PAPUA NEW GUINEA'S PRIMARY HEALTH CARE SYSTEM

VIEWS FROM THE FRONTLINE

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PAPUA NEW GUINEA'S PRIMARY HEALTH CARE SYSTEM: VIEWS FROM THE FRONT LINE

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ABBREVIATIONS

AGO	Auditor-General's Office of Papua New Guinea
ANU	Australian National University
AusAID	Australian Agency for International Development
CDF	Constituency development funds
CHS	Christian Health Services
COVID-19	Novel coronavirus disease of 2019
DDA	District Development Authority
DSIP	District Services Improvement Program
DIRD	Department of Implementation and Rural Development
JDPBPC	Joint District Planning Budget Priorities Committee
LLG	Local Level Government
LLGSIP	Local Level Government Services Improvement Program
MP	Member of parliament
MPAs	Minimum Priority Activities
NDoH	National Department of Health
NEFC	National Economic and Fiscal Commission
NGO	Non-government organisation
NRI	National Research Institute of Papua New Guinea
OIC	Officer in charge
OLPLLG	Organic Law on Provincial and Local Level Governments
Open MP	Open electorate member of parliament
PER	Provincial Expenditure Review
PHA	Provincial Health Authority
PNG	Papua New Guinea
PSIP	Provincial Services Improvement Program
SIP	Services Improvement Program
UPNG	University of Papua New Guinea
VHC	Village Health Committee
WHO	World Health Organization

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Photo: Richard Eves

EXECUTIVE SUMMARY

Health systems across the world — in developed and developing countries alike — have been stretched beyond their capacity in response to the novel coronavirus disease of 2019 (COVID-19) pandemic. The already fragile health care systems of developing countries, such as Papua New Guinea (PNG), are being profoundly tested: the need to manage the impact of COVID-19 while at the same time dealing with a range of significant pre-existing health challenges. PNG is seen to be particularly vulnerable to the health security risks presented by a pandemic. Previous research has outlined numerous issues facing PNG's health system, which includes bottlenecks in the financing system, insufficient frontline health workers, deteriorating infrastructure and the limited availability of medical supplies to name a few. Despite the ambitious health policies and reform programs of past governments, significant challenges persist in the effective delivery of basic health care for the majority of the population.

This report aims to provide insights into how recent PNG government reform efforts are impacting on the primary health care system. These include the introduction of a free primary health care policy, national grants to provinces for recurrent health expenditure, changes in medical supply policies, and development funds allocated to members of parliament (MPs) for health infrastructure in their electorates. Our report presents illustrations of how PNG's primary health care system functions, drawing mainly on the perspectives of health administrators and frontline workers on the ground in two selected provinces.

The results in this report set out the realities of providing frontline health services to communities at the local level. This provides some insights into health system operations and reveals how different provincial contexts influence the implementation of health reforms, the utilisation of available health funds and the performance of health facilities. Our findings provide a contextual understanding of the health system in which the pandemic is occurring and may offer some lessons to policymakers in considering ways to strengthen that system as part of a potentially large-scale — likely long-term — response to a pandemic.

This research draws on results from case studies of health systems in East New Britain and Gulf provinces. These provinces were selected because they represented outliers of health facility performance based on an earlier larger study (Howes et al. 2014). This previous quantitative analysis found that East New Britain provided far superior health services to Gulf Province, although it was limited by the extent to which it could explain differences in performance between provinces. For this reason, we adopted a case study approach whereby a small number of health facilities were sampled in each of the selected provinces so that they could be studied in depth. Using mainly qualitative, field-based methods and repeating the same health facility questionnaire, we sought to augment the original survey data in order to determine how health facilities, and the broader health system, were responding to recent health reform initiatives.

We designed the case study research to investigate the factors that had contributed to success in East New Britain, with a view to determining their applicability elsewhere. It was also intended to assist with understanding the factors working against health service provision in Gulf Province. Instead, we found deterioration across a number of performance indicators in East New Britain and further stagnation in Gulf when compared to the 2014 research findings. In East New Britain there were notable reductions in the availability of medicines, the quality of health infrastructure, the ease of transferring patients to referral health centres/hospitals, and the number of outreach patrol clinics conducted to rural communities. These developments had not been anticipated. Importantly, the findings presented in this report capture the views of frontline health workers and administrators when explaining their day-to-day experiences of providing services and managing the health system.

We argue that significant difficulties in accessing government and church health budgets were a key reason for performance challenges observed. These findings are consistent with earlier studies which have shown that recent increases in recurrent health budgets to provinces have not resulted in on-the-ground improvements to primary health care. Previous research has also suggested that church-run health facilities provide more consistent funding and superior health services to government-run health facilities (Howes et al. 2014). Our case studies did not corroborate these earlier findings. At the time the research was conducted, church-operated health facilities were dealing with a range of difficulties resulting from a sudden decline in grant funding from the national government.

Overall, our findings suggest that major health policies and broader reforms implemented under the O'Neill Government to strengthen the health system were struggling to achieve their intended purpose. Specifically, health workers and administrators described health policies that promised free primary health care, by attempting to eliminate user fees, as effectively reducing access to readily available funds. As a result, this was perceived to have negatively impacted on the ability of health facilities to provide services to communities. Similarly, respondents identified ongoing challenges in the procurement and delivery of medical supplies as contributing to a reduction in the availability of drugs at health facilities for patients.

From a governance perspective, research participants spoke of considerable fragmentation of responsibilities for strengthening health systems at subnational levels. For instance, each province or Provincial Health Authority (PHA) is responsible for recurrent financing in the delivery of primary health services. While some provinces rely mostly on national grants to fund health services, others receive very limited funding from the national government due to higher levels of internal revenue that are supposed to be invested into the health sector by provincial governments. Most of the development budget available for rehabilitation and new capital works at health facilities is captured by District Development Authorities (DDAs). This means that Open MPs (representing PNG's 89 single-member districts) in particular are playing an increasingly significant role in financing health infrastructure. Such fragmentation of responsibilities within provincial health systems generates a suite of governance challenges and presents a risk that the concurrent rollout of PHAs and DDAs may be contributing to further politicisation of the health system.

This report situates case study findings in the broader literature on PNG's health system. We did this in order to better understand potential reasons for why health service delivery challenges have been so difficult to overcome. We contend that weaknesses identified in the health system throughout this report have emerged over time and appear to be indicative of a broader trend of declining health performance.

This research suggests that policymakers need to be mindful of the deep structural complexities within PNG's health system. In the context of a pandemic, provinces (and their districts) will likely have to adopt different approaches based on the financing and performance challenges of their respective health systems. This can be a complex task, as our results show that even within provinces there is no single provider of health services. In fact, there are multiple providers which include government, churches, non-government organisations (NGOs), the private sector and elected officials. As exemplified by the two provincial case studies in this report, efforts to improve primary health care have to be operationalised differently across the country to account for significant differences in the functioning of provincial (and even district) health systems.

SECTION 1. INTRODUCTION

Medical specialists (Mola 2020), informed commentators (Allen 2020; Bright 2020; Minnegal and Dwyer 2020) and citizens alike are raising concerns about the capacity of PNG's health system to respond to health emergencies such as that posed by the COVID-19 pandemic. Such concerns have also been made public by elected officials, such as the governor for Madang Province, Peter Yama, who issued the following dire warning to his constituents:

> *We don't have any contingency plan … there's nothing in place, there is no money and no appropriation for such money like this in here for that purpose … if coronavirus out breaks in Madang province — my people will die like flies. They will die like flies. And that's my fear (EMTV 17/3/2020).*

In giving this warning, he appealed to his fellow MPs to contribute their constituency development funds (CDFs, received through the District Services Improvement Program) to Madang's provincial health preparedness efforts, while adding that the 'national government do not seriously consider the concern of the government [here] in a place like Madang' (ibid.). Governor Yama's comments point to numerous questions and concerns about the PNG government's ability to respond to a potentially large-scale health emergency at the provincial level.

Improving health system capabilities — and in particular the delivery of primary health services that are managed by provinces in PNG — has been an enduring challenge for successive governments and the donors that support them. PNG has some of the lowest health indicators in the Asia-Pacific region and did not achieve any of its health-related Millennium Development Goals (DNPM 2015; see also AusAID 2009; UNDP 2014; World Bank 2012). Most recent research concerning PNG's health system, regardless of its scope, scale and the methodologies employed, points to either stagnation or deterioration in frontline health service delivery (Bauze et al. 2009; DPLGA 2009; Howes et al. 2014; McKay and Lepani 2010; Thomason et al. 2009; WHO 2012; Wiltshire and Mako 2014; World Bank 2013).

Key challenges impeding the effective delivery of primary health care include ineffective governance and public administration systems, bottlenecks in provincial financing systems, insufficient frontline health workers, deteriorating infrastructure, and the limited availability of medical supplies. Notably, a recent World Health Organization (WHO) report on PNG's health system concluded that:

> *examination of health coverage data demonstrates that there are significant inequities in access to primary health care and the WHO-defined essential package of services. Coverage of these services is low and have stagnated, or in some cases declined, in recent years (Grundy et al. 2019: xvi).*

PNG's current National Health Plan (2011–2020) acknowledges weaknesses in the health system and committed to a 'back to basics' approach for strengthening primary health care systems (NDoH 2010). The PNG government has introduced a suite of new health policies and reforms over the last decade. A number of these reforms have targeted provinces and districts to meet operational costs for health facilities (particularly those deemed to have higher service delivery costs and lower internal revenue), as well as the rehabilitation of run-down health infrastructure.

Adequate health financing has proven to be a major impediment to the provision of health services in PNG. The PNG government has struggled to translate its investments in health systems into improved performance on the ground. A large health survey conducted across PNG showed that health services had declined against a range of indicators despite large increases in recurrent and development health budgets over the decade

to 2012 (Howes et al. 2014). The case study research in our report is essentially a follow-up to this much larger health survey. Howes and his colleagues' report, entitled *A Lost Decade? Service Delivery and Reform in Papua New Guinea 2002–2012*, found that health services had largely declined and that fundamental challenges to establishing a functional primary health care system remained. It also identified significant differences in the functioning of health systems across provinces, as well as between government and church-run facilities (ibid.).

The findings from the *A Lost Decade?* study were largely consistent with a World Bank (2013) report on rural health financing, which found that while provincial governments had increased spending on health services, official output data collected through PNG's National Health Information System did not show improvement against key indicators (NDoH 2015). Since 2013, the health financing context has shifted, in large part due to declining national revenue affected by falling commodity prices and broader economic and budgetary challenges (Flanagan 2015; Flanagan and Howes 2015; Fox et al. 2017; Howes et al. 2019). Indeed, the most recent annual review of sector performance (NDoH 2019) has found that the health sector has continued to show stagnation and decline against key performance indicators.

Research aims

The difficulties in improving PNG's health system, despite policy and financing reforms, require further investigation. This research seeks to investigate why recent reforms to improve primary health care services have had limited impact and then consider how reforms can be made more effective. This is particularly important given the fiscal challenges PNG faces and the onset of the COVID-19 pandemic.

We set out to explore these questions through targeted research which sought to document the implementation and impact of recent health reforms in two provinces. The 2014 study identified East New Britain and Gulf provinces as performance outliers (Howes et al. 2014). Notwithstanding that there was significant scope for improvement in health service delivery, East New Britain performed much better than all of the other provinces surveyed. In contrast, health service delivery in Gulf Province was found for the most part to have ground to a halt. In essence, our case study research was designed to explore why health system performance differed so significantly in these provinces. Since the previous study also found that church-run facilities generally performed better than government facilities (ibid.), the case studies sought to explore this finding in greater detail.

The research also aimed to provide an update of how health facilities were responding to PNG government health policy directions. These initiatives include the introduction of a free primary health care policy; national health grants provided to provinces and church agencies for recurrent operational expenditure; changes to medical supplies procurement and distribution; and continued increases in constituency development funds (CDFs) for elected officials, such as the District Services Improvement Program (DSIP), that should fund improved health infrastructure.

Considerable attention was paid to how the above policy and expenditure reforms were affecting health facilities that provide primary health care to communities in the two selected provinces. This case study research was conducted in 2016 and key findings were presented publicly at the PNG Update conference at the University of Papua New Guinea (UPNG) in 2018. Detailed analysis of the qualitative findings was delayed due to departures of key researchers who conducted the initial fieldwork. Nonetheless, ensuring research undertaken into PNG's health system is made publicly available is vital in the context of a pandemic, where systemic challenges are likely to impede the delivery of health support to local communities. This report has been able to document possible drivers of progress and regress in PNG's health system and could be important for public policy decision-making in terms of responding to long-term health challenges and the difficult economic environment that PNG currently faces.

Report overview

This report has been divided into five sections. A brief summary of each of these sections is outlined below:

Section 2 provides the context for understanding primary health care in PNG. It outlines the major sources of recurrent and development financing available for health facilities in PNG. Providing this context is necessary to consider the implications of health policies and reforms examined in this report in the two sampled provinces.

Section 3 describes the mixed-methods approach used to undertake the case study research in East New Britain and Gulf provinces. It outlines how the intention of this research was to build upon and complement an existing health data set, which had shown significant disparities in performance between the two provinces. This informed the reasoning for returning to these locations for the case study research.

Section 4 reports research findings for health facility finances. The difficulties in accessing government and church health budgets are explored from the perspective of health facilities, including the context of the implementation of the free primary health care policy. This section also looks at development funds made available through MPs to finance the rehabilitation and construction of new clinics at selected health facilities in both provinces.

Section 5 documents important health facility performance indicators arising from the research. These include the frequency of outreach patrols, the ease of transferring patients, infrastructure quality, and availability of essential utilities. Most notably, a significant decrease in the availability of medicines is highlighted, especially in East New Britain. Other challenges in the health system include the management of health workers, the lack of supervisory visits (both administrative and clinical), increases in patient numbers, reported closures of some health facilities, differing planning processes, and varying levels of community engagement with local health facilities.

Section 6 concludes with a discussion of the key findings and considers the implications of the research. It argues that despite reform efforts, significant weaknesses persist that curtail the ability of frontline facilities to deliver basic health care to communities. We suggest that strengthening health systems should consider individual provincial operational contexts closely. This section also proposes ideas for further research.

Photo: Richard Eves

SECTION 2. HEALTH POLICY AND REFORM IN PNG

Understanding the PNG health context is necessary for interpreting the findings and discussion that follow in subsequent sections of this report. We begin by defining primary health care in the PNG context before describing the 'triple' burden of disease that the country currently faces. This is followed by a brief background on how health facilities are governed and financed in PNG's decentralised setting. We show how increases in national health grants have impacted provinces differently and then describe how funds are made available to church-operated health facilities.

This section also provides an overview of the relevant policies and reforms examined in this report that shape primary health care provision at health facilities. We explain their purpose and the context relevant to their implementation at the provincial level. We argue that some of these policies may have become more important for the health sector since the original surveys were conducted. For instance, ensuring that the health function grant — which funds health facility operations — is received in a timely manner became even more critical with the introduction of free primary health care in 2014 because that policy meant that health facilities should no longer charge fees.

Primary health care in the PNG context

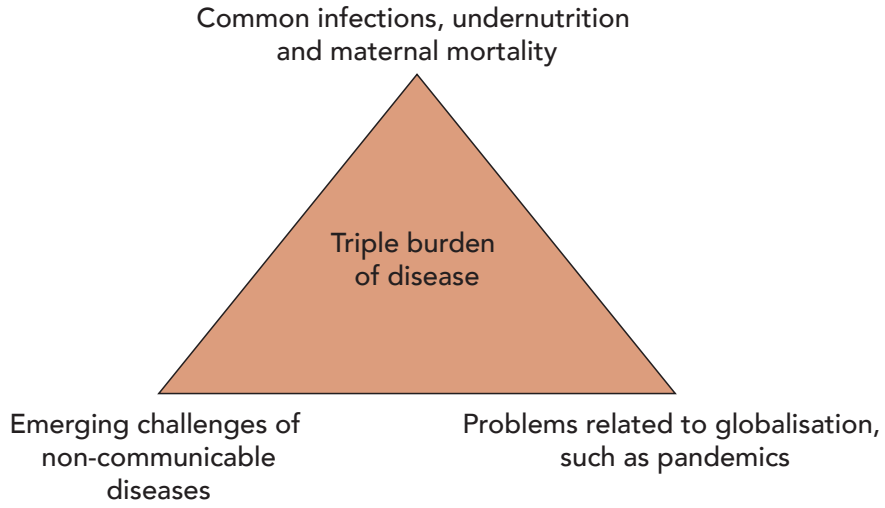
An appropriate definition of primary health care in PNG is required considering it is the focus of this report. According to the WHO, primary health care is defined as care that 'addresses the majority of a person's health needs throughout their lifetime' (WHO webpage on primary health care). Primary health care should be available close to home and 'addresses not only individual and family health needs, but also the broader issue of public health and the needs of defined populations' (ibid.). It should encompass 'health promotion, disease prevention, treatment, rehabilitation and palliative care' (ibid.).

