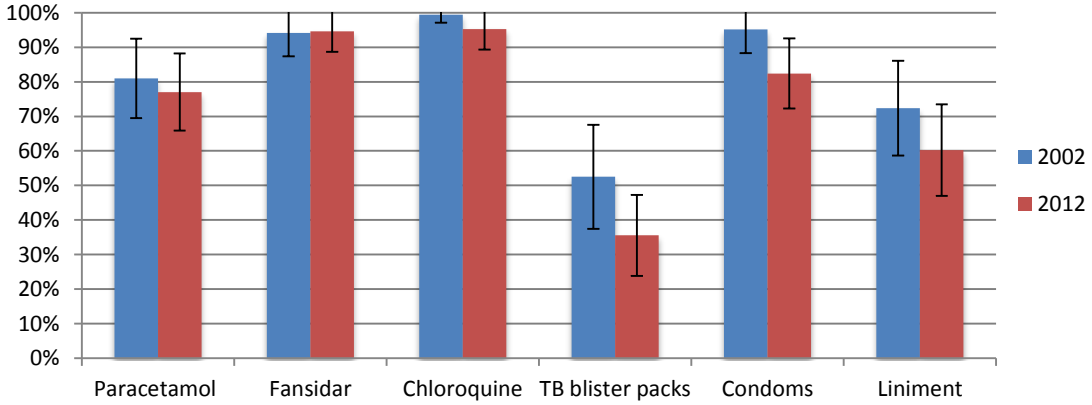
These findings are consistent with national trends of declining outpatient visits (those who do not stay overnight) collected through PNG's National Health Information System for the last few years. Based on this data, PNG's 2013 Sector Performance Annual Review (SPAR) (GoPNG 2013) estimates that the average number of health centre and hospital visits per year has fallen from 1.59 in 2008 to 1.26 per person visits in 2012. This is an 11 per cent reduction (assuming 3 per cent population growth per year) over five years.

The sample size is too small to support accurate provincial comparisons, but trends were highly variable across provinces.

4.3 The availability and cost of basic medical supplies

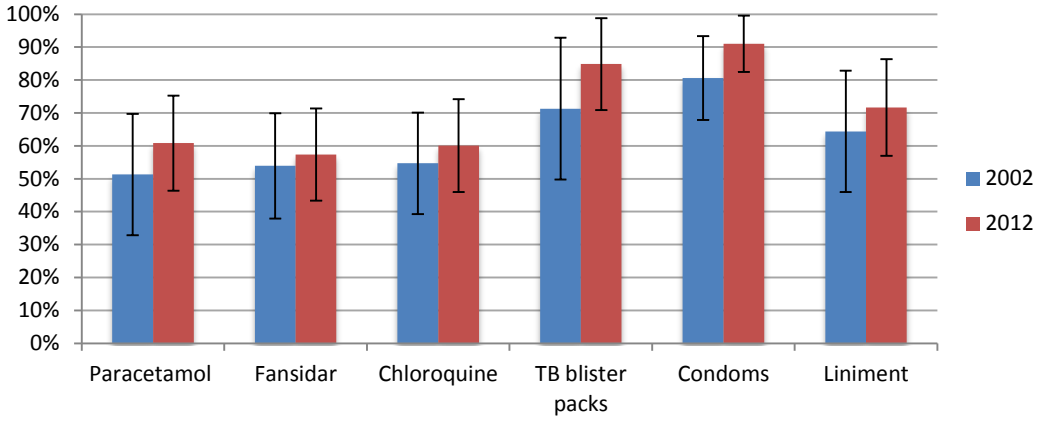
The availability of common drugs and medical supplies has declined over the last decade. Figure 4-4 shows that the availability of all but one of the six drugs and medical supplies that were asked about in both surveys has decreased. Average availability across the six drugs and supplies fell from 82 to 74 per cent. TB blister packs, condoms and liniment recorded the largest declines. Fansidar was the only drug to maintain the same availability over the decade. The declines were not statistically significant, but the fact that all but one of the changes are heading in the same direction supports the finding of reduced availability of drugs and supplies.

Figure 4-4: Availability of six drugs and medical supplies across clinics



Drugs and medical supplies were less likely to be available, but more likely to be free of charge. Figure 4-5 indicates that health clinics became less likely to charge for the six drugs and medical supplies over the ten years. (The average is only across those that had the drug or supply in stock.) In 2012, just over half the clinics did not charge for paracetamol, fansidar and chloroquine, and more did not charge for TB blister packs, condoms and liniment. The likelihood of not charging averaged over the six drugs and supplies increased from 63 to 71 per cent.

Figure 4-5: Drugs and supplies offered free of charge across clinics



Note: Average across those clinics where the drug or supply was available.

4.4 Health workers

Health worker numbers

Health workers are a core component of any primary health care system. Both surveys collected data from the Officer in Charge (OIC) on the number of health workers positions (the number that were supposed to be posted to health facilities), workers who regularly turn up, and those who were present at the time of the survey. Table 4-1 indicates that the average number of health worker clinic positions increased from 4.8 workers to 5.4 between 2002 and 2012, a statistically insignificant change. The number of health workers who regularly turn up to the facility for work remained unchanged at 4.1 on average in 2002 and 2012, which means that a smaller proportion of positions is filled. The surveyed ratio of workers regularly turning-up to positions fell from 91 to 80 per cent. The number who were actually present at the time of the survey fell from 3.4 to 3.2, or from 71 to 59 per cent as a proportion of positions.

