

## Healthcare worker shortages in Papua New Guinea and the need to focus on employee engagement

Nella Renton<sup>a\*</sup>, Grant R. Muddle<sup>a</sup>

### Abstract

In Papua New Guinea, there is a lack of literature on the impact of severe staff shortages in health service delivery. Clinician to patient ratios are well below the WHO international standard and the lowest in the region. Main factors contributing to the shortage include a constrained training system, an aging workforce and increasing population. Staff shortages contribute significantly to the increased risk of patient safety incidents and mortality. Whilst measures to reduce staff shortages take considerable time and investment, appropriate leadership is necessary to improve the engagement of the current workforce to achieve quality patient care and high work output.

**Keywords:** Papua New Guinea, Health Workforce Crisis, Employee Engagement, Staff Shortages, Workload Impact, Leadership Strategies, Transformational Leadership, Healthcare Worker Burnout, Workforce Training, Patient Care.

**Author Affiliation:** <sup>a</sup>Research Scholar.

**Corresponding Author:** Grant R. Muddle, Research Scholar.

**Email:** [grantmuddle@malyska.com.au](mailto:grantmuddle@malyska.com.au)

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### 1. Introduction

The Papua New Guinea (PNG) health sector grapples with persistently low levels of employee engagement, primarily attributed to an arduous workload resulting from critically low clinician-to-patient ratios and insufficient medical resources encompassing infrastructure, medical supplies, and equipment. [1]

#### 1.1 Health Workforce Crisis and Impact on Employee Engagement

The World Bank's seminal report in 2012 identified Papua New Guinea's health workforce shortage as a 'workforce crisis,' urgently necessitating intervention [2] Notably, PNG's clinician ratio of 0.587 per 1000 population falls significantly below the WHO international standard of 2.3 per 1000 and is the lowest in the region. [3] While immediate responses have focused on augmenting supply and distribution [2], the toll of high patient-to-clinician ratios on increased workloads, leading to diminished motivation and burnout among healthcare workers, necessitates attention [1,4].

#### 1.2 Rural Staff Shortages and Impact on Healthcare Delivery

Although a literature gap exists regarding employee engagement in the health sector of low-to-middle-income countries (LMICs) [1,4], qualitative studies have

identified the burden of staff shortages in PNG's rural areas, adversely affecting motivation and subsequent performance [4,5,6]. Given that rural health services cater to 87% of the population [2], their role in delivering primary healthcare and enhancing patient health outcomes is pivotal [2,4].

This paper will outline key aspects of the health workforce crisis, examine the impact staff shortages and high workloads have on healthcare workers (HCWs) from literature and lastly based on personal experience give examples of leadership strategies that resulted in improving employee engagement at the largest referral hospital in PNG.

### 2. Discussion

PNG's health workforce is estimated to be about 12,294 HCWs [3]. From this 30% work within health administration and 40% are over the age of retirement [3]. The numbers and distribution of HCWs in addition to the mix of staff does not meet international standards nor comparable to neighbouring countries [3].

#### 2.2 Macro and Micro-Level Challenges: Implications and Consequences

The macro-level constraints encompass a disparate health workforce distribution, an under-

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resourced training system, movement of staff into the extractive industry, migration due to the absence of career development, a rapidly aging workforce and increased demand for health services due to population growth [2,3]. This is a major constraint that cannot be easily rectified in the short and mid-term. In the last 15 years, the capacity to train more healthcare workers has been severely reduced and to meet the WHO international recommendation of 2.3 per 1000 population the health workforce would need a 200% increase in the number of clinicians at a cost of 615 million kina [3]. Thus, it seems equally important to ensure the workforce in place is healthy, engaged and appropriately looked after.

At a micro level, Muddle attributes reduced employee satisfaction, demotivation and burnout to the increasing workloads caused by the high patient to clinician ratios [1]. Additional qualitative studies in PNG also describe burnout from increasing workloads because of staff shortages in primary health care, rural health, and HIV/AIDS care [5,7,8]. In these studies, it is evident that HCWs are burdened by the impact of staff shortages on clinical care highlighting delayed treatment, poor patient experiences and the inability to perform health promotion and health education in preventative care [5,7,8].

### 2.3 Consequences of Staff Shortages on Healthcare Quality and Patient Safety

Percentages of hospital staff needed compared to existing numbers range throughout the country from 3.8% to 108.4% [3]. Despite limited documentation on PNG hospital staff shortages' direct impact, the COVID-19 pandemic exposed extreme burnout due to inadequate staffing, particularly in tertiary hospitals [9]. These reports came from PNG's only tertiary and referral hospital Port Moresby General Hospital (PMGH) which prior to the pandemic had a need for 80% more staffing [3].