In PNG, the delivery of primary health care services has been decentralised to provinces since the late 1970s. The primary health care system 'consists of 1800 community-level facilities called functioning aid posts (planned to transition to community health posts by 2030) and approximately 800 subhealth/health centres' (Grundy et al. 2019:30). Secondary health care is provided by 22 provincial hospitals, of which one is the national referral hospital.

There are significant public health challenges that the primary health care system should address. PNG has a triple burden of disease as shown in Figure 1 below. The first aspect of this burden includes high levels of communicable diseases such as tuberculosis, sexually transmitted infections, mosquito-borne illnesses including malaria, dengue fever and chikungunya, water-borne diseases like typhoid and the re-emergence of polio (Mishra 2018), yaws (Enserink 2018), leprosy (Hendrie 2018) and measles (Kana 2020). The first component also comprises maternal and child health, including a high maternal mortality rate (Watson et al. 2015:123).

The second aspect of the burden is a growing incidence of non-communicable diseases such as diabetes, stroke, hypertension and cancer (Grundy et al. 2019:18). The often chronic, life-long nature of these diseases frequently requires complex and expensive means of diagnosis and treatment, which presents a very different type of challenge for the health system. The third component comprises threats due to globalisation such as pandemics and the health consequences of climate change (Frenk and Gómez-Dantés 2011). In PNG, the latter could include, for example, malaria becoming evident in places and populations which previously were not exposed to it. The third arm of the burden also includes 'afflictions related to rapid urbanization and industrialization (for example, injuries, substance abuse, and mental illness)' (Ortiz and Abrigo 2017:2).

Figure 1: Triple burden of disease in developing nations



Source: Based on Frenk and Gómez-Dantés (2011)

Health governance and responsibilities in a decentralised setting

Successive PNG governments have struggled to find ways to effectively govern and finance basic primary health services. At independence in 1975, PNG began to decentralise service delivery responsibilities, including primary health care functions, to newly established provincial governments (see Axline 1986; Ghai and Regan 1992; May 1999). Difficulties implementing decentralisation reforms, initially through the Organic Law on Provincial Governments in 1977 and then its subsequent repeal and replacement with the Organic Law on Provincial and Local Level Governments (OLPLLG) in 1995, have had important implications for the functioning of PNG's health system (see Connell 1997; Newbrander and Thomason 1989; Thomason et al. 1991). Some have suggested that the declining and stagnant performance of health systems can be attributed to ineffective governance structures (Foster et al. 2009: Thomason and Kase 2009) while others have pointed to insufficient funding allocations (NEFC 2008; World Bank 2013) to enable decentralisation to work effectively.

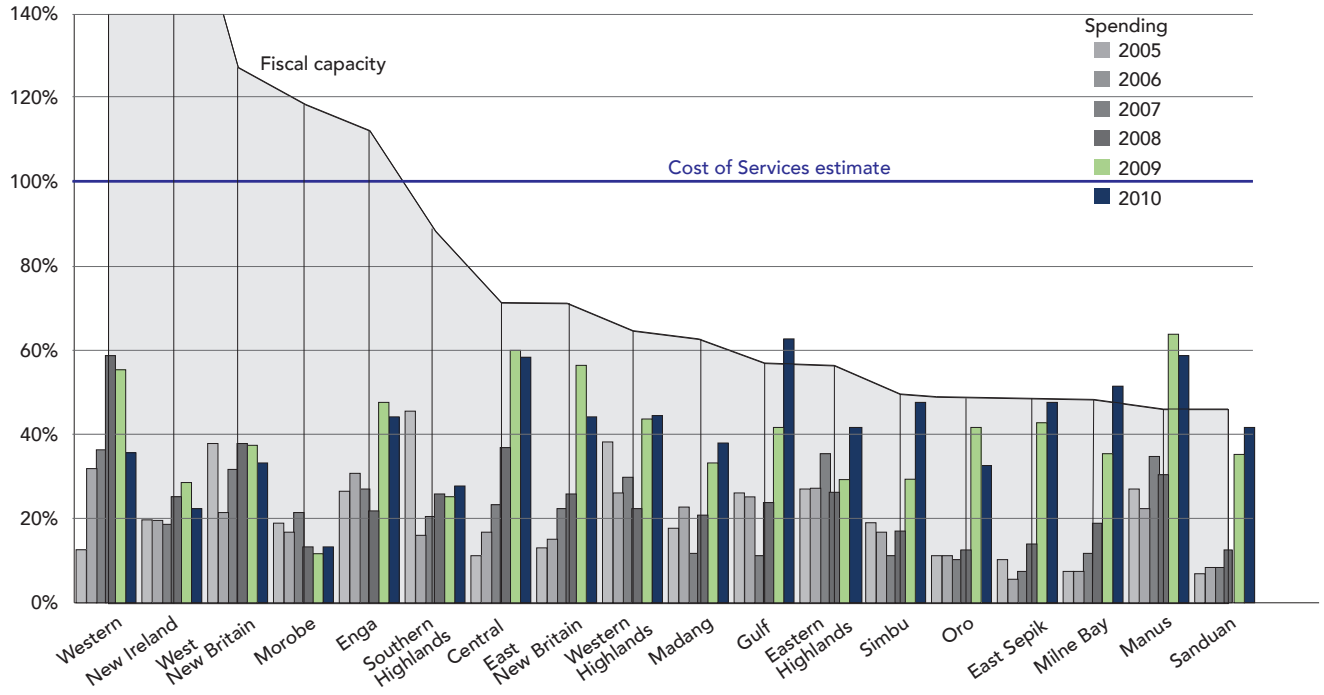
In an attempt to overcome perceived fragmentation of governance arrangements in the health system, the Provincial Health Authorities Act was passed in 2007. The act allows 'provincial governments to establish Provincial Health Authorities (PHA) to be responsible for both primary and secondary health care (hospitals) in the province' (World Bank 2011:2). PHAs were initially trialled in three provinces (Eastern Highlands, Western Highlands and Milne Bay) from 2011 (Ashcroft et al. 2011). A review of progress found that the implementation of PHAs had been 'relatively ad hoc and slow' and recommended remedial action in the pilot provinces before PHAs were implemented across the country (NDoH 2013:4). Since then, the PHA model has been slowly rolled out across PNG. In February 2020, Minister for Health and HIV/AIDS Jelta Wong reportedly announced that the PHA in the National Capital District was the final PHA to be launched (*The National* 26/2/2020). Provinces that had recently adopted the PHA structure were Chimbu in November 2019 (ibid.), Central Province in October 2019 and Western Province in September 2019 (*Loop PNG* 15/10/2019).

PNG's National Economic and Fiscal Commission (NEFC) has argued that underfunding for frontline service delivery has been a major reason for declining health indicators in PNG. Such claims were supported by a cost of services study, which reported that most provinces were significantly underfunded for their service delivery responsibilities (NEFC 2005).

Based on these findings, the NEFC successfully advocated for changes to PNG's intergovernmental financing arrangements through important amendments to the OLPLLG, which were passed through parliament as the Intergovernmental Relations (Functions and Funding) Act in 2008. As a result of these reform efforts, there have been gradual increases in total funding allocations, labelled 'function grants'[1] for core service delivery responsibilities, especially in provinces with the greatest fiscal need. Axline (2008) argued that this change to intergovernmental financing arrangements was one of the most significant decentralisation reforms for service delivery in PNG since independence.

NEFC's Provincial Expenditure Review (PER) reports capture spending in core service delivery sectors, including health, on an annual basis. Figure 2 shows health expenditure for each province between 2005 and 2010 (NEFC 2010). It indicates that no province was even close to spending enough funds to reach minimum health service delivery requirements. The graph also reveals that health spending increased significantly in 2009 and 2010 compared to previous years due to reforms to intergovernmental financing arrangements (ibid.).

Figure 2: NEFC recorded provincial health expenditure (2005–2010)

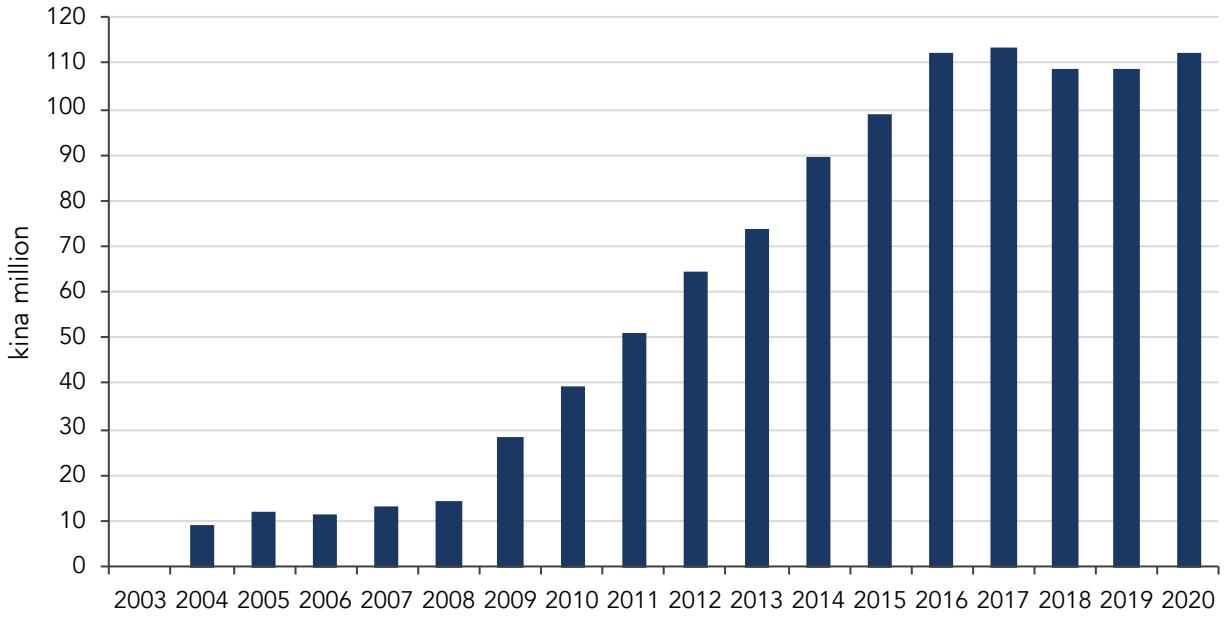


Source: Adapted from NEFC (2010:55)

Recurrent health grants for provinces

The health function grant allocated to provincial governments through the national budget is for primary health facilities to improve the availability of specified priority services. There have been gradual, but nonetheless substantial, increases in national budget allocations for health function grants since 2009 (Figure 3), due to the reformed intergovernmental financial arrangements for service delivery (PNG Treasury 2014). The health function grant almost doubled from K14.5 million in 2008 to K28.4 million in 2009, with incremental increases to K112.5 million by 2016 (PNG Treasury 2009, 2016, 2020) and has since remained at similar levels.

Figure 3: Budget allocations of the health function grant (kina millions)



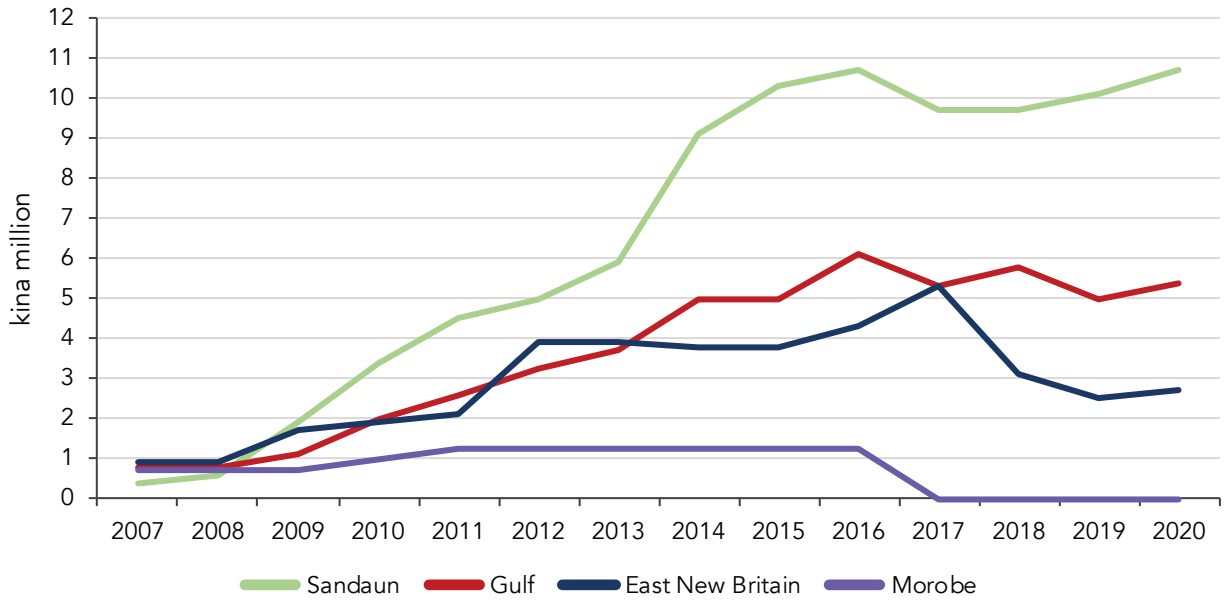
Source: PNG national budget documents (PNG Treasury 2004–2020)

The health function grant has helped provinces, particularly those with insufficient internal revenue, draw closer to estimates of their actual costs for providing core health services. The conditions on these national government grants to provincial governments require that these funds be spent on basic health facility operations (also known as Minimum Priority Activities or MPAs), in particular the maintenance of clinic infrastructure, conducting outreach patrols to rural villages and drug collection and delivery (NEFC 2008). The extent to which the health function grant makes it to health facilities and is used to support these basic health activities was examined in the *A Lost Decade?* report (Howes et al. 2014) and is revisited in this case study research report.

As the health function grant increased from K64 million in 2012 to almost K112 million in 2016, it would be reasonable to expect that health facilities should be receiving more funds for their MPAs. As described earlier, however, health function grants are allocated on the basis of need relative to provincial internal revenues. Therefore, some provinces have received much more substantial increases in their function grant allocations than others, particularly between 2012 and 2016.

Figure 4 below shows changes in function grant allocations for four provinces (our case study provinces and two additional provinces). Morobe and Sandaun are included because they demonstrate effectively the contrast between a province with high internal revenues (Morobe) relative to its estimated health service delivery requirements and one that is more dependent on grants from the national government (Sandaun). Morobe Province was allocated K720,000 in 2007, which increased to only K1.25 million in 2012 where it plateaued until 2016 before not receiving any health function grant allocation from 2017 to 2020. In contrast, Sandaun Province received K350,000 in 2007, which increased to just over K5 million in 2012 and eventually K10.7 million by 2016. Figure 4 also shows changes in the health function grant allocations between the case study provinces, where Gulf received substantially more than East New Britain by 2016 relative to 2012.

Figure 4: Health function grant allocations for specific provinces (kina millions)



Source: PNG national budget documents (PNG Treasury 2007–2020)

As discussed earlier, the NEFC PER has improved transparency in reported health spending at provincial and national levels. However, prior to the *A Lost Decade?* report (Howes et al. 2014), there had been very little on-ground monitoring to verify whether function grants had been spent as reported in the expenditure data. While the PER is a useful indicator of service delivery spending, it does not provide a complete or comprehensive picture. Once function grants are drawn down against specific budget lines for a 'function' or 'activity', such as routine maintenance of a health facility, there is no way of knowing if that activity has been completed without effective monitoring and evaluation carried out by provinces.

The *A Lost Decade?* report found that provinces face significant challenges in their efforts to spend their health function grants effectively (ibid.). Despite attempts to finance and promote more effective health expenditure, increased budgets have highlighted difficulties that constrain strengthening the health system. Many aspects of health facility operations are provided through provincial and district financial management systems that are complex (Watson and Wiltshire 2016:3) and can focus exclusively on administrative compliance rather than actual improved service delivery (DPLGA 2009; Howes et al. 2014). Consequently, it can be very difficult to get funds to frontline health facilities. There appears to be little doubt that increased national grant allocations show a genuine commitment to fairly fund decentralised service delivery in PNG. It should not be assumed, however, that strengthened health systems will result from increased financing, unless distribution of funds within provinces as well as implementation and reporting systems improve at the same time. It is important to note that the health function grant is not necessarily used to provide funds directly to health facilities for their operations. The *A Lost Decade?* report found that provinces and districts often keep these funds to administer at their levels rather than placing these funds into facility bank accounts.