Table 4-1: Health worker numbers at health clinics

	Health worker positions		Health workers regularly working (turning up)		Health workers present		Positions filled (%)	
	2002	2012	2002	2012	2002	2012	2002	2012
Overall	4.8	5.4	4.1	4.1	3.4	3.2	91	80
	(0.9)	(0.8)	(0.9)	(0.7)	(0.7)	(0.6)	(3.4)	(4.4)

Note: The OIC was asked how many health workers are supposed to be posted to the health facility, as each clinic has a designated number of staff. They were also asked how many regularly turn-up for work and were present at the time of the survey. The proportion of positions filled is the ratio of the two averages shown of health workers regularly turning up to health worker positions. In this and subsequent tables, the numbers in brackets are standard errors.

A World Bank (2012) report on PNG's health workforce shows a reduction in the number of nurses in the health workforce by 34 per cent between 1998 and 2009 and in community health workers by 18 per cent over the same period. These results are consistent with that, if is kept in mind that the number of health clinics, especially aid posts, has fallen over the last decade

Since the number of workers turning up is roughly constant, and the number of patients has declined, the patient-to-staff ratio has fallen as well. For example, the ratio of the average number of patients on a the day before the survey to the average number of staff present on the day of the survey falls from 11.8 in 2002 to 8.7 in 2012.

Comparisons across provinces reveal some important differences but are only possible using 2012 data due to differences in clinics visited across provinces in both surveys (Table 4-2). In Gulf, the proportion of positions filled was only 56 per cent. But in Sandaun and East New Britain it was 91 per cent. This variation across provinces may reflect different management practices of health workers. The number of patient visits on a typical day per health worker in 2012 who regularly turns up ranges from 23 visits per health worker per day in West New Britain to just 10 in the Eastern Highlands. Health workers at aid posts see an average of 22 patients per day compared to just eight for health centres.

Table 4-2: Health worker positions and attendance at clinics

	Worker positions	Workers turning up	Proportion of positions filled (%)	Patient visits per health worker
Overall	5.4	4.1	80	14.5
	(0.9)	(0.9)	(4.4)	(0.8)
East New Britain	6.9	6.1	91	9.9
West New Britain	5.4	3.8	75	23.1
Morobe	5.0	3.5	80	14.4
Sandaun	4.4	4.1	91	15.3
Eastern Highlands	4.8	3.2	75	9.7
Enga	7.6	6.1	80	10.3
Gulf	4.9	2.7	56	15.0
NCD	8.2	6.0	79	17.4
Health centres	9.0	6.9	81	8.3
Aid posts	1.5	1.1	79	22.3
Government	5.0	3.7	79	15.6
Church	6.7	5.4	79	12.6

Note: The ratios shown in the third and fourth columns are averages across clinics. The proportion of positions filled is the ratio of workers regularly turning up to positions. Patient visits per health worker is defined using visits on typical day and the number of workers turning up.

The 2012 PEPE survey gathered perceptions from health clinic users about health worker attendance. Table 4-3 indicates that half of users believe health workers spend most of their time at the clinic treating patients. 17 per cent said health workers are 'often' at the clinic, 22

per cent reported 'sometimes', while 6 per cent said 'rarely' and only one per cent said 'never'. Some provinces performed better that others. In East New Britain, Enga and Sandaun over 80 per cent of respondents said health workers were either always or often at the clinic. Eastern Highlands and Gulf did not perform as well, recording higher percentages of health workers sometimes or rarely at the clinic treating patients. Averaging across health centres and aid posts, 83 per cent of church health workers are perceived to be always or often available, but only 60 per cent of workers at government clinics.

Table 4-3: User perceptions of availability of health workers at the clinic (%)

	Always	Often	Sometimes	Rarely	Never
Overall	53	17	22	6	1
	(2.8)	(2.0)	(2.3)	(1.4)	(0.5)
East New Britain	61	19	14	6	0
West New Britain	67	5	28	0	0
Morobe	50	17	21	8	4
Sandaun	61	22	10	7	0
Eastern Highlands	47	6	34	13	0
Enga	62	29	9	0	0
Gulf	53	3	37	7	0
NCD	19	38	31	13	0
Health centres	57	15	24	4	0
Aid posts	55	15	19	8	2
Government (HC+)	43	12	36	8	0
Church (HC+)	72	18	10	0	0
Government (AP)	52	13	26	6	3
Church (AP)	50	25	4	21	0

Gender and experience of the health workforce

The position of the Officer-in-Charge (OIC) of a health facility can carry significant influence in a village or town setting in PNG. Table 4-4 shows that 43 per cent were female, up from 34 per cent in 2002. There was significant variation in the percentage of female OICs surveyed across the provinces, ranging from only 19 per cent in the Eastern Highlands to 75 per cent in NCD. Female OICs are much more likely to be in charge of a health centre (51 per cent) than an aid post (20 per cent). In 2012, a majority of (non-OIC) health workers were female. (There were no non-OIC health worker interviews in 2002).

