ALLOCATE

Whitepaper:
Rising Staff Costs in Victorian Hospitals and Health Services

Applied Aged Care Solutions Pty Ltd

Allocate Software

Healthcare Financial Management Association

The whitepaper has been prepared by Applied Aged Care Solutions (AACS) - www.aacs.com.au in consultation with the Healthcare Financial Management Association (HFMA) who, in partnership with Allocate Software, conducted a member survey and Roundtable discussion session.

AACS's primary focus is on analysis, research, evaluation and system design improvements in relation to the health, aged and community care sectors. We have worked extensively with Commonwealth and State governments for over 20 years. AACS expertise has been integral in assisting with the background research that has delivered significant reform in the health and aged care sector, most notably the design of the National Aged Care Funding System, including the creation and design of the Aged Care Funding Instrument (ACFI) and Community Care Assessment Models.

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Janet has extensive experience in research and evaluation design, project management, training, data analysis and reporting using qualitative and quantitative methodologies. Janet has been a key researcher on all AACS projects in the past 15 years including the development of the ACFI funding system.

Roundtable participant organisations:

- Bairnsdale Regional Health
- Ballarat Health Service
- Bendigo Health
- Castlemaine Health
- Dept. Health & Human Services
- Eastern Health
- Macedon Ranges Health
- Melbourne Health
- Monash Health
- Royal Children's Hospital
- Royal Vic Eye & Ear
- Western Health

CONTENTS

ACRONYMS

AACS	Applied Aged Care Solutions
ACFI	Aged Care Funding Instrument
ABF	Activity Based Funding
AIHW	Australian Institute of Health and Welfare
DHHS	Department of Health and Human Services
DRG	Diagnosis Related Grouping
EBA	Enterprise Bargaining Agreement
EN	Enrolled (Division 2 nurse)
HFMA	Healthcare Financial Management Association
KPI	Key Performance Indicator
NHMRC	National Health and Medical Research Council
RN	Registered Nurse

SUMMARY

This whitepaper was informed by the HFMA survey, Roundtable discussions and the literature. For individual health services, the greatest opportunities identified for reducing costs while also considering safety and quality, were items in the recurrent expenditure that come under their management. The items are best identified with high quality data.

The whitepaper identifies the main issues relating to rising costs as:

- Population demographics;
- Increasing service costs;
- The funding model;
- Access to timely high quality data;
- Analysis and evaluation;
- Economies of scale;
- The cultural environment; and
- Workforce issues.

Of these identified issues, those relating to the workforce, access to timely, high quality data, cultural environment and, to a lesser extent, economies of scale, were identified as being areas feasibly addressed by individual health services.

Managing Workforce Issues

Roundtable discussions with organisational representatives highlighted the following highest contributors of preventable costs at their organisation:

- Personnel shortages;
- Unnecessary overtime;
- Agency staff expenditure;
- Recruitment costs due to attrition; and
- High rates of personal (sick) leave.

Roundtable participants stated that more timely information about staff absenteeism would assist them in making the most effective management decisions to curtail expenditure. Participants indicated that health services should collect consistent and standardised data to

enable the identification of avoidable costs and reduce expenditure, to make data driven decisions and to share benchmarking information (that covers costs and quality) with similar services in an efficient and timely manner. There is little benchmarking currently undertaken.

Data should be used to develop nuanced benchmarks across departments and service types. For example, the sick leave rate expected for nurses (4-5%) will be higher than for administration staff (1-2%).

High quality data can help to identify avoidable workforce costs, and a process and decision-tree analysis can help to learn how to manage it. There are opportunities to reduce labour costs, for example, by better managing staff absenteeism (changing staff attitudes with the aim to reduce overtime and the use of agency staff), staff satisfaction (meeting staff needs where possible and reducing staff attrition), and not staffing for empty beds. Also, as management style can impact on staff culture and attitudes there are opportunities for improving staff allocation (i.e. by deploying staff across departments).

The literature indicates that improving the rates of sick leave will result in cost savings (by using fewer temporary staff who are more expensive) and improving the quality of care by maintaining consistent staffing (turnover and understaffing have been associated with unsafe care). Sick leave was often seen as an indicator of other issues such as burnout from a high workload or high stress environment, or a sense of unfairness.

Some potential cost saving options associated with rostering and staff practices will require interventions at the system level, such as rostering to resident acuity rather than staff availability or to set ratios, and being able to efficiently use the available staff skill mix (i.e. by changing work practices that allow qualified but more cost-effective staff to carry out some activities).

Cultural and Organisational Change

Cultural and organisational change are two other areas identified by Roundtable participants and the literature as a method for improving workforce efficiencies by implementing best practice, and are often undertaken by individual health services. However, the Grattan Institute Report notes there is a gap in the evidence to support how to undertake the operational changes (Duckett and Breadon, 2014).