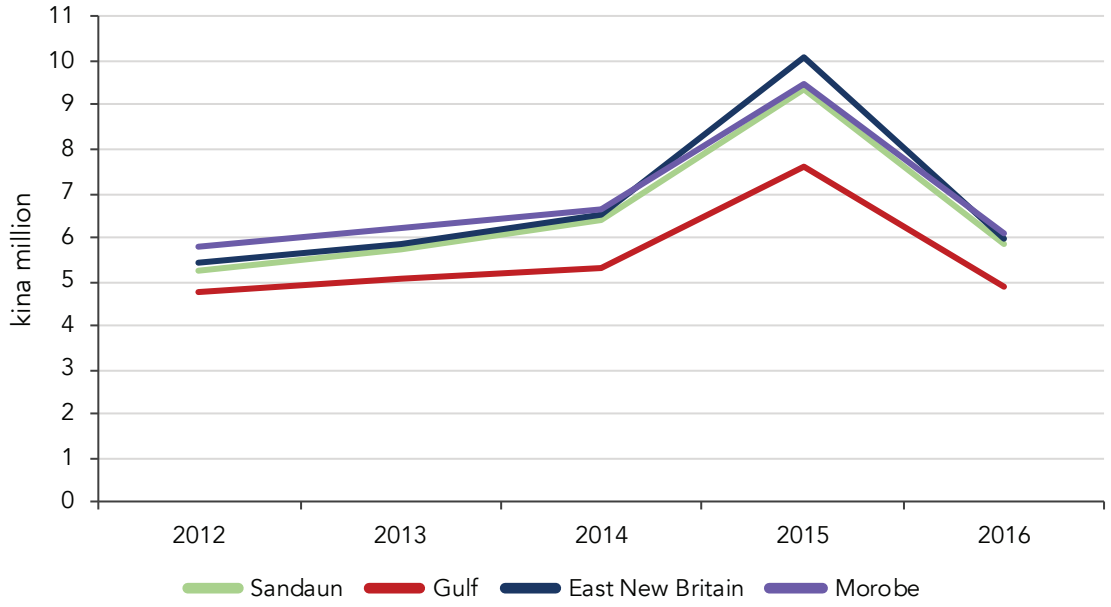
Health financing for church-run health facilities

Church-run health facilities are integral to PNG's health system and are estimated to provide almost half of primary health care services across the country (NDoH 2010; World Bank 2013). While health facilities managed by churches operate somewhat independently from government-run facilities, they are highly subsidised, as approximately 80 per cent of their operational costs are financed by the PNG government

(WHO 2012). For these health facilities, the PNG government provides national grant funding through the Department of National Planning and Monitoring to the Christian Health Services (CHS) (formally the Churches Medical Council), which then support the various denominations of church health agencies (Piel et al. 2013). These denominations include the Catholic, Lutheran, Seventh-day Adventist and United churches, who manage health facilities across PNG.

National government grants for church-run facilities are allocated to each province to fund salaries and operations and are published in national budget documents (PNG Treasury 2013, 2014, 2015, 2016). Figure 5 shows church funding allocations to the same four provinces represented in Figure 4 for the health function grant. It is clear that all provinces received substantial funding increases in 2015, but were then subject to significant cuts in 2016. In East New Britain, over K10 million was allocated in 2015, but cut by almost half to K5.99 million in 2016. Gulf Province was also subject to funding cuts but not to the same extent.

Figure 5: Grants for church-operated health facilities in specific provinces (kina millions)



Source: PNG national budget documents (PNG Treasury 2012–2016)

Free primary health care policy

After the 2012 election, the O'Neill-Dion-led national government introduced a free health care policy. As many people in rural areas have a subsistence lifestyle, with limited opportunities for generating cash, the policy reform was designed to unlock barriers to accessing health services. In PNG, providers of health care are categorised according to six levels, with primary health services offered by health centres, aid posts and outreach patrols. These services are identified as levels one to three and since 2014 have no longer been able to charge fees.

While user fees are set for hospitals under the Public Hospitals (Charges) Act (1972), primary health services were always supposed to be free of charge (WHO 2012). However, previous studies established that charging fees for services has been common practice (DPLGA 2009; Sweeney and Mulou 2012; Wiltshire and Mako 2014). The *A Lost Decade?* report showed that over 80 per cent of health facilities surveyed charged user fees to raise revenue to deliver basic services (Howes et al. 2014).

A key reason for charging fees is that health facilities lack a reliable source of funding to deliver services. In addition, some facilities charge user fees as a way of moderating patient numbers (Dooley 2014) and as a deterrent against tribal fighting and domestic violence (see Howes et al. 2014:114–15). The 2014 policy decision that primary health service delivery should be free of charge was always going to impact each province differently due to the large variation in fees collected by health facilities in different provinces. On average, East New Britain facilities raised more revenue from fees than any other province, while Gulf Province facilities collected the least from fees based on the 2012 survey data (see section 3).

While the new policy sought to abolish user fees charged for primary health services, it was also designed to supplement the lost revenue through predetermined subsidy payments made to either provincial and district health offices or church agencies.[2] However, a recent report has argued that the implementation of this policy has not gone to plan (Grundy et al. 2019:92) even though it remains a key priority in the current National Department of Health (NDoH) corporate plan (NDoH 2017). Ensuring that subsidy payments reach frontline services is complicated due to numerous public financial management challenges at subnational levels (Watson and Wiltshire 2016:3; Wiltshire and Mako 2014). It is also evident that implementing such an ambitious policy had the potential for unintended consequences, given inherent weaknesses in the finance arrangements for health facilities (Howes et al. 2014).

Health infrastructure funding through MPs

While health function grants, church funding and the free primary health care policy determine how health facilities fund recurrent operational activities, the District Services Improvement Program (DSIP) makes funds available for health infrastructure. DSIP represents one of the few available funding sources to rehabilitate the large number of deteriorating health facilities and associated infrastructure, such as staff housing, across PNG.

DSIP was introduced in 2006 and 2007, replacing earlier smaller funding allocations with other names (see Wiltshire 2016:57) and can be regarded as constituency development funds (CDFs). CDFs are discretionary funds provided to elected officials to support electorate or constituency-level development activities. Tshangana defines CDFs as primarily decentralisation initiatives that 'send funds from the central government to each constituency for expenditure on development projects intended to address particular local needs' (2010:1). There has been a significant increase in CDFs in PNG compared to levels in the 1980s[3] and especially since 2007 (see Howes et al. 2014:128).

In PNG, Open MPs (representing PNG's 89 single-member districts) receive up to K10 million a year in DSIP funds and play a significant role in their allocation and management. Since 2013, DSIP-type expenditure has increased and expanded to incorporate politicians at provincial and local levels through a broader Services Improvement Program (SIP). Governors (representing the 20 provinces, the National Capital District and the Autonomous Region of Bougainville) significantly influence the allocation of funds under the Provincial Services Improvement Program (PSIP), while Local Level Government (LLG) presidents are associated with the LLG Services Improvement Program (LLGSIP). Throughout this report, respondents referred to the DSIP, PSIP and LLGSIP when talking about the health sector.

The reported use of SIP funds ranges from well-planned and executed projects to allegations of cash payments made directly to communities for political support (Wiltshire 2016). According to government documents, SIP funds target infrastructure development to improve service delivery at the district level. DIRD guidelines state:

> *The primary objective of the PSIP, DSIP and LLGSIP is to provide minimum service delivery standards through re-establishment of basic infrastructure and facilities, including socio-economic activities for essential services such as health, education, law and justice, quality water and sanitation, transport (air, sea and land), communication and rural electrification (Section 3 Objectives and Principles, DIRD 2013:1).*

Official policy directions for SIP have consistently required health sector spending ranging between 10 and 20 per cent. Performance audits conducted by PNG's Auditor-General's Office have found significant governance and compliance concerns in the administration and management of SIP funds (AGO 2014, 2019). Until the *A Lost Decade?* report, there had been few attempts to evaluate the effectiveness of expenditure under the DSIP program from the perspective of sector allocations (Howes et al. 2014:128–34).

District officials are responsible for informing health facilities about allocations and plans for the implementation of DSIP projects. It was therefore possible to collect case study data from district administrators and health facilities about their experiences with DSIP. The decision-making body that initially oversaw DSIP project allocations was the Joint District Planning and Budget Priorities Committee (JDPBPC), which transitioned to District Development Authorities (DDAs) from 2015. Each DDA is chaired by the Open MP for the electorate and comprises the LLG presidents and three community members[4] appointed by the Open MP. When decisions are made to rehabilitate or fund new infrastructure at health facilities, the district administration is required to administer the project (DIRD 2013). Governance arrangements stipulated under the 1996 amendments to the OLPLLG state that the district administrator is the chief executive officer to the JDPBPC and since 2015, the DDA.

On the surface, DSIP funding is not usually regarded as an expenditure reform that has an impact on the health sector. Prior to the introduction of DSIP, however, there was a notable lack of development funds made available to provinces, districts and churches as a dedicated funding source. As the name implies, DSIP is primarily a service improvement program. According to a PNG Auditor-General's Office review of DSIP, it was a requirement that at least 10 per cent of funding be spent on health infrastructure (AGO 2014).[5] For a typical province in PNG, at least 10 per cent of DSIP funding allocated to the health sector is significant compared to the recurrent budget. Moreover, a guaranteed 10 per cent of annual DSIP allocations is notable when compared to the previous reliance on infrastructure funding through the Public Investment Program or provincial capital expenditure.

Provision of medical supplies

The procurement and delivery of medical supplies to health facilities across PNG has proved contentious in recent decades (McNee 2011). The PNG government has struggled to deliver drugs regularly to health facilities and has required support through donor interventions to varying degrees over a long period of time (see Wiltshire 2016:264–69). Health facilities across PNG can access medical supplies through two means. The first is ordering drugs through the appropriate Area Medical Store. Medicines are purchased by NDoH and sent to provinces, which are then responsible for distribution to health facilities through the health function grant (Grundy et al. 2019:17; *PNG Post-Courier* 18/1/2019). The other option is through medical supply kits, which are supposed to be delivered directly to health facilities. The medical supply kits contain standardised basic drugs and medical supplies. Within provinces, there are substantial 'geographical challenges posed for distribution of medical supplies, equipment and vaccines' (Grundy et al. 2019:142; see also Wade 2018).

The *A Lost Decade?* report found that the availability of basic medical supplies declined over a 10-year period (Howes et al. 2014:67–68. For these findings, as well as a detailed discussion of medical supply processes and Australian support, see Wiltshire 2016:264–69). These health surveys captured the start of donor-led delivery of medical supply kits and generally revealed a promising start to the reform, but also noted several significant impediments to effective delivery of these kits.

Since then, alleged political corruption in the procurement of medical supplies into the country (Tefuarani and Mola 2013) may have negatively impacted the reform of medical supply policies, which illustrates how politics can exacerbate service delivery in PNG. In this case, a tender process conducted in 2013 saw the country's medical supply contract awarded to a bidder without formal accreditation in accordance with

international standards, despite the bid being more expensive than others from accredited suppliers (Callick 29/12/2013; Cochrane 26/12/2013; Tefuarani and Mola 2013). Because the chosen supplier did not have the required accreditation, donor funding for distribution of supplies was then withheld (Callick 29/12/2013; Cochrane 26/12/2013). It has been acknowledged that there are 'governance and corruption issues that the NDoH has identified within the pharmaceutical management systems' (Grundy et al. 2019:161; see also Transparency International PNG 7/1/2019; Wade 2018). In addition, medicines can be expensive due to 'lack of local manufacturers and poor exchange rates for the kina' (Grundy et al. 2019:174).

PNG has low vaccination coverage (Wade 2018), which increases the risk of the spread of disease. Poor distribution of medical supplies can be directly linked to the country's poor immunisation rates. It is acknowledged that procurement and distribution of 'pharmaceutical and other medical supplies has been a long-term problem for the health sector' (Grundy et al. 2019:174). A 2013 reform was designed to improve medical supply distribution and included a software tool for managing relevant information and logistics (Grundy et al. 2019:144; *PNG Post-Courier* 18/1/2019). However, there remain significant hurdles to ensuring that the right supplies are delivered to health facilities (Grundy et al. 2019:144–47).

In 2019, the then minister for health, Sir Puka Temu, admitted that there were substantial weaknesses in the medical supply system resulting in medicine shortages (*PNG Post-Courier* 18/1/2019). He explained that the electronic database system would take more time to become fully operational, with much continued reliance on paper records (ibid.). Lack of medicines can have deadly impact. As one health worker said in 2018 in a rural health facility in Central Province, 'There are times when people die of curable diseases and we feel really sad about it' (Wade 2018:n.p.).

Photo: Richard Eves

SECTION 3. APPROACH TO RESEARCH AND METHODS

This section outlines the approach to the research conducted for this report. It explains the process for selecting the two provinces and the research methods adopted at fieldwork sites. We begin with a brief overview of the health data collected for the earlier larger study (Howes et al. 2014) and explain how these findings revealed stark contrasts in health service delivery between provinces. We show differences in health facility performance between the best performing province (East New Britain) and the worst performing province (Gulf), which led to the decision to investigate these outliers in more detail through this case study research. This section also explains the methods used to collect data at fieldwork sites, whereby a small sample of health facilities in East New Britain and Gulf were revisited.

Building on an existing health data set

The research conducted for this report utilised a mixed-methods approach. It drew on quantitative survey data (the same health survey used in 2012 was replicated in 2016) as well as qualitative, semi-structured interviews with key informants and focus groups at case study locations. This approach built on the 2012 survey data, which outlined health facility characteristics and provided insights into whether policies and reforms in the health sector were beneficial for frontline health service delivery.

Cognisant that the earlier research (Howes et al. 2014) was limited in the extent to which it could explain the survey findings, a case study approach was adopted in our work. Using qualitative field-based methods, we sought to augment the survey data with a view to determining how health policies and reforms were impacting on health facilities and the services they provide to communities. The case studies aimed to understand potential bottlenecks in the health system and how different provincial contexts influence the utilisation of available health financing and consequent health facility performance.

The majority of this case study research is qualitative in nature, meaning that it focuses on the words and perspectives of the participants (Bryman and Bell 2007:416; Gelo et al. 2008:272–77). Indeed, bringing the voices of frontline workers to the fore — health workers, administrators and community members — is an important contribution of this report. Unlike in quantitative research in which representativeness is key in sampling and reporting on numerical data (Bryman and Bell 2007:425; Gelo et al. 2008:274), qualitative research utilises 'almost exclusively purposive sampling strategies' (Gelo et al. 2008:275).

In this research, a purposive sampling strategy was adopted because the aim was to compare the outliers established in earlier research in more detail. Specifically, this type of purposive sampling technique is known as extreme or deviant case sampling and involves examining 'the most outstanding cases — in order to learn as much as possible about the outliers' (ibid.). Therefore, the findings from East New Britain and Gulf provinces, two extremes of the earlier data set, are useful for illuminating the conditions on the ground. As Bryman and Bell explain: 'Whereas quantitative researchers want their findings to be generalizable to the relevant population, the qualitative researcher seeks an understanding of behaviour, values, beliefs, and so on' (2007:426). The sample size was suitable for qualitative research, which generates rich data and insightful quotes (Neuman 2014:471).

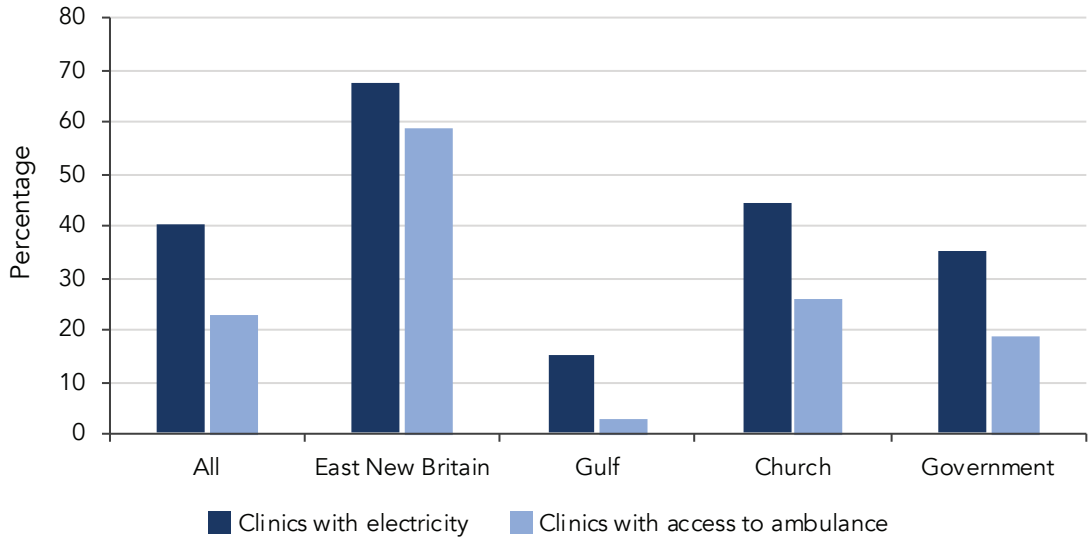
Health facility performance in Gulf and East New Britain provinces

The *A Lost Decade?* report found that the conditions of health facilities and the services they provide differed significantly across the provinces sampled (Howes et al. 2014:12–24). This suggested that how provinces and districts manage their decentralised health responsibilities contributes significantly to the provision of services by health facilities. Better performers, such as East New Britain, showed that health services could be

delivered and the system made to work more effectively. However, the results from Gulf Province showed that some provinces were starting from a very low base.