Table 4-4: Gender composition of the health workforce (%)

	Female OICs		Female health workers
	2002	2012	2012
Overall	36	41	52
	(8.9)	(8.2)	(2.2)
East New Britain	63	67	82
West New Britain	45	62	50
Morobe	33	27	33
Sandaun	27	34	40
Eastern Highlands	22	19	37
Enga	15	48	64
Gulf	14	31	57
NCD	67	75	94
Health centres	46	44	51
Aid posts	27	38	65
Government	49	57	40
Church	29	36	73

Note: Health workers were only interviewed at clinics that had at least one health worker apart from the OIC. 82 non-OIC health workers were interviewed in 2012. None were in 2002.

The 2012 PEPE survey asked the OIC and other health workers at clinics for years spent in their position. Table 4-5 shows that OICs have been in their position for almost nine years, and other health workers for nine and a half years on average. There was some variation across provinces. In East New Britain, OICs had served at the same clinic for only four years, less than half the average, while health workers in NCD had been at the clinic for less than six years. In contrast, for both Enga and Gulf, OICs and health workers had been serving at the same clinic for over a decade on average. Those stationed at aid posts and government-run clinics were in their position for longer than those at health centres and church-run clinics, respectively. On average, health workers seem to spend much more time at the same clinic than teachers do at the same school (see Table 3-13). While more experience in one location may seem positive, health workers may simply be unable to rotate to other clinics, as teachers do between schools, because there are simply not enough health workers to take their place.

In terms of motivation to continue at the clinic, 88 per cent of OICs wanted to stay on the following year. Responses were fairly consistent across all provinces ranging from 75 to100 per cent. OICs at church-run clinics were more than 10 per cent more likely to want to stay at the clinic than those at government-run clinics.

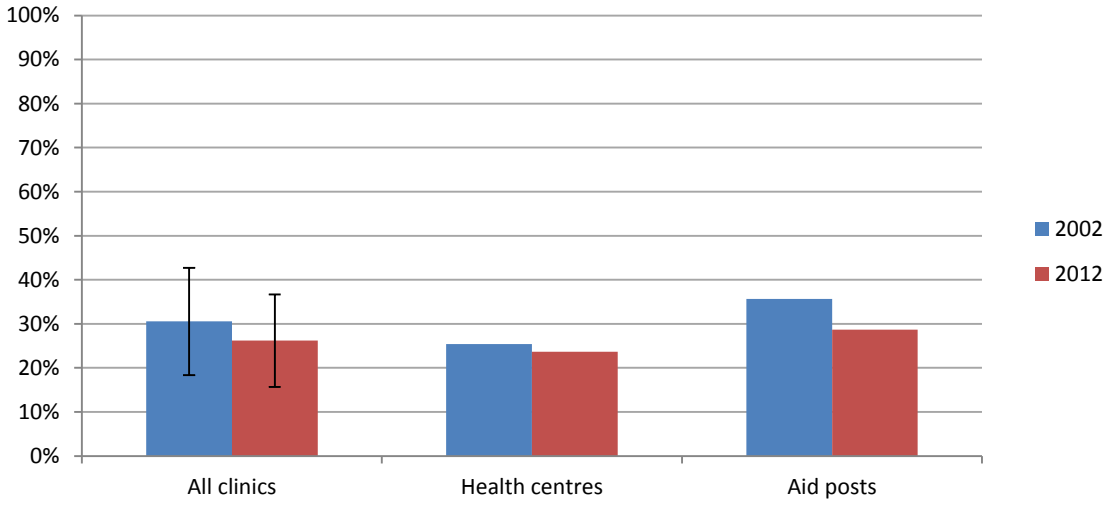
Table 4-5: Experience at clinic and desire to stay

	Years at health clinic		Wants to stay at clinic (%)
	OIC	Health Worker	OIC
Overall	8.9	10.0	88
	(0.5)	(0.5)	(1.8)
East New Britain	4.2	5.4	82
West New Britain	8.4	10.8	100
Morobe	10.2	7.2	92
Sandaun	9.6	11.0	75
Eastern Highlands	9.0	13.8	83
Enga	10.5	16.1	100
Gulf	10.4	9.8	83
NCD	7.1	5.8	93
Health centres	8.2	9.3	88
Aid posts	9.8	11.2	87
Government	8.8	10.0	83
Church	8.4	8.7	94

Health worker training

Health workers surveyed were marginally less likely to have attended in-service training in 2012 than 2002 (Figure 4-6). Considering the 2002 survey was carried out mid-year, these results indicate a deterioration in the number of health workers attending training.

Figure 4-6: Number of staff attending in-service training (2002 – 2012)



Health worker conditions

The working environment and conditions health workers operate under can influence worker morale and commitment. Unfortunately, this data was not collected in 2002, so is shown here only for 2012.