Despite the lack of documentation on the effects of staff shortages in PNG hospitals, research is clear on the consequences of high patient to clinician ratios and excessive workloads. In nursing practice, at a meso level, studies have shown patient safety incidents are 10-30% more likely and patient mortality 40% higher in high intensity patient workloads [10]. Moreover, even with sufficient nurse to patient ratios, high patient turnover was associated with increased mortality [11]. Similarly, excessive workloads for hospital physicians result in inadequate time with patients, delay in admissions and discharges, reduced patient satisfaction, increased patient safety events, increased morbidity, and mortality [12,13].

### 2.4 Importance of Measuring Employee Engagement and Leadership Strategies

Evaluating staff shortages' impact and measuring employee engagement remain crucial to gauge work output and patient safety amidst the ongoing shortage

of trained clinicians. Subsequently, the following section delineates exemplary leadership strategies undertaken at Port Moresby General Hospital from 2014 to 2015, showcasing their impact on augmenting employee engagement levels.

## 3. Leadership Strategies

Employee motivation, satisfaction, and commitment are imperative in achieving organizational goals and enhancing patient outcomes [1]. Employee engagement significantly impacts hospital performance by fulfilling organizational objectives, decreasing staff turnover, enhancing patient care quality, and ensuring patient safety [14]. In a study focusing on three major hospitals in Papua New Guinea (PNG), Muddle observed that transformational leadership proved to be the most effective style in enhancing employee engagement [1]. Further, although employee engagement levels were influenced by workplace safety, team organisation, work environment and remuneration issues, the study found the most influential factor was the leadership style [1]. This leadership style, characterized by continuous leader-follower interactions aimed at motivating employees to meet organizational goals, notably influences employee engagement in highly stressful healthcare environments, resulting in high-quality output from staff [1]. It is the most appropriate for its use in the health sector as it has a significant positive effect on employee engagement in highly stressful working environments whilst producing high levels of quality output from staff [1].

### 3.1 Implementation of Transformational Leadership at PMGH (2014 – 2015)

During 2014-2015, Port Moresby General Hospital (PMGH) adopted a transformational leadership approach to augment work capacity and output, leveraging digital innovation, staff incentives, and creativity amidst staffing shortages.

PMGH initiated a strategic plan centred around the vision of 'Better Health,' focusing on bolstering hospital performance and quality of care by enhancing employee engagement levels and augmenting staffing. Leadership strategies implemented to enhance workforce capacity and productivity included:

- **Public Hospital Information System (HIS):** The HIS, integrated across all hospital departments, facilitated capacity building, improved workflow efficiency, streamlined processes, and monitored performance metrics.
- **Heartfelt Program:** A novel recognition and reward program based on staff recommendations by peers and patients, fostering staff appreciation and acknowledgment.
- **Adherence to International Standards:** Implementation of Joint Commission International Standards and revised clinical governance to elevate patient care quality.
- **Innovative Patient Services:** Utilizing an overstaffed

medical records department to advocate the HIS and serve as customer care representatives, enhancing patient experience.

- **Formalized Spiritual Care:** Engaging accredited volunteer hospital chaplains to provide holistic care encompassing physical, emotional, psychological, and spiritual support to patients and staff.

The implementation of the HIS transformed departmental functionality, automating tasks, and significantly reducing paperwork burdens. This initiative optimized workflows and offered timely management reports, enhancing efficiency across departments. Midnight bed census, ordering stationary, drugs and cleaning supplies, drawing up manual bed lists were some of the cumbersome tasks that were automated for nurses. Physicians rejoiced in not having to walk half a kilometre to retrieve lab and radiology results and were able to order tests and drugs at the click of the mouse. The HIS also provided management timely reports on volumes and indicators that once took weeks to put together. Medical Record Departments once a lonely quiet department became trained champions of the HIS, improving their capacity and elevating their status amongst clinicians. However, comprehensive research is required to gauge the HIS's full impact at PMGH.

The Heartfelt Program, a unique staff recognition initiative, positively impacted often-overlooked support staff, fostering a sense of recognition and motivation and involved a monthly town hall barbeque and award ceremony for recognising hardworking staff. This incentive went a long way with the grounds keeping and housekeeping staff who work tirelessly but are not often recognised in the hospital, many of them looking forward to being rewarded a food hamper to take home to their families. Rewards were kept simple but meaningful to the staff. This was one of many initiatives to give staff appreciation, respect, and recognition. Additional strategies included providing paid scrubs for nursing personnel, fostering better communication through newsletters, email access, social media, and enhancing interaction via executive ward rounds and open-door policies. This allowed increased interaction with staff and management.

A baseline Gallup Q12 engagement survey in 2014 and a subsequent survey in 2015 showcased significant improvements in all ten survey questions, marking an overall increase in engagement scores from 3.3 to 3.6 [15].

#### 4. Conclusion

Healthcare staff shortages in PNG persist as a chronic concern requiring sustained commitment and investment. While addressing the shortage necessitates producing more healthcare workers, investing in the engagement of existing staff remains equally crucial in ensuring and sustaining high-quality work output.

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