It is necessary to highlight the significant differences in health facility performance between East New Britain and Gulf provinces based on the previous research (ibid.), in order to justify the selection of these provinces. Figure 6 illustrates the extent of variation between the selected provinces. For instance, whereas two-thirds of health facilities in East New Britain had access to electricity, only 15 per cent of facilities in Gulf Province did. Sixty per cent of health facilities in East New Britain had regular access to an ambulance,[6] but only three per cent of facilities in Gulf did. It should also be noted that East New Britain health facilities performed much better than overall averages on both these indicators, while health facilities in Gulf performed significantly worse than the national average. It can also be seen in Figure 6 that these indicators were generally better for church-run facilities than for government providers.

Figure 6: Health facility characteristics: electricity and access to ambulance

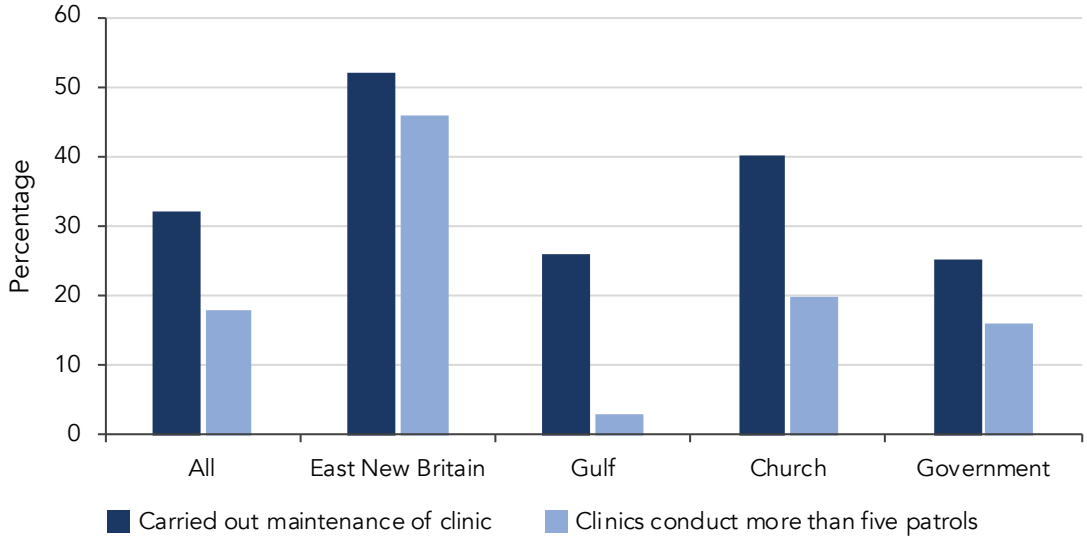


Source: Howes et al. (2014)

Figure 7 shows differences in another two key performance indicators (maintenance of health facility infrastructure and health outreach patrols) for both provinces and agency type (church versus government), compared to averages for the whole sample. More than half of the health facilities in East New Britain had undertaken maintenance of the facility or staff housing in the previous year compared with just 26 per cent of those in Gulf. Similarly, almost half of the East New Britain health centres surveyed had conducted regular outreach patrols,[7] compared to only 3 per cent in Gulf and 18 per cent across the eight-province sample. In terms of agency type, more church-run facilities had conducted maintenance (40 per cent) and patrols (20 per cent) than government-run facilities (25 per cent and 16 per cent respectively).

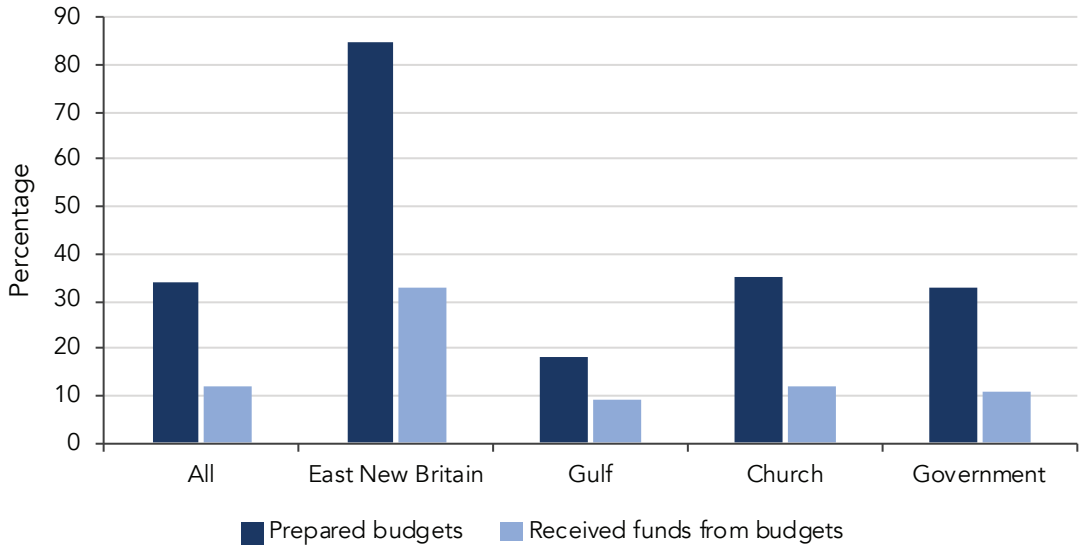
Figure 8 clearly shows that health facilities in East New Britain were much more likely to prepare an annual budget (85 per cent) compared to the eight-province sample (34 per cent) and to Gulf Province (18 per cent). As a result, 33 per cent of health facilities in East New Britain received funding from prepared budgets, which is impressive considering that only 12 per cent of all health facilities received funds from budgets and less than 10 per cent in Gulf received funds based on budgets. With regard to these particular indicators, Figure 8 reveals that there was little difference between church-run and government-run facilities.

Figure 7: Health facility performance: maintenance and health patrols



Source: Howes et al. (2014)

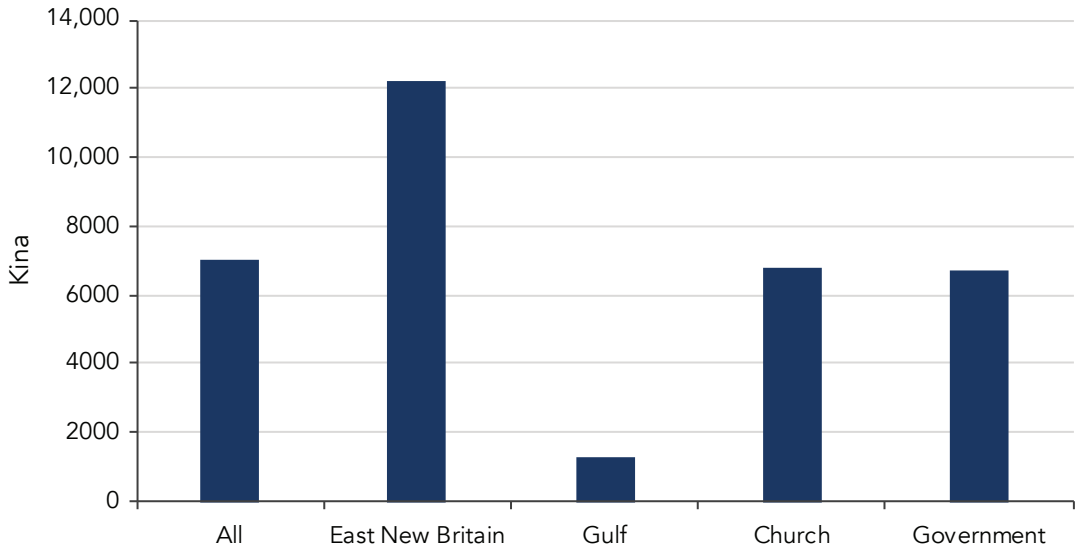
Figure 8: Health facility finances: budgets prepared and funds received



Source: Howes et al. (2014)

Figure 9 shows that health facilities in East New Britain were also far more likely to raise funds from user fees in 2012. Average annual user fees raised in East New Britain amounted to K12,240, which was almost twice that of the average amount raised elsewhere (K6998), and far exceeded the annual user fees raised in Gulf (K1311) per facility. Based on this data, it was expected that the introduction of free primary health care would be more keenly felt in East New Britain than in Gulf. There was little difference, on average, between the fees raised by church-run versus government-run facilities.

Figure 9: Average annual user fees raised by health facilities (values in kina)



Source: Howes et al. (2014)

The immediate question arising from these indicative health indicators is why East New Britain performed well above the average and Gulf far below the average for the whole sample? There appeared to be promising approaches to managing the health system in East New Britain, which better supports its health facilities and to a lesser extent among church-run facilities. Further investigation into how these models operated in practice motivated the case study research reported here. Understanding how health facilities in Gulf and East New Britain were responding to health policy reforms was another reason to conduct this research.

Approach to case study fieldwork

The fieldwork involved revisiting a small sample of health facilities in each province and conducting semi-structured interviews with provincial and district bureaucrats and community focus groups. The case study team comprised researchers from the University of Papua New Guinea and The Australian National University.

In East New Britain Province, research teams visited Pomio and Gazelle districts, two of the four districts (Kokopo and Rabaul were not sampled) in the province, which is situated in the islands region of PNG. In 2011 the province had an estimated population of 327,000 (UNDP 2014:106)[8] and is roughly 15,000 square kilometres, including mountains, limestone plateaus, active volcanos, valleys, rivers and coastal plains (Hanson et al. 2001:258). There is 'an extensive network of sealed roads' at the eastern tip of the province's main island but 'there are few roads in the south of the province' and 'outboard motorboat and canoe travel are common in coastal areas' (ibid.:260). In terms of development status, East New Britain has long been considered a relatively high-performing province in the PNG context (see Regan 1997:350). Based on factors such as access to services, income from agriculture and child malnutrition, the district of Gazelle is thought to be doing well, while Pomio is considered to be disadvantaged (Hanson et al. 2001:310–13).

Research teams visited the two districts that make up Gulf Province: Kerema and Kikori. It is situated in the southern region of PNG, with a land size of about 13,500 square kilometres and has a population of approximately 157,000 (UNDP 2014:106; World Bank 2011:12).[9] There is a road connection to PNG's capital city, Port Moresby, and there are other roads but 'outboard motor boat and canoe are the main forms of transport along the major rivers and the coast' (Hanson et al. 2001:40). In terms of access to services, agriculture and child malnutrition, both districts are thought to face significant disadvantages (ibid.:310–13).

In each province, four health facilities (two in each district) were selected based on their performance reported in the previous research (Howes et al. 2014). Given that PNG's primary health care system operates as a vertical structure of referrals, with aid posts at the base reporting to various types of health centres and rural hospitals,[10] judging performance is not straightforward. For instance, aid posts are usually operated by a single community health worker and offer limited primary health care compared to district health centres and rural hospitals. Therefore, the performance measures used to judge which health facilities should be revisited had to be considered relative to health facility type. These performance measures included the quality of infrastructure, access to budgets, health workforce availability and services actually provided.

For each district, the research team visited one of the best performing health facilities and one of the poorest performing facilities. Selection considerations also included attempts to achieve a balance between government and church operations as well as clinic type. Table 1 shows the identifying characteristics of health facilities revisited in each province. At each of the chosen health facilities, the 2012 officer in charge (OIC) survey was repeated, so that changes in health indicators could be compared across the four years (2012–2016) to identify potential trends. While these quantitative surveys were completed, more emphasis was placed on collecting qualitative data and broadening the number of respondents, including community focus groups, to help explain the research findings.

Table 1: Health facility characteristics for those revisited in this study

District	Facility type	Agency	Performance
Kerema	Sub-health centre	Church	Good
Kerema	Aid post	Church	Poor
Kikori	District health centre	Church	Good
Kikori	Aid post	Government	Poor
Gazelle	Rural hospital	Government	Good
Gazelle	Sub-health centre	Church	Poor
Pomio	Health centre	Government	Good
Pomio	Health centre	Government	Poor

A series of semi-structured interviews were held with government and church health administrators who were directly involved with budgeting and monitoring health services in both provinces. In total, 21 key informant interviews were conducted to understand the challenges faced by those managing the health system. Finally, focus groups were conducted at each health facility location with local community members (disaggregated for gender), since they are the intended beneficiaries of the services provided. Sixteen focus group discussions were held — these discussions were wide-ranging and touched on the broader challenges to service delivery at the local level. These consultations with communities also helped the research team to triangulate different perspectives from health workers and administrators.

Human research ethics approval was granted by ANU for this research. An explanation of the research project was given to prospective participants in both verbal and written form and in either Tok Pisin or English depending on their preferences. Prescribed ethics procedures were employed at all research site locations (including respect for all parties and informed consent).

Qualitative research findings are presented in this report in the form of direct quotes from individual interviews and focus group discussions. In some cases, participants spoke in English. Tok Pisin was commonly used and quotations have been translated into English. All quotations are presented as the original spoken word, although in some instances there have been minor changes to align with the conventions of standard

grammatical English. Changes have been made judiciously, with strict adherence to the intended meaning. Words and phrases appearing inside square brackets indicate additions made by the authors to ease comprehension.

Photo: Richard Eves

SECTION 4. THE FINANCING OF HEALTH FACILITIES

This section presents views from research participants on recurrent and development financing for health facilities. We begin by reporting results on the budget process for government and church-run health facilities sampled in East New Britain and Gulf. Our findings describe numerous challenges with accessing funds through the health function grant and the CHS and considers key differences in financing arrangements for government and church facilities. This is followed by a discussion of perspectives gathered from health administrators, frontline health workers and community members on the implementation of the free primary health care policy. Finally, we present the views of research participants on development funds made available to sampled health facilities through the various iterations of the SIPs.

Budget submissions and access to funding

The *A Lost Decade?* report found that East New Britain was the only province surveyed that showed signs of an established budget process. This meant health facilities regularly prepared budgets in anticipation of receiving operational funds. In contrast, almost no health facilities surveyed in Gulf Province prepared budgets or annual plans (see Figure 8). It would be reasonable to expect that more health facilities would be preparing budgets due to increases in health function grants (see section 2). Our findings reveal, however, that health facility budgets, both the number that submit them and the amount sought, had either declined or stayed the same based on our small subsample of facilities surveyed again in 2016.

All health facilities revisited in East New Britain reported preparing a budget for their recurrent operations. In most cases, health facilities were advised on funds allocated from government or church funding providers. While functional budget practices were still evident, there was very little change in budget amounts requested between 2012 and 2016. This could be due to one or a combination of reasons: it may have reflected the modest increase in health function grants over the period or perhaps provincial internal revenues allocated to the health sector in East New Britain had not changed.[11] Another reason could be a tendency for OICs to copy the previous year's budget documentation when preparing new budget submissions.

Regardless of budget allocations made to individual health facilities, the main issue in East New Britain is that health facilities rarely receive their full amount. Interviews with OICs at health facilities revealed problems with obtaining promised operational funds that had been approved and budgeted for in the previous financial year. For example, one health worker in Pomio District spoke about budget constraints, saying:

> *When we put the budget in, they will say that there is a shortage of money … If I have K25,000 [in my budget], maybe, I will access K20,000.*

At another health facility in East New Britain, the OIC explained that the lack of funds available to health facilities in the province was not the result of limited budget allocations but rather a question of budget implementation. This OIC suggested that the main reason for the lack of available funds for frontline health services was ineffective management. When asked whether the disbursement of allocated health budgets to facilities had improved in recent years, this same OIC provided a blunt assessment: 'I just think it is going from bad to worse'.

In East New Britain, recurrent health funding (such as health function grants and CHS grants to provinces) is mainly managed at the level of local government. As described in the *A Lost Decade?* report, East New Britain is the only province in PNG that has LLG health administrators who manage budgets for health facilities (Howes et al. 2014: 174). Funds are allocated to each health facility and 'held in the relevant District Treasury on behalf of each facility' (ibid.:125). However, these systems and administrative processes are still subject to funding

shortfalls and delays. For example, one respondent said that 'while there is LLG funding, this is often late and inconsistent' … 'for things like transport to conduct outreach programs and the outreach programs themselves'. As described earlier, these operational activities are specifically funded under the health function grant.