Table 4-6: Health worker pay (%)

Percentage of health workers …	Paid at official grade	Paid eligible allowances	Receive pay on time	Alternative income	Use pay to deliver services
Overall	55	30	72	34	75
	(2.6)	(2.5)	(2.5)	(2.6)	(2.4)
East New Britain	88	36	91	57	66
West New Britain	72	44	80	69	94
Morobe	28	32	71	14	79
Sandaun	53	22	76	11	90
Eastern Highlands	64	19	61	9	22
Enga	56	22	90	37	82
Gulf	42	29	37	52	90
NCD	67	44	75	19	63
Health centre	55	37	69	39	67
Aid post	50	21	82	28	83
Government (HC+)	67	34	93	35	69
Church (HC+)	42	41	72	37	64
Government (AP)	72	23	86	31	84
Church (AP)	19	29	49	32	100

Whether health workers are receiving the full pay they are entitled to has become a major issue of concern in the sector. Table 4-6 indicates that 55 per cent of health workers believed they were being paid at their official grade. East New Britain is the standout performer among provinces at 88 per cent. Morobe is at the other end with only 28 per cent. There were also large disparities between government and church health clinics, which is consistent with more general equity concerns raised by church health providers (Piel et al 2013). 67 per cent of government health workers at health centres and 72 per cent at aid posts believe they are paid at their official grade compared to only 47 per cent of health workers at church health centres and only 19 per cent for aid posts.

72 per cent of health workers reported receiving their pay on time. Most health workers directly receive their pay into a bank account so the problem is not late payment but accessing their pay from a bank, ATM or EFTPOS-type facility at a trade store. Health workers at government facilities are more likely to receive their pay on time, especially at the aid post level. 86 per cent of workers at government aid posts receive their pay on time compared to 49 per cent at church aid posts.

Health workers are usually entitled to other allowances besides their salary. This might include leave fares to return to their home, as well as allowances for conducting health outreach patrols to rural villages. However, only 30 per cent claimed to have received these payments. Church health workers are more likely to receive allowances than government workers and health centre workers access their allowances more so than CHWs at aid posts.

Overall, more than a third of health workers have an alternative source of income. There was a diverse range of responses across provinces from less than 10 per cent in the Eastern Highlands to almost 70 per cent in West New Britain. Local economic conditions can influence opportunities for health workers to earn an alternative income. For instance, the oil palm industry was cited in West New Britain. Other provinces mentioned that it was common for health workers to earn another income by selling vegetables at the market.

More health workers use their own pay to deliver services than earn an alternative income. Three quarters of health workers claimed to draw on their own salaries to meet expenses for providing health services. 90 per cent or more of health workers from more remote provinces like Gulf, Sandaun and West New Britain said they used their pay to deliver services. The willingness of health workers to use their own salaries to pay for health costs is both a cause for optimism and concern. It may be a strong indicator that health workers are committed to providing health services, even at their own expenses. However, it is also a sign that they are inadequately funded to deliver services.

4.5 Health clinic infrastructure and utilities

Health facility infrastructure and enabling utilities are essential to delivering quality health services. The poor condition of health infrastructure, mainly clinic rooms and worker housing, is well known in PNG, but there has been no reliable quantitative baseline to demonstrate the extent of the problem. This was not a topic explored in the PESD survey, but it was included in the 2012 PEPE survey.

Clinic rooms and staff housing

Table 4-7 shows that almost a quarter of clinic rooms need complete rebuilding, while 43 per cent need maintenance. In all, about two-thirds of clinic rooms need some infrastructure support. Some provinces performed better than others. In NCD, only 8 per cent of clinic rooms need rebuilding but more than half do in West New Britain.

Staff housing is almost twice as likely to need complete rebuilding as clinic rooms. In Sandaun, West New Britain and Gulf almost all housing requires either complete rebuilding or maintenance.

Infrastructure at church-run health clinics is in better condition than at government ones. 28 per cent of government aid post clinic rooms need rebuilding, compared to 14 per cent for church aid post rooms. 54 per cent of staff housing attached to government health centres need complete rebuilding compared to just 26 per cent for church health centre housing.

Providing support to clinics to maintain operational infrastructure is a key priority of the health function grant provided to provinces. Yet Table 4-7 shows that only about 30 per cent of health clinics reported

that they conducted basic maintenance of health clinic rooms or staff housing during the year. Church-run health centres, but not aid posts, significantly outperformed their government counterparts when it came to maintenance.

Table 4-7: Rebuilding and maintenance requirements (%)

Percentage of health clinics …	Carried out maintenance in 2012 of health clinic or staff housing	Where clinic rooms requires		Where health worker housing requires	
		Rebuilding	Maintenance	Rebuilding	Maintenance
Overall	32	24	43	40	37
	(2.6)	(0.3)	(0.4)	(3.1)	(2.0)
East New Britain	52	13	45	24	55
West New Britain	22	54	22	60	28
Morobe	23	33	34	18	28
Sandaun	51	18	49	43	58
Eastern Highlands	42	24	49	17	50
Enga	27	10	55	64	16
Gulf	26	27	38	43	46
NCD	13	8	26	10	60
Health centre	42	24	40	39	37
Aid post	19	22	50	46	29
Government (HC+)	29	26	42	54	26
Church (HC+)	55	21	37	26	46
Government (AP)	20	28	42	57	25
Church (AP)	22	14	43	20	57

Health clinic utilities

The availability of key utilities at health facilities such as electricity, refrigeration, toilets and water is essential. Health emergencies can occur at any time of the day, so light at the health clinic to treat patients at night or operate medical equipment is also critical. However, Table 4-8 shows that only 40 per cent of health clinics have access to electricity, 41 have refrigeration, and 51 have enough toilets. Provincial comparisons reveal highly contrasting situations. 94 per cent of health facilities in NCD have electricity, but none in West New Britain.