In East New Britain, case study findings show that while budget processes are in place, difficulties with budget implementation continue to prevent the primary health care system from functioning effectively. The result is that health facilities do not have the funds available when needed to deliver regular health services. A health administrator in East New Britain made the following observation:

> *The biggest problem or our greatest hindrance is through the district allocation of government funds, which takes so long to be given to us to purchase required materials.*

When this same health administrator was asked whether the health financing system had improved in East New Britain since the previous survey of 2012, similar perspectives to frontline health workers emerged. This health administrator commented on the consequences of inefficiencies in getting financing through the system:

> *So, within these five years, time would run out waiting for the money to reach the wards. Meanwhile, people are suffering from the [lack of] very basic health care services.*

Much of the evidence collected from case studies in East New Britain shows that the health financing system continues to struggle to deliver budgets to health facilities for their operations. As will be described in the health facility performance section (section 5), without reliable funds to implement plans, health facilities continue to struggle to deliver regular basic services.

Health financing for church-run health facilities

Case studies conducted in Gulf Province provided a distinct contrast to East New Britain in terms of how health facilities are financed and supported by government and church providers. As shown in Figure 8, only 18 per cent of health facilities sampled in Gulf Province prepared budgets. Of these facilities, all were run by churches. It is also important to note that Gulf Province is generally considered to be a more rural and remote province than East New Britain, so access to banks and financing is often very difficult. Indeed, the 2012 survey found that only a quarter of health facilities visited in Gulf had active bank accounts compared to over 80 per cent of facilities visited in East New Britain (Howes et al. 2014:122).

Most of the health facilities sampled in our research for Gulf Province were operated by churches. As noted in section 2, there was a funding cut to CHS in 2016 when compared to the previous year.[12] The funding cut to churches was compounded by delays in national grants being made available to CHS. Since health facilities in Gulf Province are often reliant on funds from church providers, cuts and delays to national grants allocated to CHS were expected to have implications for the ability of health facilities to provide basic services. The subsequent impact of these cuts (or delays in the availability of these grants) became a major theme for the case study research in Gulf Province. A key finding from the *A Lost Decade?* report was that church health facilities performed better than government-managed facilities 'across a number of important measures' (Howes et al. 2014:84), including maintenance of facilities and staff housing, ambulance availability and the number of patient transfers. In addition, health facility users generally had a better perception of the availability and competency of health staff at church facilities compared to government facilities (ibid.:85).

In Gulf Province, only one of the four health facilities revisited prepared a budget or plan for 2016, which was one less than in 2012. For this major church-run health centre, the budget prepared in 2016 was for about half of the 2012 amount. According to the OIC, cuts and delays in national grants provided to the CHS had resulted in significant reductions in budgets for church-operated health facilities across Gulf Province. This major

health centre was supposed to receive K20,000 a month for its operations (similar to its 2012 budget) but had only received K6000 a month throughout 2016. In addition, the OIC reported that staff were unpaid for the first three months of 2016 due to substantial delays in the staffing grant coming through. A health committee member for this health centre underscored this point:

> *Since 2012, there have been changes and about fifty million [kina] was taken off from the mainline churches that run such agencies. So, our health workers now experience delays in being paid. (See section 5 for more on pay delays.)*

Despite not being paid, health workers still performed their duties but were unable to offer the same levels of services due to the cuts and delays in budget funds. This situation at the health centre had downstream impacts on a church-run aid post, also revisited as part of this research in Gulf Province, which reported receiving K10,000 in 2012 but nothing in 2016. The community health worker stationed at this aid post said that they were unsure whether funds had been cut or were simply delayed.

Church and government health administrators interviewed in Kerema (the capital of Gulf Province) acknowledged the twofold problem of funding cuts and delays in payments. While they were aware of overall cuts to the budget allocations for CHS, these health administrators were keen to emphasise that delays in funding allocations were crippling health systems, especially for health worker salaries. One church health administrator said:

> *[There is] a lot of delay but I always tell the nurses that it's delayed but it's not cut: 'When it comes, you will still get the full pay. There may be delays in getting it but when the subsidy comes, you'll get the same amount'.*

A government health administrator confirmed that church health grants are usually paid, saying, 'It does come in, because I am the person sitting in there and I know it does come in … it just doesn't come in time'. Managing actual cuts to health funding allocations combined with delays in availability of funds to churches had significant implications for health services offered in Gulf Province. Delays and budget cuts to church-run health services were affecting operations, performance and service delivery. According to an authoritative source, several aid posts in Gulf Province had been closed until more secure and reliable funds — to at least pay health workers — could be accessed. This health administrator mentioned that in the last year 'five aid posts have closed now: [if there are] no staff, then we'll just close it'.

In addition, church health administrators located in the provincial capital were unable to travel to health facilities for monitoring visits due to their own budget constraints, compounded by the fact that these health facilities were in remote locations that could only be accessed by air. When asked whether these health facilities were monitored and supervised, one health administrator admitted, 'That's my job. I'm supposed to go but I didn't go'. The major constraint in performing these duties was believed to be funding. The administrator said that previously they had made supervisory visits twice each year but this practice had ceased due to lack of funding. This has resulted in a lack of support for health facilities.

Discussions with provincial health administrators and managers of church-operated health facilities in Gulf Province confirmed significant cuts and delays in funds being made available to church health budgets. They acknowledged that the lack of funds provided to the CHS was crippling the health system. Some respondents even suggested that church-operated health facilities should be handed over to the government to operate. A health committee member for a church-run facility in Gulf Province also raised concerns about the standards of service delivery and speculated that services might improve if the health facility were handed over to the government:

If the mission handed [this health facility] back to the government, then the government would supply services. I think the free health policy would work. If we were a government facility, I think we would have medicines … The government would provide services.

Overall, case study findings in Gulf Province revealed that church-run health facilities were experiencing significant challenges in maintaining health service delivery across the province.

Differences in financing church and government health facilities

Our case study findings revealed mixed views as to whether government or church-run health facilities were better managed, particularly in terms of reliable financing for operational activities. There were participants who believed that church-run facilities operate better than government ones. A health committee member said that at church-run facilities staff are generally available for longer hours, whereas staff at government facilities tend to only work in the mornings. Church health workers argued that churches do play a crucial role in providing services that would not otherwise be available. One mentioned construction of airstrips, while another alluded to the establishment of new health facilities: 'A very important point I want to mention is for those four aid posts, none of those aid posts are raised by the government'.

Others felt that there is no difference between government-operated and church-run health facilities in real terms since they both function in the one integrated health system. For instance, a health worker in East New Britain Province said, when referring to a church-run facility, 'there are still funding provisions under the current DSIP funding arrangements'. A health manager in the same province also described uniformity between the government and church funding models servicing the same interests:

Church health plans are communicated to the Provincial Health Adviser to incorporate into the Provincial Health Plan. Components of these programs are then funded by the PHO [Provincial Health Office] under the PSIP, DSIP or LLGSIP depending on the location of the health facility running the programs. As to what programs are run, this depends on individual facilities and their capabilities. Health facilities, both government and church run, are required to conduct quarterly reviews on their programs and facilities. These reviews are forwarded to the DHC [District Health Committee] or its LLG equivalent, then to the PHO.

A former member of parliament in Gulf Province also felt that there are few differences, but not in a positive sense: 'Both the government and the church have to do more when they want to deliver services to our people. They have to do better because all of the aid posts are closed'. In contrast, a health committee member in the same province was less pessimistic, referring to collaboration: 'This aid post here, it is a Catholic-run agency aid post. But we get a lot of support from the government'.

It seems that issues around sources of funding are contentious for both church and government facilities, with varying views as to whether or not there are any real differences in funding. In Gulf Province, a health administrator said that it is preferable to work for a government facility rather than a church one, as government facilities have access to more money:

They [government facilities] don't only get money from the government — the provincial grant — but they also get a lot of money from groups like AusAID, UNICEF and all these other groups. So, they're better off than the churches.

But a health manager was scathing of the assertion that churches have less funding than government operations:

They get grants from the government — the same as what we get … They have grants that come in that should support them. They should not be running

out of money, because most of their health facilities under the church, like the United Church and the Catholic, they get a lot of help from government.

There is a common perception that church-run health facilities have more funding options available to them than government-run health facilities. Related to this may be a perception that churches are wealthy, as explained by a church health officer:

Politicians think that Catholic Churches have a lot of money. That's why when we ask [for funding], they don't give [anything]. [We] always tell them that it's not that we have a lot of money. It's how we spend the money wisely and correctly, that's all.

Another health worker from Gulf Province suggested that patients prefer to attend government facilities as they believe they provide better services. This church health worker mentioned that one church's system of supplying medicines through its head office in Port Moresby was less efficient than the government's source of medical supplies in Kerema, the provincial capital. However, this same participant admitted that sometimes the government drug supplies are not available in full.

In summary, there were mixed views regarding similarities or differences between government and church health facilities. Common themes of collaboration and equality emerged, particularly in the explanations of a unified system in East New Britain. There were also conflicting statements from participants, especially regarding funding sources.

Charging user fees and free primary health care

At the time this fieldwork was conducted, the expectation was that health facilities would no longer be charging fees in compliance with the free primary health care policy introduced in 2014. The research findings showed, however, that this was not the case. In East New Britain, only one of the revisited facilities had complied with the policy of not charging user fees. At that facility, demand had increased 'because medicine is free, there has been a massive influx in the number of patients'. This situation led to frequent shortages of medicines and wound dressings. During the fieldwork, the facility's OIC had submitted a request to the LLG to commence collecting user fees once again, primarily to address shortages of medical supplies:

We have submitted […our] submission to the LLG for them to approve user fees again. They must approve it so we can start [to] collect fees again because we have a shortage of drug supplies.

The following explanation was given for wishing to recommence charging fees:

I think if we introduce a user pays policy, we will collect money and run the facility with it … Like, we will collect fees for consultations, medicines, lab tests, in-patient stays and medical reports.

Interestingly, health facilities in East New Britain that had continued to charge fees for consultations and medications were charging patients more per service in 2016 than before the free primary health care policy was introduced. For instance, two of the four health facilities revisited in East New Britain were collecting more than twice as much revenue from user fees in an average month when compared to 2012, in part due to raising consultation fees charged to patients.

Other facilities in East New Britain also reported increased patient numbers since the new policy was introduced, with one OIC saying that attendance at antenatal health facilities had increased. At one facility, the news about the national policy was enough to increase the number of people visiting the health facility:

We have seen an increased number of patients [coming] to the facility because they heard that medication and other services are free. So, an increased number of patients kept coming. This has created problems for us because free health services are supposed to be free. The number of patients has increased but staffing has not increased. And that is a big problem with free health care services. They implemented the idea without considering that we [need to] train personnel.

With inconsistent and/or late arrival of medical supplies (see section 5) and late disbursement of funds to health facilities, it is difficult for health staff to manage any increase in patient numbers. There is some confusion in the community about whether fees should be charged and why they are being charged. As one community member said in an interview:

We don't know why exactly they are charging us, the people, since all the drugs are taken care of by the government. They must have other agendas to create this policy. We think they are doing that because the health centre is employing casual workers and maybe this money is diverted to the casual workers' pay.

A key element of the free health care policy is that health facilities are to receive subsidy payments in lieu of user fees. In East New Britain, a facility manager said that inconsistent and late payment of subsidies was having a negative impact on activities. He explained how inconsistent and late payments had limited the facility's ability to provide basic services, especially outreach patrols:

Since the introduction of the free health care policy, the hospital has experienced an increase in patients being treated. Unfortunately, there are not enough staff to implement the policy. Additionally, the inconsistent and late payment of the free health care subsidies means there is a negative impact on hospital activities and programs. For example, the maternal and child health clinics have been stalled. Patients have to wait for the clinics for another month.

In addition to providing fewer health services as a result of the policy, this same health worker said that payments could not be made to casual staff due to the late arrival of the subsidy payments:

The hospital has not received its subsidy for 2016 yet. As a result, casual staff have had to be laid off work. These are one driver, one cleaner and two community health workers.

At another facility in East New Britain, user fees were ended when the free health care policy was announced, but due to inconsistent payments of subsidies fees were reintroduced. Initially, 'there were complaints from the community about these user fees but [they] have now accepted that they still have to pay if they want medical treatment'. Earlier research found that almost three-quarters of health users surveyed believed that the cost of health services (user fees) was about right (Howes et al. 2014:117). In addition, users who could not afford to pay for treatment were usually exempted or only paid fees according to their ability.

As expected, in Gulf Province, the introduction of the free primary health care policy had little impact on revenues raised at the health facilities revisited. This is because there was already a free health policy in place, initiated by the provincial government many years before such a policy was introduced nationally in 2014. In Gulf Province, the research team could find no evidence that facilities had received subsidy payments associated with the free health care policy.

In 2013, then prime minister Peter O'Neill and other senior politicians repeatedly stated their commitment to implementing a free primary health care policy across the country (Gerawa 25/2/2014; NDoH 2017; Prime Minister's Office of Papua New Guinea 2013). However, our case studies illustrate many implementation problems that will be difficult to overcome given funding problems for health facilities. This case study

research suggests that the ambitious free health care policy may have produced unintended consequences, such as increased patient numbers, additional workload for existing health staff and depletion of medicines and wound dressings.

Infrastructure funding for health facilities

This fieldwork was conducted during the period in which DDAs were being established across PNG (see section 2). Therefore, some interviewees had not heard of DDAs while others were unclear about how they would work and how they might interact with health providers. Lack of awareness about processes and limited communication with DDAs seemed evident. As one health committee member said, there are challenges for health committees in accessing SIP funding through the DDA:

> *Paperwork is needed to access such things [like DSIP funds] for health facilities. But many of us are not that literate. And the member [MP] himself isolates himself from the staff and the people working around him.*

In East New Britain, three of the four health facilities revisited had received recent DSIP funds for infrastructure. This was an increase from 2012 when only one facility reported that they had received DSIP funds. One facility in Pomio received K25,000 for clinic infrastructure, which was managed by the health facility itself with funds received directly into its bank account. However, it was also reported that this project was more than 18 months behind schedule. Another facility surveyed in Kokopo reportedly received K75,000, which was managed by the district office and the project was completed on time. Despite very different outcomes in project implementation, both of these health facilities still believed that DSIP was a fair way of allocating health resources.

As in 2012, of the four health facilities revisited in Gulf Province, none reported receiving recent DSIP funds. According to one interviewee, the exception was a major health centre in Kikori that had been promised funding for infrastructure during a public announcement on a prime ministerial visit to Kikori District in 2015. However, this promise of infrastructure support did not come to fruition as originally anticipated. This caused tension in the local community as people felt that the health staff had misused the funds.

One respondent in Gulf Province expressed concern about the lack of oversight of DSIP projects, stating that there is no monitoring of expenditure. Another respondent, a health manager also in Gulf, was highly sceptical about the use of DSIP funds:

> *You see the MPs in the newspapers saying 'Oh, look, these are my acquittals for my DSIP'. But that doesn't mean anything, just because you acquit the funds. What happens if you go and you see the health clinic? There's no water supply. The floorboards aren't there. So, you can say, 'Oh yes, this is acquitted. We spent K200,000 at whatever clinic.' It says so in the paper. But unless you go to the area and you check, surely the acquittal doesn't mean anything. Right?*

In a similar vein, a health manager in Gulf Province described health facilities constructed with PSIP funding but with no accompanying staff housing constructed nearby, leaving them idle. A related concern was that PSIP-funded new facilities were not built to standard specifications, which meant that they could not be registered to receive medical supplies:

> *They build a health facility [but] they don't build houses. How do they expect the health facility [to function] without a health worker house? And they're not going through the department of health to get proper design and things like that. These are some of the*

problems with the politicians coming in and building health facilities, aid posts, and things like that. The design is not a standard design that the [national department of] health wants. They do their own, and then when they do their own, they cannot be registered … When it's not registered, they cannot get medications and things like that there.

In addition to discussions on DSIP and PSIP, some interviewees talked about LLGSIP as a possible source of health infrastructure funding. As a research participant explained in East New Britain:

Funding is available using the DSIP and LLGSIP funding arrangements. These funds are monitored using acquittals and reports submitted to relevant authorities before the end of each financial year. Operational funding is shared between the district and local level administrations. For example, a submission for an outreach program is made to the LLG concerned. The LLG may then seek support from the district administration. The district will usually provide transport for the outreach.

There was also evidence in East New Britain that DSIP may be used to help fund operational rather than capital expenditure. When one health worker was asked about the ways in which DSIP has supported the health facilities, she stated: 'The youths cleaned the hospital and I got the funds from that basket [DSIP] to pay them and even the boys who cut the grass. Also, for the maintenance of the houses here, the district helped.' A health worker in the other case study district of East New Britain also spoke positively about the DSIP funding arrangements: 'The current DSIP funding is effective. Budget submissions are done by the HEO [health extension officer]'.

Discussion of key health financing findings

This section has presented research findings on how health function grants are implemented in the two provinces examined. East New Britain has long been a standout health performer in PNG, especially in terms of its health facilities, preparation of budgets and receiving funds. However, based on the findings from this case study research, over the years 2012–2016 the health financing situation appears to have stayed the same or is slightly in decline. Gulf Province showed little evidence of having established a functional health system; indeed this research demonstrates that health facilities have fallen even further behind since 2012. The exception in Gulf Province is a facility that does receive funds and is the best performer in the province.