Health clinics with electricity and refrigeration differ significantly by type and agency. 61 per cent of health centres but only 17 per cent of aid posts have electricity. Church clinics do not always do better, but 77 per cent of church-run health centres have electricity compared to 51 per cent of government health centres.

The most common type of toilet facility was a pit latrine and there were rarely separate male and female toilets.

Table 4-8: Health clinics with electricity, refrigeration and enough toilets

Percentage of health clinics with…	Electricity	Refrigeration	Enough toilets
Overall	40	41	51
	(2.8)	(2.9)	(3.0)
East New Britain	67	71	53
West New Britain	0	25	70
Morobe	42	25	46
Sandaun	43	29	31
Eastern Highlands	56	72	61
Enga	47	44	64
Gulf	15	37	44
NCD	94	88	44
Health centres	63	71	60
Aid posts	19	13	44
Government (HC+)	51	70	61
Church (HC+)	77	72	60
Government (AP)	17	0	37
Church (AP)	8	11	52

Note: Solar-powered refrigeration means that a health clinic can have refrigeration but not electricity.

Table 4-9 indicates that 79 per cent of health clinics have a water supply, usually piped or through a rainwater tank. 70 per said that the water supply was working at the time of the survey. Only 55 per cent said the water supply was working for all of 2012. Slightly less than half of health centres reported that water was connected to the delivery room and working at the time of the survey.

Other important assets for the health clinics to provide services are access to an ambulance to transfer patients, beds with mattresses and a kitchen. Table 4-10 shows that only 20 to 25 per cent of clinics are in possession of each of these assets.

There is huge provincial variation. For example, 60 per cent of health clinics in East New Britain have access to an ambulance compared to only 3 per cent in Gulf Province.

Aid posts are particularly poorly equipped. Only 4 per cent have access to an ambulance even though an aid post is just as likely as a health centre to need to transfer patients in case of emergencies.

Church-run agencies do better on most but not of all these fronts.

Table 4-9: Health clinic water availability (%)

Percentage of health clinics with…	Access to water	Water working at time of survey	Water working all 2012	Water connected to delivery room
Overall	79	70	55	47
	(2.4)	(2.6)	(2.9)	(4.5)
East New Britain	89	85	62	31
West New Britain	64	64	38	39
Morobe	79	61	39	33
Sandaun	79	79	68	78
Eastern Highlands	83	83	47	28
Enga	73	48	48	69
Gulf	68	65	50	40
NCD	94	81	81	56
Health centres	82	76	55	46
Aid posts	76	66	48	NA
Government (HC+)	82	71	49	48
Church (HC+)	82	82	58	44
Government (AP)	68	61	45	NA
Church (AP)	84	59	37	NA

Note: Figures in final column 'connected to delivery room' only reports results for health centres because it is not common for aid posts to have a delivery room.

Table 4-10: Good and adequate access to an ambulance, beds and kitchen (%)

Percentage of health clinics with…	Access to ambulance (good or adequate)	Beds with mattresses (good or adequate)	Kitchen (good or adequate)
Overall	23	20	23
	(2.7)	(2.4)	(2.7)
East New Britain	59	35	39
West New Britain	17	17	66
Morobe	17	17	8
Sandaun	18	18	16
Eastern Highlands	19	8	0
Enga	32	30	23
Gulf	3	19	03
NCD	25	38	38
Health centres	40	35	30
Aid post	4	03	09
Government (HC+)	35	31	29
Church (HC+)	45	38	32
Government (AP)	35	31	11
Church (AP)	45	38	7

4.6 Health service outreach, mobility and basic service delivery

In a setting such as PNG, to be effective health centres need to be mobile. They need to run patrols, transfer patients, and pick up drugs. This section explores these aspects of performance. It is limited to 2012 data.

Conducting health outreach patrols to villages that do not have health clinics should be the backbone of providing effective rural primary health care. The large majority of PNG's population lives in rural and remote settings and have to either walk long distances to health facilities or wait for outreach patrols to come to them. Health function grants should be an important funding source for health clinics to draw on to provide this service.

Table 4-11 reveals extensive variation in the number of health patrols conducted across provinces. While the average number of patrols conducted was almost 12 per health centre in 2012, East New Britain recorded more than 38 patrols on average while West New Britain averages more than 22 patrols. In more remote and rural provinces, such as Sandaun and Gulf, where patrols are especially important, health centres conducted less than two patrols on average in 2012. This is a very low figure, and indicative of a general breakdown in the system of providing outreach services.

Table 4-11: Health clinic outreach and mobility

	Total number of patrols conducted in 2012	Health clinics conducting more than 5 patrols (%)	Health clinics can transfer patients (always & most) (%)	Health clinics have access to fuel (always & most) (%)
Overall	9.3	18	33	36
	(5.2)	(2.2)	(4.7)	(4.9)
East New Britain	45.5	46	23	44
West New Britain	14.1	25	20	80
Morobe	1.7	13	67	50
Sandaun	1.5	0	25	12
Eastern Highlands	3.8	19	25	11
Enga	5.0	31	23	20
Gulf	1.4	3	12	9
NCD	1.2	6	50	50
Health centres	11.9	27	45	47
Aid posts	1.5	7	20	22
Government (HC+)	9.6	28	45	53
Church (HC+)	14.6	26	57	45
Government (AP)	1.4	2	13	6
Church (AP)	0.9	8	14	32

The total number of patrols can be a misleading indicator as health centres face different types of geographies in reaching populations with varying degrees of remoteness. To better understand if health clinics regularly conduct patrols, a more appropriate measure is to assess the percentage of health centres that conduct at least five patrols. This number would likely be the absolute minimum for health centres that claim to conduct patrols with some regularity. Table 4-11 shows that only 27 per cent of health centres conducted more than five patrols in 2012.

Fuel for transport so that health clinics can collect and deliver drugs is essential. (Based on survey data, close to 90 per cent of health clinics order drugs. Responsibility for collection usually lies with the clinic itself.) Table 4-11 shows that only 36 per cent of health clinics have good access to fuel to support medical supply collection and distribution.[12]

Patient transfers to a referral health facility are another important service. The ability of the health clinics to provide such a service is dependent on an ambulance, which as previously discussed, is often unavailable for most. One third of health clinics said they were able to transfer patients all or most of the time to their referral health facility.

There is again significant variation across provinces. For example, 46 per cent of health clinics in East New Britain conducted regular patrols (at least 5 a year) but none did in Sandaun and only 3 per cent in Gulf Province.

4.7 Patient satisfaction

The 2012 survey asked users of the health facility about their satisfaction with services provided. 45 per cent said the services provided were 'very good', 22 per cent thought they were 'adequate', 20 per cent said they were 'average' and 13 per cent believed services provided were 'poor' (Table 4-12). NCD recorded the highest satisfaction levels with 75 per cent describing the service as very good, and only six per cent as poor. The Eastern Highlands easily recorded the lowest satisfaction levels with 23 per cent believing the service was very good and 28 per cent saying the services provided were poor. Users of church–run health clinics seemed more satisfied than government clinics, at least for health centres.

Overall, patient satisfaction with services provided is higher than expected given the poor state of PNG's health system outlined in this chapter. However, there is much debate in the international literature about how satisfaction is measured against patient experience with health care provided (see Bleich et al 2009). Very high levels of patient satisfaction have also been recorded in a number of developing countries, and may be explained by low expectations.

12. The fuel question asked whether clinics had access to fuel to pick up medical supplies.

Table 4-12: User community satisfaction with services provided (%)

Percentage of users thinking services provided…	Very good	Adequate	Average	Poor
Overall	45	22	20	13
	(2.7)	(2.5)	(2.3)	(1.9)
East New Britain	55	15	24	6
West New Britain	5	54	26	15
Morobe	42	17	38	04
Sandaun	50	15	11	23
Eastern Highlands	23	49	00	28
Enga	59	18	18	6
Gulf	42	13	26	19
NCD	75	6	13	6
Health centres	43	31	19	6
Aid posts	33	22	23	22
Government (HC+)	38	35	14	12
Church (HC+)	50	27	24	0
Government (AP)	30	21	20	28
Church (AP)	22	18	47	12

4.8 Supervision and community engagement

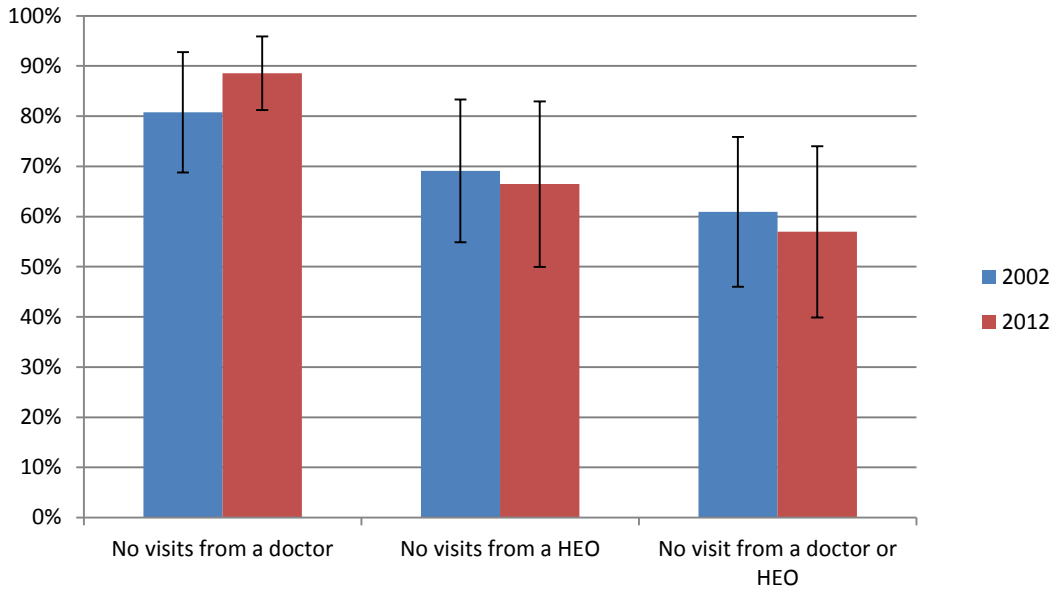
Effective supervision and support for health workers to deliver services to communities is crucial to providing comprehensive health care. So too is community engagement, as an engaged community is more likely to demand high standards of care.