Before this research was conducted and based on the findings from the *A Lost Decade?* report, it may have been reasonable to expect that participants interviewed would have been more positively disposed towards church health facilities than government-operated ones (Howes et al. 2014). However, interviews revealed some surprisingly contrasting perceptions. With significant cuts to national government grants for CHS in 2016 and the subsequent impact on church-run facilities, there were genuine sentiments conveyed that these facilities may need to be handed over to the government.

In East New Britain, budgetary processes are more regularly adhered to than in Gulf. East New Britain is the only province that has established health manager roles at the LLG level (ibid.:125). These managers are responsible for overseeing and disbursing funds for health facilities. Although the system in East New Britain generally seems to work well compared to other provinces, OICs and workers nonetheless talked about delays with receipt of funds.

This section of the report also examined the free primary health care policy. It found that as a result of the introduction of this policy, interviewees reported an increase in the number of patients presenting to health facilities in East New Britain but not in Gulf because in the latter province fees were not previously charged. Due to the rise in the number of presentations in East New Britain, health workers felt stretched and medicines and bandages ran out. A contributing factor to this situation was that subsidy payments linked to the policy were

delayed or simply not received at health facility levels. The inconsistent timing of these subsidy payments made it difficult for OICs to plan for and purchase sufficient supplies, particularly given increased patient presentations.

Previously, little has been written about DSIP as a reform with implications for the health sector. The case study research shows mixed results. Some health infrastructure had been completed as a result of DSIP funding, with some respondents speaking positively about the contribution DSIP had made. In contrast, other health workers were promised funding that never came or the project remained incomplete. In at least one case, there had been negative consequences, with heightened local-level tensions due to perceived misuse of funds allegedly linked to an unfulfilled public announcement. While this is a small sample size and more research may need to be done on DSIP, there seem to be indicators that East New Britain has performed better than Gulf Province when it comes to DSIP spending in the health sector.

Photo: Richard Eves

SECTION 5. THE PERFORMANCE OF HEALTH FACILITIES

Health financing arrangements have direct implications for the ability of health facilities to provide services to patients and the broader community. This section of the report details perspectives from research respondents on the performance of sampled health facilities, with a specific focus on frontline operational activities. We begin by examining whether the PNG government's MPAs, prescribed under the health function grant (as described in section 2), and other related essential health activities are conducted on a regular basis by health facilities. MPAs cover outreach patrol clinics, patient referrals and emergency transfers, health facility infrastructure and on-ground maintenance, essential utilities for health facilities, and the availability of drugs and medical supplies.

The voices of health workers and administrators, as well as community perceptions, are given particular prominence in their descriptions of challenges faced on the ground. Participants raised key points on the effective functioning of health facilities and these are covered in this section, including the management of health workers, administrative and clinical supervision, increased patient numbers, closure of health facilities, planning, and community engagement.

Outreach patrol clinics and patient transfers

Outreach health clinics and patrols require health workers to travel to villages within their assigned population catchments to provide health services to rural and remote communities, such as childhood vaccinations and maternal health checks (NDoH 2010). They are an essential component of health service provision in PNG as the majority of PNG's population reside in villages where standalone health facilities are not easily accessible. It is estimated that 60 per cent of PNG's population does not have access to standalone health facilities and are therefore reliant on outreach patrols for primary health care (Anderson and Martin 2017:32).

East New Britain was the outstanding provincial performer in terms of conducting regular outreach patrols according to the *A Lost Decade?* report. Indeed, 46 per cent of health facilities performed more than five health patrols per year, compared to 18 per cent across the eight-province sample (Howes et al. 2014:78-79; see also Figure 7). However, all revisited health facilities sampled for this study reported conducting fewer outreach patrols in 2016 than in 2012. Several health workers interviewed in East New Britain spoke of recent problems with performing regular planned outreach patrols. One health worker explained:

> *The inconsistent and late payment of the free primary health care subsidies means there is a negative impact on hospital activities and programs. For example, the MCH [maternal and child health] clinics have been stalled. Patients have to wait for the clinics for another month. The June clinics have been moved to July — the last one was conducted in May.*[13]

The lack of readily available operational funding appeared to be the main reason for a reduction in the number of patrols. One health worker even suggested that the district administration had utilised DSIP funding to provide transport for some outreach programs, including an immunisation program.

Despite a reduction in the reported number of patrols taking place in East New Britain, it is clear that the various actors in the service delivery chain strive to work together to deliver these services to rural and remote communities. In particular, the LLG and district administration attempt to coordinate their resources for outreach programs such as immunisation patrols. In East New Britain, one participant reported effective cooperation between various levels of government and administration:

> *Operational funding is shared between the district and local level administrations. For example, a submission for an outreach program is made to the LLG concerned. The*

LLG may then seek support from the district administration. The district will usually provide transport for the outreach. The LLG administration pays the service providers utilised by the health workers in the LLG. Accommodation and carriers' expenses are taken out from the hospital budget, while a minimal component is funded by the district.

In Gulf Province, it was reported that patrols are rarely conducted at all, similar to results in 2012. One health worker described the situation:

Last year, the only thing we did was we went out and did an immunisation patrol, which was a national program. And that's when we got funds and went out. But otherwise, any other thing besides that was never done.

Notionally, the PNG health system offers a hierarchy of health services, commencing with primary health service provision at aid posts in rural areas. If a patient cannot be treated adequately at a rural facility, they should be referred to the next level of health service — perhaps at the district health centre and then, if needed, at a provincial hospital for secondary care. The Port Moresby General Hospital in the capital city is the highest level of referral in the government's health system. In cases where it is deemed necessary, it could be expected that transportation should be provided to patients, particularly during time-critical medical emergencies. A World Bank report found, however, that 'spending to support patient transfer is all but non-existent — suggesting that there is currently no meaningful systemic government funded/provided arrangement for moving rural patients to higher levels of care' (2013:41). Based on this finding, this same report indicated that patient transfers should perhaps be considered as a priority activity for provincial health spending.

Availability of a road ambulance or boat is therefore key to being able to transfer patients when needed. Health facilities in East New Britain were less likely to be able to transport patients to the referral health centre in emergency cases in 2016 than they were in 2012. Three facilities in East New Britain had reported having good access to an ambulance with fuel in 2012, but this had changed to poor access by 2016. There had been very low levels of regular access to an ambulance with fuel in Gulf Province in 2012 (Howes et al. 2014:78-79; see also Figure 2) and the health facilities revisited in 2016 reported similarly limited access.

A health worker at a health facility in Gulf Province explained that the services offered there had declined. In the past, government funding ensured that fuel was available for the health facility's boat. More recent practice, however, was that patients must pay for fuel. This could be a substantial hindrance to patients when they are in need of immediate access to medical attention for serious illnesses, injuries or childbirth complications, as it is likely that families would struggle to source the required funds quickly. As a health worker explained, patients nowadays 'have to pay maybe 50 kina to 100 kina and then fuel costs, they pay fuel costs to and from Kerema [the capital of Gulf Province]'.

Health facility maintenance and essential utilities

The availability of operational infrastructure at health facilities was examined at length in the *A Lost Decade?* report. In 2016, OICs were again asked whether their clinic rooms were in good condition, needed some maintenance or required complete rebuilding. In 2012, clinic rooms in East New Britain were less likely to need rebuilding than in other provinces (13 per cent compared to 24 per cent for all health facilities surveyed) (Howes et al. 2014).

A marked deterioration in health facilities in East New Britain's Pomio District was evident when the research was conducted. The first revisited health facility had had no rooms that required rebuilding in 2012. Yet when revisited in 2016, the OIC advised that more than half of the clinic rooms (62 per cent) required rebuilding. Field researchers were also told that more than half (52 per cent) of the clinic rooms at the second Pomio health facility required rebuilding in 2016, up from 29 per cent in 2012. In Kokopo District and Gulf Province, research participants assessed the state of health infrastructure at facilities revisited to be much the same as in 2012.

For rural health facilities, there were perceptions that ongoing maintenance can be conducted more easily, more quickly and more cheaply by local villagers than it can through contracting outside building companies to come to the health facility. As a health worker in Gulf Province explained, ongoing maintenance of rural health facilities should be considered as a kind of taxation for rural villagers:

> *It must be emphasised that people must have to pay a tax … Whether you like it or not, you have to pay. It's a responsibility … Also, community members must help to maintain facilities. So, it's a task for all the communities.*

Interviews with community members revealed some of the on-ground problems with maintaining clinic infrastructure, as explained by one participant in Gulf Province:

> *Normally, we have one day in a week to come back and clean and maintain this hospital and cut the grass. And we do a total clean-up once a week. The five staff of this small aid post serve people from this community. [However,] Only the same people come and work … Some of them don't even show respect for the staff in the aid post. They don't do anything. They don't even take ownership of this aid post.*

There is also a question of payment for community members. As mentioned above, some health workers have the view that maintenance of the health facility, staff housing, toilets and grounds should be a community service, for no payment, undertaken by nearby communities. In Gulf Province, community members had helped with chopping down trees and provided other labour for the construction of a new church-operated health facility. Others, however, have an expectation that payment for maintenance services is required: 'Nowadays, there is nothing for free — even for just cutting the grass, the hospital pays the workers'. In East New Britain, a health worker reported that DSIP funding had been used through the district administration to provide basic maintenance and cleaning of health centre clinics. However, a health worker based at another facility in East New Britain believed that DSIP funding was not enough to cover maintenance and other costs, 'especially in maintenance and others, I think the DSIP funding is inadequate now, so it is a must that the government should increase it'.

Data was also collected on the availability of essential utilities and supplies for health facility operations, including adequate water supply, toilets and beds with mattresses for patients. For the health facilities revisited in this study, there was a notable decline across most of these indicators. For both East New Britain and Gulf provinces, access to an adequate water supply had remained stagnant over the four years between surveys. All health facilities revisited in East New Britain said they had an adequate availability of toilets at the health facility in 2012, yet three of the four said this was no longer the case in 2016.

A similar decline was documented in the availability of beds for patients. At one health facility in East New Britain, the research team observed that the in-patient wards needed beds. Staff members said that patients in both the female and male wards often had to sleep on the floor due to a lack of beds, while focus group participants reported that it was common to see patients sleeping on the floor with their intravenous drip stands beside their mats.

Medical supplies available at health facilities

This case study research assessed the availability of 16 common drugs and medical supplies at revisited health facilities. This enabled direct comparisons between 2012 and 2016 supply levels at sampled facilities. Table 2 shows that there were significantly fewer drugs and medical supplies available in East New Britain Province: down from an average of 83 per cent in 2012 to 59 per cent in 2016. There was little or no change between 2012 and 2016 for health facilities visited in Gulf Province, albeit from a very low base.

Table 2: Changes in the availability of common drugs at revisited health facilities in East New Britain

	2012 (%)	2016 (%)
Common drugs/supplies:		
Paracetamol	100[a]	100
Amoxicillin	100	75
TB blister packs	100	75
Liniment	75	25
Oral Rehydration Salt	100	100
Oxygen	75	75
Maternal and child health:		
Pregnancy tests	25	50
Baby books	50	50
Measles vaccine	75	25
Ergometrine	100	50
Condoms	100	25
Depo-Provera	75	75
Anti-malarial drugs:		
Fansidar	100	100
Chloroquine	100	75
Mala-wan[b]	100	50
Malaria RDT	75	50
Average	83	59

a 100 per cent of the facilities visited had at least one paracetamol tablet in stock.

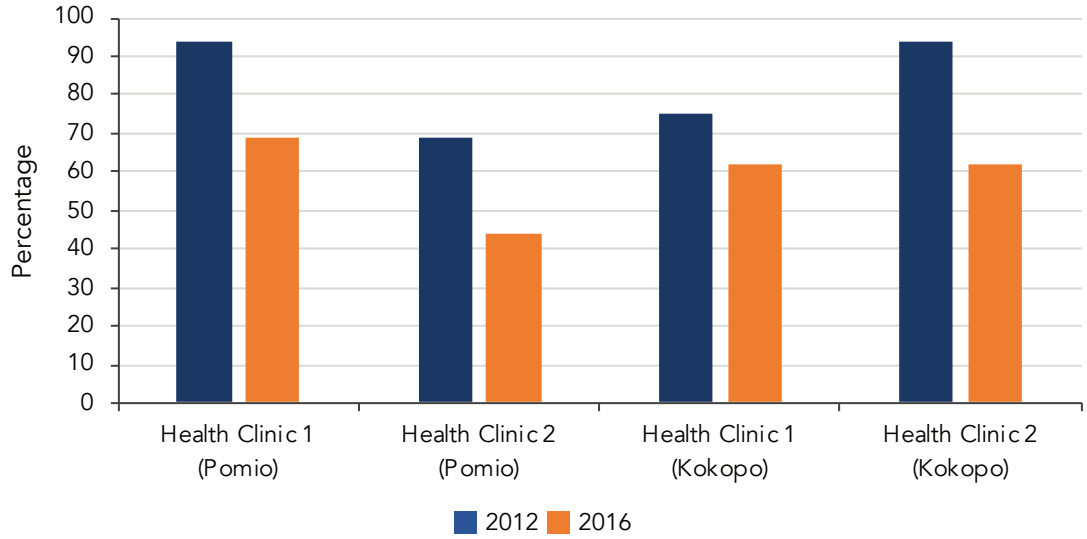
b Artemether-lumefantrine is commonly referred to as Mala-1 or Mala-wan in Papua New Guinea.

Source: Authors' survey data.

Figure 10 displays these same findings for each of the four health facilities revisited in Pomio and Kokopo districts. It shows that all facilities revisited experienced a decline in the overall availability of these drugs and medical supplies. This evidence may point to problems in the provision of drugs and medical supplies across the whole province.

Health workers in East New Britain spoke about delays with ordering medicines from the Area Medical Store. Two of the four health facilities surveyed reported much longer waiting times, when compared to 2012 results, in response to questions about the time taken for health facilities to receive deliveries after placing orders with the Area Medical Store. One health facility in Pomio said that waiting times had increased from seven days (one week) in 2012 to 60 days (two months) in 2016. Another health facility surveyed in Kokopo also reported waiting seven days on average in 2012, but this had increased to 30 days (one month) in 2016. In relation to the long delays for ordered drugs to reach the health facility, one health worker stated that in the intervening period senior staff members had made trips to the nearest urban centre to purchase key medicines and wound dressings from commercial outlets.

Figure 10: Changes in the availability of drugs at revisited health facilities in East New Britain



Source: Authors' survey data

Research participants reported dissatisfaction with the contents of medical supply kits received by health facilities. Survey findings revealed that all facilities revisited in East New Britain were dissatisfied with the contents of the medical supply kits in their last delivery. In addition, all health facilities reported knowing when to expect the delivery of medical supply kits in 2012, compared to just one of the revisited facilities in 2016.

Interviewees highlighted insufficient medical supplies; a health worker in East New Britain said, 'In the past two months, we have had shortages of drugs and we asked most of the patients to pay for the medication themselves, especially anti-malarials'. In addition, the health worker deemed the quality of supplies to be below standard: '[The clinic head] is purchasing plasters from the shops because plasters from the Area Medical Store are too small and do not stick for long'.

A health worker in Gulf Province stated that there were no medicines in stock at the time of the interview and admitted that when parents bring in sick children, 'the only thing we do is we get the history and then we refer them to Kerema [provincial capital of Gulf] — we don't have the medicines with us for the children'. A health manager in Gulf Province said that companies contracted to deliver medicines do not understand the local context and are not equipped to deliver to locations that are not accessible by road. There was a perspective that logistic companies delivering medical supply kits are not prepared to charter planes or hire boats to get to health facilities with no road access. Therefore, there is a risk that medications expire before they reach their intended destinations. 'Basically, they expire' was the blunt assessment from one health worker.

There are concerns that the free primary health care policy could exacerbate drug shortages, as discussed by a health committee member: 'If we get into the use of free [health care] policy, then where would we get our drugs? … Because we don't have money to fund drugs'. It is noteworthy that a health worker in East New Britain conveyed a positive experience when medicines were delivered by air and the team in attendance checked the on-site medicine fridge[14] to ensure that it was in working order, and also liaised with the local health workers to 'check if the supplies were correct'. This perspective shows that health workers have had different experiences with medical supplies, although it is clear that drug supply was on the decline at most facilities revisited.

Management of health workers

Participants interviewed for this research had strong views about a shortage of frontline health workers and key differences between church and government facilities. In general, these views are supported by the available literature. PNG has 0.532 nurses and midwives per 1000 people, which is low compared to neighbouring countries such as Fiji, Vanuatu, Solomon Islands and Indonesia (Grundy et al. 2019:106). There are 0.055 physicians per 1000 people, 'which is significantly lower than in countries such as the Solomon Islands (0.191) and Vanuatu (0.186)' (ibid.). Overall, PNG has low health worker numbers, 'well below the recommended WHO international standard' (Grundy et al. 2019:107; see also World Bank 2011). In addition, a substantial portion of health workers are in administrative positions and there is an ageing workforce (Grundy et al. 2019:109-111; see also World Bank 2011).