Supervisory visits

Supervision and assistance for health workers can be both clinical and administrative. On the clinical side, an important aspect of PNG's primary health care system is for health facilities to receive visits from doctors or from Health Extension Officers (HEOs), sometimes called rural doctors.

The majority of primary health care clinics surveyed in the PEPE and PESD surveys did not have a doctor or HEO visit them. Figure 4-7 shows that health clinics that did not receive a doctor visit increased from 81 per cent in 2002 to 89 per cent in 2012, but the proportion that did not receive a visit from an HEO was slightly higher in 2002 than 2012. Those clinics that did not receive a visit from a doctor or HEO was 61 per cent in 2002 and 57 per cent in 2012.

Figure 4-7: Percentage of health clinics with no doctor or HEO visit



All health clinics should also receive regular administrative supervisory visits from either church or government affiliated health officials or their referral health facility. In most cases, government health centres are supervised by the district or provincial health office. Church-run health centres are supervised by their affiliated funding providers (Catholic, Lutheran, etc.). For aid posts, supervision is usually provided by the supervising health centre.

Table 4-13 (based on the full 2012 sample) shows that only 64 per cent of health clinics said that they had a supervisor. The proportion ranged from as high as 89 per cent in Enga to as low as 22 per cent in West New Britain. The average number of visits for health clinics that had a supervisor was 1.5 in 2012. NCD had more than nine visits on average, whereas health clinics in Sandaun and the Eastern Highlands recorded averages of less than one visit each for the year. Only 63 per cent of health clinics with a supervisor received at least one supervisory visit in 2012. More health centres have a supervisor and receive visits than aid posts. While more government health clinics claimed to have a supervisor, they were less likely to receive a visit than church-run health clinics. Overall, 60 per cent of clinics did not receive a visit from a supervisor in 2012. These findings indicate supervision of health clinics is generally weak.

Table 4-13: The extent of health clinic administrative supervision

	Clinics with supervisor (%)	If supervisor, number of visits	If supervisor, clinics with at least one visit (%)	Clinics receiving no visits from supervisor (%)
Overall	64	1.5	63	60
	(2.8)	(0.2)	(4.0)	(2.7)
East New Britain	74	1.5	65	52
West New Britain	22	1.3	100	78
Morobe	57	1.2	76	58
Sandaun	72	0.4	18	80
Eastern Highlands	81	0.9	50	60
Enga	89	3.0	83	26
Gulf	62	2.2	44	72
NCD	63	9.1	87	45
Health centre	72	1.9	69	50
Aid post	53	1.1	49	74
Government (HC+)	80	2.4	44	65
Church (HC+)	64	1.6	81	48
Government (AP)	62	1.6	67	58
Church (AP)	52	1.3	64	66

Community engagement

The established institution for community engagement with health clinics is the Village Health Committee (VHC). This was a topic for the 2012, but not the 2002, survey. Table 4-6 shows that 64 per cent of health clinics were supported by a VHC. Aid posts were more likely to have an operational VHC than health centres (71 versus 56 per cent). As the name suggests, VHCs are normally located in a rural village setting where community members come together on a voluntary basis either to support the health facility or represent the health needs of the community. Health centres, especially larger facilities situated in towns or stations (administrative centres), are less likely to have operational VHCs.

More rural and remote provinces surveyed generally convened more VHC meetings. While the average number of VHC meetings was just over two per year, Gulf and Sandaun averaged over three. More remote communities may have fewer choices and thus greater incentive to support the operations of the health facilities that serve them.

Survey results also provide a better understanding of how communities interact with the health facility and its workers. Table 4-14 shows that 58 per cent of OICs believe the community assists the health facility. The more rural provinces of West New Britain and Sandaun were more likely to receive support from the community and conduct promotion activities, which may suggest a correlation with the functional VHC. Almost three quarters of health facilities conduct promotion activities

in the community. At the other end of the results spectrum, in the Eastern Highlands Province, only 28 per cent of the community assists the facility, well below the average. In Morobe, less than half of its health facilities conducted promotion activities and only 39 per cent of the community assists the health facility. These results suggest there are widespread differences in how health clinics and workers interact with the community across PNG.

Table 4-14: Village Health Committees and community interaction

	Clinics with VHC (%)	If VHC, number of meetings in 2012	% health workers conduct promotion activity	% community assists health clinic
Overall	64	2.2	72	58
	(2.7)	(0.3)	(2.7)	(2.9)
East New Britain	67	2.1	89	59
West New Britain	89	2.5	100	77
Morobe	62	1.1	49	39
Sandaun	71	3.2	74	89
Eastern Highlands	47	2.5	58	28
Enga	58	1.8	82	61
Gulf	56	3.4	68	59
NCD	13	1.0	80	56
Health centre	56	1.8	75	53
Aid post	71	3.3	68	55
Government (HC+)	54	1.7	78	48
Church (HC+)	59	1.9	69	57
Government (AP)	77	2.4	66	58
Church (AP)	55	2.5	58	38

4.9 Conclusion

While the two health surveys offer limited comparisons over the 10-year period compared to education, the results are revealing. Clinics may be open for longer but patients visiting them have declined when measured by patient visits on either a typical day or yesterday. The decline in effective demand for primary health care could be greater than the survey results suggest. The majority of health managers in surveyed provinces believed the number of open clinics has likely declined over the period 2002 – 2012, especially in rural areas, where the majority of PNG's population lives. This would also be consistent with our survey experience.

For the six drugs and medical supplies asked about in both surveys, all were less likely to be available, but more clinics offered them to patients free of charge than a decade earlier.

The number of health workers posted to clinics has increased, but the number that regularly turn up to work at the clinic is unchanged between 2002 and 2012.

While none of the changes observed over the last decade were

statistically significant, the fact that they all went in the same direction, and that they are in some cases supported by other data sources, suggest that they are indicative of an underlying trend of deteriorating performance. Absolute falls in patient utilisation are especially worrying in the context of rapid population growth.

Declining drug availability may be one reason for reduced effective demand for PNG primary health care services. In addition, the conditions provided to health workers are not conducive for a motivated workforce. The majority do not receive annual training, only 30 per cent are paid their eligible allowances and just over half are paid at their official grade.

Health clinic infrastructure and utilities are in poor condition. Almost a quarter of clinic rooms and 40 per cent of workers' houses need complete rebuilding. Less than a third of clinics conducted maintenance in 2012. Only 40 per cent of health clinics have access to electricity and refrigeration and just over half had enough toilets. Less than half have year-round access to water supply. Less than a quarter have adequate access to an ambulance, beds with mattresses and a kitchen.

Only 18 per cent of clinics (27 per cent for health centres) are able to conduct regular outreach patrols, while about a third could regularly transfer patients and had access to fuel to conduct their operations.

Both clinical and administrative oversight of clinics require significant improvement. Only 40 per cent of clinics received at least one visit from their supervisor, which indicates a major breakdown of administrative support for clinics. Community engagement with the health clinic was limited. Only two-thirds of health clinics have a VHC, and VHCs on average only meet twice a year.

Given the clear weaknesses in the health system, patient satisfaction was higher than expected with 67 per cent of users believing services provided were at least adequate. Such high satisfaction levels are also found in a number of other countries, and may be explained by low expectations.

Overall, the survey findings suggest PNG primary health care clinics struggle to remain operational and deliver basic services. There is, however, significant variation across provinces. The range in performance across provinces shows that sub-national authorities matter in how they manage the health system. Better performers, such as East New Britain, show that health services can be delivered and the system made to work better. This is discussed further in the conclusion to Chapter 6.

Church health clinics also perform better than government ones across a number of important measures, especially in comparisons at the health centre level. Church health centres are far more likely to conduct maintenance (55 vs 29 per cent), have fewer staff houses that

require complete rebuilding (26 vs 54 per cent), are more likely to have an ambulance (45 vs 35 per cent) and transfer patients (57 vs 45 per cent) than government-run clinics. Users of church health centres are more likely to think that health workers are always available at the clinic (72 vs 37 per cent) and that the services being provided are very good (50 vs 38 per cent). The differences between church-run and government clinics are less obvious at the aid post level. Chapter 8 further explores these differences using regression analysis.

Chapter 4 Annex

Table 4-A1: Summary statistics and tests of difference for health variables, 2002 and 2012.

		2002			2012			Test-statistic
		N	Mean	SE	N	Mean	SE	
Days open and patients visit								
Days open per week	days	117	6.2	0.2	142	6.5	0.1	1.3
Patient visits typical day	no.	117	46.3	10.8	142	37.3	5.7	-0.7
Patient visits yesterday	no.	103	39.5	14.6	138	28.1	5.6	-0.7
Availability of basic drugs and supplies								
Paracetamol	% clinics	117	81	7	142	77	6.8	-0.4
Fansidar	% clinics	117	94	4.1	142	95	3.6	0.2
Chloroquine	% clinics	117	99	1.4	142	95	3.6	-1.0
TB packs	% clinics	117	52	9.1	142	36	7.1	-1.4
Condoms	% clinics	117	95	4.1	142	82	6.2	-1.7
Liniment	% clinics	117	72	8.3	142	60	8.1	-1.0
Drugs/supplies free of charge								
Paracetamol	% clinics	78	51	11.2	116	61	8.8	0.7
Fansidar	% clinics	94	54	9.7	135	57	8.6	0.2
Chloroquine	% clinics	99	55	9.4	133	60	8.6	0.4
TB packs	% clinics	51	71	13.1	60	85	8.5	0.9
Condoms	% clinics	93	81	7.7	117	91	5.2	1.1
Liniment	% clinics	69	64	11.1	89	72	8.9	0.6
Health workers								
Health worker positions	no.	117	4.8	0.9	141	5.4	0.8	0.5
Health workers turning up	no.	117	4.1	0.9	141	4.1	0.7	0.0
Health workers present	no.	117	3.4	0.7	141	3.2	0.6	-0.2
Supervision								
No visit from a Health Extension Officer	%	117	69	8.7	142	66	10	-0.2
No visit from a supervising doctor	%	117	89	7.3	142	81	8.1	-0.7

Notes: Test-statistic is calculated as the difference in the mean between 2012 and 2002 divided by the standard error of the difference in the mean, which in turn is calculated as the square root of the sum of squared standard errors for each year. A test-statistic (in absolute value) greater than 1.65 indicates a statistically significant difference in means at the 10% significance level, and greater than 1.96 indicates a significant difference at the 5% significance level (based on a two-tailed t-test). Drugs/supplies free of charge are calculated only for clinics where the drug/supply is available.