In one case in East New Britain, health worker positions had been advertised but not all of them had been filled. In another location, health worker houses were standing vacant as staff had not been found to take up available positions. In East New Britain, an interviewee reported delays in the conduct of clinical programs because of insufficient staff. There was a small operating theatre at one health facility, but it was not in use due to inadequate equipment and no anaesthetist. Some interviewees wondered if the remoteness of health facilities and/or a lack of services such as banking, water supply and telecommunications might dissuade potential candidates from accepting available roles. As one health worker in East New Britain argued, health workers might be more willing to go to, and stay in, rural areas if services could be improved; service such as reliable water supply, staff housing, telecommunication coverage, air transport services and banking services.

In Gulf Province, a health manager said that some aid posts had been closed due to a shortage of staff. As with East New Britain, it can be difficult to attract staff for rural and remote health facilities in Gulf:

> *Maybe the environment where officers can go and work. Like Highlanders, they cannot work in a place like our place here in Kikori. They want, many people want beautiful roads, beautiful transport, beautiful everything. So, they like to go and work there. And some very good people, well-trained, well-equipped officers, they cannot work in an environment where there's bad buildings, bad roads, bad transport system, bad airfields, bad health services, and bad education services. The quality is very low here. When they come, they say, 'Oh no, it's too low.' They go to where the children can attend better schools, better health services, and there is better road system, better airfield, better everything. So very good, trained personnel, all go to better places where they can have better services. You see what I mean? Gulf is lacking. We have all the rubbish down here. That's why we can't see the change. You see what I mean?*

A health administrator in Gulf Province also described being unable to fill available health worker positions:

> *We always have recruitment under way throughout each year because we recruit people, we send them to the mountains and then they see the place is not worthy, [and then] they go away. And then, we look for somebody to fill the position, but we can't do anything much.*

Problems surrounding staff pay and the timeliness of payments emerged as concerns for respondents. Three interviewees in Gulf Province stated that payments to church health workers can often be delayed, whereas government health workers are consistently paid on time. As one explained:

> *The church workers have a lot of problems with their pay. Yeah. Really, I don't know what they're doing, but I think it's a management problem. They should be getting their pay on time, but they are not. Personally, I think that there is a management problem because it's not a money problem.*

A church health worker commented on the government's use of software for processing payments and contrasted this to the church worker experience:

> *For government workers, they have the concept payroll and they're constantly getting their pay on time. Whereas with us, when there's cash available, they give it to us. Otherwise, they will delay it one week or two weeks.*

Delays in payments are a reason why health workers would prefer to work for the government as government workers are viewed as having a better chance of being paid on time. A church health manager in Gulf Province explained that a lack of banking services makes it very difficult to disburse staff salaries at all, let alone on time. Banks view large cheques with suspicion or branches may not have available funds to cash cheques. Transporting cash is also risky in terms of security and possible theft:

> *When a plane comes here, a clerk will put the money in different envelopes for different staff members … We give it … to anybody trusted to care for it. It's so risky but we're doing [it like that].*

In addition to timeliness of staff pay, one church health worker asserted that government health workers earn more than they do:

> *They get the nursing service allowance. It is a risk allowance. They get isolation allowance. Whereas us, we just get [base pay]. They get qualification allowance and association allowance or whatever they call it. They get a lot more allowances than we do. They just have a few, like uniform and other allowances, that we get.*

One health committee member highlighted that inconsistency in staff salary payments negatively affects motivation and work quality:

> *The staff are paid by the national government, but through the Catholic agency. Sometimes they hold up the pay. Let's say for one or two months. The staff don't work just because of their payment … I believe that we should get rid of this mission agency thing and the services should be looked after by the government. Because sometimes they don't get paid for months. That can affect their work. So, I think the services should be given to the government. The government can look after the services and the staff as well. I don't think that the mission funds anything here. I don't know what services they give to us.*

There was a discussion about whether pay delays negatively influenced staff performance. Two respondents raised concerns about staff punctuality. In contrast, a participant in a focus group discussion praised health facility staff for always making themselves available, day and night. When pay delays were mentioned in relation to clinical work, one respondent said health workers 'continue to serve their community even though they are not paid after two months or three months, but they still serve the community'. On the other hand, a committee member asserted that church health workers do not work when their pay has not come through. Two interviewees also mentioned a shortage of staff accommodation, while one mentioned the need for a reliable water supply at the health facility.

Administrative and clinical supervision of health facilities

The research examined two different types of supervision of health facilities: administrative and clinical. Based on the data collected from revisited health facilities, supervision continues to be a problem in both East New Britain and Gulf provinces. Survey results showed there had been a decline in the number of administrative and clinical supervisory visits to health facilities in East New Britain between 2012 and 2016. In

Gulf Province, there had been a slight increase in the number of administrative visits to health facilities, but clinical supervision remained non-existent for the facilities revisited. This section of the report summarises the views expressed by participants regarding supervision.

In regard to administrative support for health facilities, the general feeling conveyed during interviews was that it was either non-existent or very limited. Health workers located at rural health facilities repeatedly spoke about a lack of direct support, rare supervisory visits and other related concerns. One officer in East New Britain said, 'There is very poor support from the hospital board, the district administration and the provincial administration'. One rural health worker in East New Britain said that there had been no supervisory visit to the health facility for five years. He recalled that a small team from the provincial health office visited in 2011, although he was unaware of any visits from the district health coordinator. One health worker in East New Britain said that supervisory visits tended to focus on reviewing paperwork and statistics, but that inventory and infrastructure were not checked and staff were not consulted: 'There are no proper checks on resource usage and there is no communication with other hospital staff'.

In another case, a rural health worker in East New Britain suggested that health administrators at provincial or district levels tended to visit roughly once per year. An interviewee at a church-run health facility in Gulf Province said that there had been no supervisory visits from either church officers or government administrators for many years. There were suggestions that there is a lack of clarity about the delineation of responsibilities between the church and the government and very little response when something is needed, for example if a medicine fridge is broken. Referring to government and church providers, he said:

> *Normally, we go from office to office. We go to our health supervisors, provincial office, and then if they're not in at work, then we go from office to office asking.*

Those in supervisory positions at provincial and district levels cited significant challenges in providing adequate supervision. In one case, a church administrator in Gulf Province travelled to Port Moresby for 'payroll runs' fortnightly. Payroll runs refers to travelling to obtain cash from a bank since there is an inadequate banking system in Gulf Province. The consequence is that this church administrator spends more time in Port Moresby than in the province, leaving little time for supervisory visits to rural health facilities. The same officer also felt that there had been a decrease in available funding for supervisory visits, stating that in the past there had been funding for two visits per year, but that more recently there had been less funding for such visits 'because when you have enough money, you will construct buildings and all these things but with no money, you're handicapped'.

One government health administrator in Gulf Province did not see any value in undertaking supervisory visits, viewing them as pointless exercises. He said that while he completed such visits, he found them ultimately to no avail:

> *I do direct supervision of all the health clinics. I do reports. I bring them into the Provincial Health Office and submit my recommendations. And then based on my recommendations, the procedure is they're supposed to go and do their own investigation. They don't.*

In contrast, a health worker in East New Britain had a more positive view and said that administrative visits from a provincial officer included checking on the operation of the medicine fridge, checking drug supplies and airlifting drugs to remote health facilities. A health manager in East New Britain suggested that administration at the local level is supported well: 'All health clinics have a health board that oversees the operational issues at the clinics'. A health worker at a facility in the same province spoke in a similar vein:

> *There is good support from the district and local level administrations … The current DSIP funding is effective. Budget submissions are done by the HEO.*

The SICs[15] of the various hospital sections must formulate their own sectional budgets, then submit them to the HEO for further submission to the district administration. The SICs don't sit in on the district budget sessions or budget review meetings. Even so, the sectional budgets are implemented with minimal fuss.

This research also looked into clinical supervision. Our case studies show that clinical supervision is undertaken in an ad hoc and unpredictable manner. At some rural facilities, there are several staff who can support one another, but there are apparently few formal procedures in place at that level or in partnership with referral health facilities for clinical supervision. Visits from senior medical officers to outlying facilities, reviews of cases or other formal clinical supervision arrangements appear to be rare. Yet they should be vital components of a well-functioning primary health care system. Clinical supervisory visits to health facilities in East New Britain decreased in frequency between 2012 and 2016, while clinical supervision remained non-existent for the health facilities revisited in Gulf Province.

In East New Britain, clinical supervision included regular visits by a team focused on human immunodeficiency virus and acquired immunodeficiency syndrome (HIV/AIDS) and antiretroviral therapy (ART), as well as visits from a team looking at tuberculosis and leprosy surveillance and treatment. Both of these teams had a doctor as part of the team when they visit. A health worker remarked, 'Sadly, this is the only time we have a doctor on site'. All the locally-based health workers were actively involved in these types of visits: 'These visits go well and we have a good working relationship with our provincial counterparts'.

Two health workers interviewed suggested that staff training would help to address some of the challenges faced, while two more felt that rotation of staff between facilities could be beneficial. As a health worker in East New Britain argued:

Up-skilling of staff must be mandatory. More training for staff means performance of staff will improve. In-house training was done but died out. This has to be revived. Apart from training, staff rotation must also be made mandatory. Staff rotation will also contribute to improving staff performance.

Patient numbers and required resources

Interviewees talked about an increase in patient numbers. The topic came up repeatedly and was evidently a concern for health workers and other participants in the research. This section looks at three reasons for perceived or actual increases in patient numbers: the introduction of the free health care policy, population growth, and the establishment of new business enterprises nearby.

Research respondents attributed an increase in patient numbers to the government's introduction of a free primary health care policy (discussed in section 2). In East New Britain, it was widely believed that once people heard that consultations and medications would be free, they were more likely to attend a health facility seeking advice and treatment. While it may have been the intention of the policy to improve health-seeking behaviour, preparations were insufficient for the practical consequences at health facilities. Late arrival of free primary health care subsidies had further exacerbated problems at health facilities.

Coupled with inconsistent or late arrival of medical supplies, as outlined above, health workers stated in interviews that the increase in patient numbers had contributed to shortages of medicines. For example, a health worker in East New Britain said that the malaria treatment Mala-wan was only being offered to inpatients, due to insufficient stock levels: 'While the hospital does receive drug kits, these are usually not adequate'. Outpatients needed to buy their own supplies from other sources. A nearby school had organised its own supply of Mala-wan to treat members of the school community as needed. Insufficient supplies of malaria medications are of concern, particularly as 'for many of the people of Papua New Guinea malaria is an ever-present threat, and an all-too-frequent reality' (Howes 2018:n.p.). Unfortunately, there has been 'almost

a nine-fold increase in the number of cases of malaria in PNG between 2014 and 2017' (Howes 2018:n.p.; see also Hetzel et al. 2018).

As the population of PNG steadily increases, it can place direct strain on already understaffed rural health facilities. An interviewee in Gulf Province explained that population growth had been notable and visible since the 1950s and required consideration in terms of health service provision:

> *In the 1950s, there were no villages around here. Today, people are all over the place. So, the number of people is increasing. And for the sake of these people … they need to organise services and give them medicine.*

Population growth can mean that there is a need for additional health facilities. As a community member in East New Britain said:

> *We know that the rate of death is low compared to the birth rate. They were saying our population does not meet the requirement to have an aid post here, but now we think we have enough people and we want this service in our community.*

The recent establishment of a new business enterprise nearby had led to an increase in the number of patients attending one of the revisited health facilities. Health workers discussed this development in detail during interviews and it was also raised by community members in a focus group discussion. The increase in patients had led to genuine challenges at the health facility, as outlined by a health worker:

> *Unfortunately, while the patient number has increased, drugs and other medical supplies have remained the same. This has made it difficult to effectively look after our patients … The increase in the catchment population signals a dire need for improvements to the current infrastructure. The current facilities seriously need an expansion. For example, wards need to be extended to cater for the increase in inpatient numbers.*

These repeated concerns about the new business established and a consequent increase in patient number revealed a negative impact on worker morale, as well as on medical supplies and availability of beds. While respondents in our case study research had clearly noticed increases in patient numbers, there has been a well-documented decline in the amount of health services available. According to Janovsky and Travis (2007), approximately 40 per cent of aid posts have closed since the 1980s.

In Gulf Province, most health administrators interviewed discussed recent closures of health facilities. One interviewee said that five aid posts had closed within the past year. An inability to regularly pay staff members was the stated reason for these closures. Other officers mentioned staff shortages as well as inadequate maintenance and repair of facilities as reasons for clinic closures. The closure of any health facility in PNG should be a cause for concern as it means that people have further to walk to reach a health service. A clinic closure will almost certainly put strain on other health facilities in surrounding areas as catchment populations increase.

Health planning and community engagement

Our case study research sought participants' views on planning-related matters in the management of health facilities. In general, our findings suggest that many health facilities in East New Britain have management boards or committees, whereas in Gulf Province such bodies are almost non-existent. It should also be noted that while there has been a national push for the establishment of PHAs, neither East New Britain nor Gulf had established one at the time this fieldwork was undertaken.

Respondents in East New Britain were aware of planning processes and, based on their experiences, talked about the advantages and disadvantages of planning — their responses are outlined below. In contrast, people in Gulf Province were generally unaware of any planning processes taking place. The perception

was that either planning took place in Port Moresby, with no impact on the ground in Gulf Province, or that there were no plans. If there were development plans, no awareness messaging or consultation had been undertaken. One senior health administrator in Gulf Province said that an annual gathering is supposed to occur to prepare an annual plan, but that it had not occurred since 2005. The interviewee suggested that this was evidence of a breakdown in the management system in Gulf Province.

> *We're supposed to bring in all the OICs of the health facilities and all the district managers from all the districts, and we're supposed to sit and collaborate, and put the AIP [Annual Implementation Plan] together … The last one we did was in 2005.*

A respondent in East New Britain said that due to funding uncertainties, 'we have found that implementing annual plans are more effective than implementing the five year plan', while a different research participant in the same province argued for the importance of the LLG's five-year planning process, which can help share funds in an even manner across disparate localities. In East New Britain, a respondent talked confidently about that district's five-year planning process, which is aligned in consultation with the province, key stakeholders and service providers: 'The Hospital Board also plays a big role in planning and budgeting for the hospital'.

Some people talked about population growth as a challenge in planning. Other respondents expressed concerns about promised money not being forthcoming. A local leader expressed frustration at having submitted ward development plans for which there was no follow-up or funding made available. There was an allegation that public servants conduct unnecessary planning exercises as they are given additional payments to travel for planning meetings:

> *Because preparation of sector plans provides the bread and butter for these public servants. This is a common issue now within PNG as a whole. We can call it 'corruption'. Corruption stems from the top level of the government right down to the local communities. When they work on a plan, public servants claim allowances for travelling and for accommodation. This way, they make their money from that. But there is no development.*

A senior health manager in East New Britain explained that all 'health clinics, both government and church-run, are required to conduct quarterly reviews on their programs and facilities'. Reporting on SIP funds, such as DSIP and LLGSIP, is an annual activity: 'Funds are monitored using acquittals and reports submitted to relevant authorities before the end of each financial year'. One health facility manager in East New Britain bemoaned:

> *Whatever funding we get from the district administration is acquitted and reports are sent to the district office. However, we do not get confirmation of receipts of these reports.*

A rural health worker said that reporting processes do not lead to any outcomes or follow-up:

> *I do submit reports, monthly reports and quarterly reports, so that officers at the district level will see them and make some recommendations to the provincial health department. [Also] I go directly to the provincial health office with the monthly reports. But, like with the district, they do not take it seriously and they do not respond to our needs.*

Overall, despite some negatives, the research generated a picture of a functioning planning system in East New Britain, involving coordination between various bodies and a general willingness to support health-related programs and services. Gulf Province presented the opposite: planning is dysfunctional or non-existent — interviewees had never heard of any development plans for their districts. If there are planning processes occurring in Gulf, health workers are not aware of them. In Gulf, the perception is that

health facility staff and health managers are often working in relative isolation. Some people also feel that their leaders are isolated from them.

Research participants also talked about the relationships between health facilities and surrounding communities. The consensus was that support from the surrounding community and other entities, such as government agencies, is necessary for the successful provision of health services. Overall, there were far more positive comments suggesting that support is provided, compared to the small number of negative assertions made.

In-kind support from community groups was mentioned several times, particularly in relation to cutting grass and cleaning the grounds surrounding health facilities. A couple of respondents noted, however, that at their local health facility community members are paid for such activities. In-kind support of a larger scale was also mentioned, describing assistance such as repair and maintenance of staff housing and the pruning of large trees. Church groups were repeatedly praised for their wide-ranging contributions, including cleaning grounds, donating food and clothing, conducting visits and prayer services with patients, and assisting with awareness programs regarding health services. Donations from businesses and individuals were also acknowledged, as was the district administration and LLG:

> *The district assists by providing electricity for emergencies; the LLG assists in transport for outreach clinics or programs, while the community assists in providing awareness on hospital activities or upcoming outreach programs.*

Negative remarks were made by some interviewees regarding a perceived lack of support from surrounding communities, with the suggestion that community members do not understand what is needed or do not prioritise health. A committee member said that only a small handful of the same people regularly help the local health facility, while most other community members 'don't show respect and support for the staff and for the services provided'. Ward councillors and government entities also received some criticism, with a committee member in Gulf Province suggesting that they were awaiting a response to a submission for an upgrade of facilities, which went to the provincial government some years ago. In East New Britain, an intoxicated patient had allegedly tried to physically assault a health worker. Meanwhile, another health worker in the same province stated that:

> *Conflicts between the community and health workers are a common occurrence. In 2004, a patient's death was blamed on hospital staff. The health secretary had to be called in to assist in mediations with the community.*

As well as in-kind support, discussion also covered the extent to which communities engage in decision-making processes. In East New Britain, two-thirds of health facilities surveyed in 2012 reported an operational village health committee (VHC). Of the four facilities revisited in 2016, all had operational VHCs, compared to only half of this sample in 2012. This improvement in the number of established VHCs was one of the only positive findings from survey results. A health worker confirmed that 'there is effective interaction between the health centre and the health centre board and the village health committees'. In Gulf Province, VHCs operated at three of the four revisited health facilities, the same as 2012.

In addition to a general feeling among health workers and others interviewed that there is a lack of supervision (both administrative and clinical), there were also some comments about elected officials being absent from rural health facilities. For example, one respondent said that ward councillors, who are elected officials to the LLG, rarely visit or support health facilities. One focus group member spoke about elected officials in general:

> *They have to come right down to the community to meet us. They have to come right down into the village, to the hospitals or to the schools, like what you are doing. They have to come and sit with us and get our views. They don't know what we need. They stay up there and they don't know what we need.*

While there were some references to corruption in interviews in East New Britain, this was a more recurrent theme in discussions in Gulf Province. One respondent in Gulf referred to forged signatures on paperwork, for instance on order forms for medical supplies. Another respondent said that corruption was possible as there were no officers checking expenditure or project implementation. It was alleged that the officers who should be undertaking such monitoring activities were discouraged from doing so through bribes:

> *There's no checking. Those people are being bribed too, so they don't do checks. Bribery in Papua New Guinea is very, very bad now. Papua New Guinea's a corrupt nation now. I can tell you. The services are not here because Papua New Guinea is a corrupt nation. The system doesn't work for the people. People are suffering.*

Discussion of key health performance findings

Overall, findings from this case study research indicate stagnant and declining health facility performance at resampled health facilities, particularly in frontline operational activities. In Gulf Province there was little to no progress against an already low base, while in East New Britain many indicators had fallen significantly. This was not anticipated, as the research originally set out to highlight the factors leading to success in East New Britain. We expected the research from East New Britain to provide important guidance for policy implementation. Instead, we found revisited health facilities struggling to provide essential basic services, particularly those prescribed under the MPAs. Notably, there were fewer outreach patrols conducted at the time of this research compared to previous survey results. Health facility infrastructure was deteriorating and on-ground maintenance concerns persist, including essential utilities. In addition, health facilities continued to struggle to offer patient transfers, in particular citing difficulties in accessing fuel on a regular basis to transport patients when required.

The availability of essential drugs and medical supplies was a significant concern for frontline health workers and surrounding communities. Surveys and interviews at revisited health facilities revealed declining levels of drug stocks, while also highlighting problems with the ordering, distribution and management of medicines. Overall, medical supply procurement and distribution systems do not appear to be functioning well, which may be the result of the changes made to the procurement and delivery of medical supplies to health facilities across PNG in 2012.

There are numerous challenges in effectively managing frontline health workers. In particular, regular payment of wages to church health workers is problematic and appears to lead to detrimental effects on health services provided by church-run facilities. Inconsistency in timeliness of health worker pay and perceptions of 'missing out' on allowances which government workers receive diminish motivation levels among church health workers. In Gulf Province, research participants described major challenges with placing health workers in rural locations and providing them with adequate housing and utilities. Once health workers are posted to health facilities, we found that administrative and clinical supervision is not occurring as frequently as required, which raises broader questions about the oversight and management of the health system in general.

We found that some health facilities were experiencing increases in patient numbers and struggling to cope with higher demand without the required resourcing. There were also reports that health facilities had been closing in Gulf Province. In general, community engagement and involvement in decision-making processes were stronger in East New Britain, with health workers describing generally effective working relationships between district and local health administrators, boards and village health committees. A better functioning planning system may be a possible reason for the greater relative success in East New Britain than in other provinces. In contrast, respondents in Gulf Province tended to talk about decisions being made in Port Moresby or Kerema, with little engagement between elected leaders, health workers and community leaders.

Photo: Richard Eves

SECTION 6. CONCLUSION

In embarking upon this research, we set out to better understand the marked variation in provincial health systems performance evidenced in an earlier study (Howes et al. 2014). East New Britain and Gulf provinces were purposefully identified as prime sites for further research, as they represented opposite ends of the performance spectrum. This case study research was designed to investigate the factors that had contributed to success in East New Britain, with a view to determining their applicability elsewhere. It was also intended to better understand the factors working against health service provision in Gulf Province at the other end of the performance scale. Instead, we found a deterioration across a number of performance indicators in East New Britain and stagnation in Gulf, from a low base, when compared to the earlier research findings (ibid.).

In reaching these conclusions, the case studies utilised a mixed-methods approach, which drew in part upon quantitative data collected using the same survey instruments as the previous study. Administering the same survey at regular, repeated intervals significantly enhances the value of the exercise, as it provides a series of snapshots and measures progress over time. Revisiting health facilities that had been surveyed previously was important for comparability to provide much-needed evidence on potential trends in PNG's health sector. In addition, qualitative research was undertaken at each site through semi-structured interviews with health workers and administrators as well as focus group interviews with community members.

A distinguishing feature of this research from the earlier larger study (Howes et al. 2014) is that it captures the perspectives of health workers, administrators and community members in their own words. The reporting of the key issues that emerged from interviews (both with individuals and as groups) is an important contribution of this research. We utilised direct quotes from participants in order to magnify the voices of frontline workers, health managers and community members and to provide examples of how health system financing influences the effectiveness of the services provided to communities.

Discussion of the main findings

In relation to health financing, the report establishes marked increases in health function grant allocations through the national budget from the early 2000s. Some provinces have received only nominal increases in health function grants over the last decade, while others have received substantial increases. These shifts sought to account for variation in the cost of health service delivery across PNG weighted against internal revenues generated by each province (NEFC 2010).

This and other studies (Grundy et al. 2019; Howes et al. 2014; NDoH 2019) have consistently shown that recent increases in health function grant allocations have not resulted in on-the-ground improvements to primary health care.

However, unlike earlier studies which suggested that church-run health facilities provide superior health services to government-run health facilities (Howes et al. 2014), the case studies in this report did not confirm this conclusion.

The variation in findings between this study and the earlier one may in part be explained by the decline in grant funding from the national government to the CHS at the time of the fieldwork. Without doubt the funding cuts were felt acutely by health workers and administrators in Gulf Province, who also reported delays in the disbursement of funding allocations to churches. Lack of funding also delayed payment of worker salaries, which in turn impacted directly upon the operations of these church facilities. Consequently, some health workers said that they would prefer to work for government-run facilities, while church administrators speculated that church facilities should be handed over to the government so that workers would not go for months without being paid.

PNG's free primary health care policy was introduced in 2014 with laudable intentions. The aim was to ensure that citizens with little or no income would be able to access health care at no cost, and without the need for any form of co-payment. Subsidy payments for health facilities were anticipated to meet funding shortfalls, but health workers and administrators consistently reported that these payments were either delayed or simply not received.

Simultaneously, health service providers reported that the number of patient visits had increased. This was certainly the case in East New Britain, where health workers asserted that the free primary health care policy had contributed to a decline in the quality of care they were able to provide due to increased demand, which placed additional strains on workers and saw regular shortages of core medical supplies. In a number of cases, these pressures had led health facilities to request that fees be reinstated through the authority of the LLG. The impact of the free primary health care policy was not felt in the same way in Gulf Province. That provincial government had had a free primary health care policy in place well before the introduction of the national policy in 2014. As a consequence, health facilities in Gulf Province did not ordinarily charge fees for services.

A significant development on the health front are CDFs which provide funds for the rehabilitation and/or construction of new infrastructure at health facilities. This funding is primarily made available through DSIP, based on the decision-making authority of the DDA, and to a lesser extent PSIP where allocations are determined at the provincial level. Both these funding sources featured heavily in our research. Indeed, one of the more positive findings to come out of this research was that an increased number of health facilities had accessed DSIP or PSIP funds. Nevertheless significant implementation challenges persisted, including promised funds that never materialised, lengthy implementation delays and planned projects that remained incomplete.

In terms of the functioning of provincial health systems, our research in East New Britain uncovered deterioration in the provision of essential operational activities. For instance, there were noticeable reductions in the availability of medicines; the quality of health infrastructure; the ease of transferring patients to referral health centres/hospitals; and the number of outreach patrol clinics conducted. Despite these challenges, planning processes and instances of collaboration between levels of government in East New Britain were found to have remained strong, particularly the functioning of health facility boards and local-level health committees. The health system in Gulf Province remained largely unchanged, noting that it had performed poorly in the earlier research (Howes et al. 2014), so there was perhaps less scope for further decline.

Research respondents described broader challenges in the provision of basic services that affect the functioning of the health system. These included timely access to medical supplies; challenges with the management of frontline health workers, which in particular included delays in salary payments to church health workers; low numbers of supervisory visits (both administrative and clinical); increases in patient numbers; reported closures of some health facilities; planning issues (both successes and failures); and varying levels of community engagement with local health facilities.

Implications of this research

This report has highlighted the importance of applied research into PNG's primary health care system. The provincial case studies reported herein have found widespread inefficiencies and inequalities in the delivery of basic health services. The results also suggest that there are unintended consequences from recent health reforms, which may be contributing to further deterioration in the performance of provincial health systems. These findings bring into focus broader systemic challenges to PNG's health system and are consistent with earlier assessments that warned of declining trends. For example, in the mid-1990s Connell authored an article entitled: 'Health in Papua New Guinea: A Decline in Development'. He concluded that:

> *Without a radical reappraisal of development goals, a situation which does not appear imminent, the prospects for improved health status are exceptionally poor (1997:290).*

More than 20 years later, a major WHO report concluded that these significant health system challenges remain:

> *Some key development indicators for mortality reduction, gender inequality and human development are all below regional expectations, and set a formidable task for the country to achieve the SDGs (Grundy et al. 2019:176).*

While this case study research was confined to only two provinces and therefore not representative, overall results point to a worrying trend of declining performance. Of course, further research would be required to substantiate these claims at a national level. Despite these research limitations, however, this report has been able to detail some important health challenges for policymakers to understand when considering existing capacity constraints in primary health care delivery systems. This is especially important in the current context of the COVID-19 pandemic, where PNG may be required to implement an effective and fit-to-purpose response that strengthens the capacity and resilience of health systems.

With the timeframe of PNG's current National Health Plan (2011–2020) coming to an end, there may be a need to review and reform existing health policies. This research would suggest that any such review should move beyond aspirational goals (such as free primary health care for all) and instead consider the practical implications for the health system, not to mention the broader governance challenges faced. There are unlikely to be policies and reforms that can reverse existing trends and produce a well-functioning health system in the immediate to short term. There is, however, the option of a politically uninspiring but necessary 'back to basics' approach, as advocated by the NDoH itself (NDoH 2010). This would require long-term process-driven engagement focused on the re-establishment of a health system capable of providing quality primary health care to the rural population of PNG where the vast majority of citizens reside.

Given evident differences between provinces, as shown in this report and earlier research (Connell 1997; Howes et al. 2014), it is important that interventions cater to local conditions and capacities, rather than through the adoption of a one-size-fits-all nationwide approach.

The above suggestion is in accord with an apparent shift in focus by the PNG government and donor community in responding to existing health system challenges. The importance of working with provinces, through PHAs, appears to have been embraced. The Australian Government has put out a tender for a new program of support designed to strengthen primary health care systems. The proposed 'PNG Australia Transition to Health Program' emphasises the need for development assistance from Australia to 'target its support geographically to maximise impact, whilst also helping PNG make better use of its own existing financial and human resources in the health sector' (DFAT 2019). Similarly, the World Bank has also proposed a package of assistance for selected PHAs to improve frontline health service delivery through the 'Improving Access to and Value from Health Services Project' (2019:28). In prioritising PNG's primary health care system and adopting an approach that provides for direct support to PHAs, development partners appear to be moving in the right direction. It is likely that these programs will work with PHAs to monitor financing and performance arrangements on a medium- to long-term basis.

Suggestions for further research

There is merit in research that extends or builds upon earlier work. In this case we believe further research on the financing and performance aspects of PNG's health system in the context of PHAs would be beneficial.

The case studies described in this report did not explore the functioning of PHAs because the focus provinces were yet to transition to a PHA. Investigation into whether this new governance arrangement is having a negative or positive effect on health outcomes and system efficiency would be useful. It has been almost

10 years since larger health facility surveys were conducted. In that time, several of the provinces selected for that study have made the transition to PHAs. Considering that the baseline data already exists, it would be useful to assess the impact of the introduction of PHAs in these provinces.

Further research could also delve into the approach of establishing health facility boards and local-level health committees. These have emerged as a distinctive feature in East New Britain when compared to other provinces across PNG. Further research would be required to explore how these boards and committees function and whether such an approach may be replicable and/or desirable elsewhere.

The quotations from frontline health workers provide valuable insights on operational concerns based on their experiences. Further research could focus on the particular causes of the problems these workers describe. For instance, church health workers referred to delays in salary payments; one possible research project could explore this issue in detail, perhaps by tracking the flows of payments made and attempting to specifically determine where delays occur.

Participants in this study did not mention external financing for the health sector from bilateral and multilateral donors and partners such as the Asian Development Bank, World Bank and Global Fund. This may be an area for possible further research. A potential project could examine PNG government expenditure in the health sector in relation to inflows of external financing. Similarly, investment in infrastructure by such donors was not mentioned by interviewees but could perhaps be an area of further research.

While this case study research has placed considerable emphasis on situating its findings in the broader contemporary literature on PNG's health system, further research should seek to analyse more historical literature on the potential causes for declines in primary health care. Explanations for the deterioration of the health system should be considered, including reasons for why health performance differs so significantly between provinces in PNG. This is important because it is this historical context that formed the basis for the present governance arrangements, including the health policies and reform initiatives undertaken by present governments.

Source: Richard Eves

Endnotes

1. While health funding had existed previously, the term 'function grant' became prominent from 2009 due to a greater focus and increased funding following the 2008 reforms.
2. Typically, primary health services do not have their own bank accounts.
3. Electoral Development Funds and District Support Grants 1984–2005 and DSIP thereafter.
4. The legislation provided for three appointed community representatives but some MPs appoint additional community members to ensure they control a majority at the DDAs in large open electorates with four or more LLGs.
5. In 2013, this percentage allocation changed to 20 per cent of required spending. Currently, there are clearly specified percentage allocations for spending across the main sectors for which SIPs are prescribed.
6. In the survey data, an ambulance was defined as a health facility vehicle, often a converted 10-seater Toyota Landcruiser, dedicated to transporting sick patients in need of further treatment to the referral health facility. This included road transport (car) and sea transport (usually a dinghy with an outboard motor for coastal communities).
7. It is critical that health centres perform outreach patrol clinics. A significant proportion of PNG's population live in rural and remote villages and rely on patrol clinics for access to primary health care. However, to be considered regular, the 2012 survey deemed that health centres would have to conduct at least five outreach patrols a year (Howes et al. 2014).
8. Exact figures are unavailable.
9. Exact figures are unavailable.
10. Refer to Howes et al. for further detail about the structure and types of primary health care facilities found throughout PNG (2014:22).
11. The research team was unable to access budget documentation on funds the East New Britain Provincial Government had dedicated to the health sector from its internal revenue.
12. There had been a gradual increase in funding from 2012 to 2015. The 2016 funding is the same as (or slightly higher than) the 2012 funding (PNG national budget documents 2012–2016).
13. At the time of this interview, this health facility had not received its free primary health care subsidies for the year, resulting in four casual staff members, including two health workers, being laid off.
14. A refrigerator is essential for storage of certain medicines and vaccines..
15. SICs: sisters in charge. The authors use the gender-neutral term OICs (officers in charge), which is fairly widely used within the health system in PNG, but some interviewees use the acronym SICs.

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