There are various management approaches to cultural and organisational changes that can involve a top down approach (e.g. Executives examining and improving their communication skills), to 15 minute huddles for all teams for improving management and communication

between the team members. These types of approaches improve the team culture by building staff ownership, commitment and satisfaction, and potentially reducing absenteeism and turnover, leading to improved work outcomes and efficiency.

The Importance of Real-Time Relevant Data

Underpinning any approach to manage preventable costs is an accurate collection, analysis and consistent use of data within and across health services, that can be used for quality improvement, benchmarking and research that can inform industry efficiency improvements and the quality of the services provided.

Feedback from the survey and the Roundtable discussions indicated that apart from issues identified that are outside the ability of an individual health services to alter (e.g. population characteristics, increasing service costs, the funding model) there is scope to improve the quality of the data collected to support the identification of areas of improvement regarding preventable costs. The collection of relevant, consistent data that can be used for comparison and benchmarking activities (for use within and between health services) was believed fundamental for a robust monitoring system, for evaluation of interventions designed to address preventable costs and for regulatory management.

The importance of access to good data was supported by the literature and by all Roundtable participants as a fundamental necessity for an efficient and effective health service. The Grattan Institute Report (Duckett and Breadon, 2014), the Productivity Commission Report (2015), the Targeting Zero Report (2016), and the Roundtable discussions all commented on the need for quality data and the importance of that data to supporting good decision making. In summary:

- Accurate and timely data is required to address unnecessary costs;
- Lack of visibility to real time workforce costs impact on the health services' ability to identify unnecessary costs which was cited as a barrier by nearly half of the survey participants;
- Accurate and timely data will support the ability to make data driven decisions, which was identified by approximately one quarter of the survey participants as having an impact on workforce efficiency, and is strongly supported by the literature;
- Accurate and timely data will support benchmarking and fill a current data gap, as there is minimal benchmarking done at present (less than 50% of the survey respondents undertake any form of benchmarking);

- Agreed data items need to be collected to ensure that like is being compared with like (a benchmarking presumption is that there will be few variations) when viewing differences across services or departments; and
- There may need to be different benchmarks for different departments within an organisation. For example, it will be expected that nurses will have higher absenteeism rates than administration type departments.

The Bigger Picture

While discussions indicated that individual health services must address issues that are within their control using internal comparisons and benchmarking to guide interventions and evaluations, it was believed consideration could also be given to regional and sector wide approaches, such as:

- Health services and networks developing a taskforce to identify the data currently available across their network and areas of information gaps that need to be developed and collected; and
- Set-up of a specialist service that researches data and health requirements, providing guidance to individual services on how to develop quality data for internal, local network and statewide health service needs. This would ensure that a systematic approach to data collection, health interventions and evaluation could be applied to better support initiatives designed to target preventable costs.

1. INTRODUCTION

This paper was developed for the HFMA to provide insight into preventable rising costs in public hospitals in Victoria. For context, information on the hospital system in Australia is provided from the recent report 'Australian Hospitals 2014-15 At A Glance Health' (Australian Institute of Health and Welfare (2016)).

In Australia in 2014-15, there were:

- 698 public hospitals;
- 60,300 public hospital beds – around 1 per 400 people; and
- 40,000 beds were in major cities;
- 1,800 in remote areas.

The public hospitals employed:

- About 330,000 full-time equivalent staff;
    - 42% were nurses;
    - 13% were salaried medical officers; and
    - 14% were diagnostic and allied health professionals.

Public Hospitals Funding

The state and territory governments and the Australian Government provide around 90% of the funds for public hospitals. The remainder of funding for care in public hospitals is provided by other non-government sources such as individuals, Department of Veterans' Affairs and other sources. As can be seen in Figure 1-1, the funding sources have remained relatively stable over the 5-year period.

Figure 1-1: Funding Sources for Public Hospitals[1]

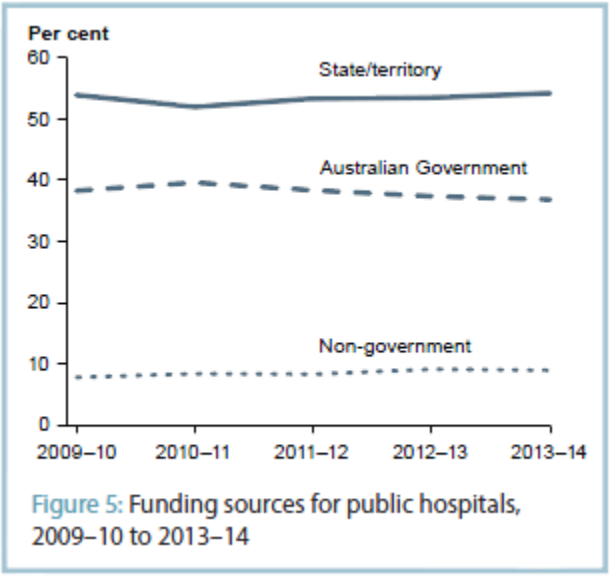


Figure 5: Funding sources for public hospitals, 2009–10 to 2013–14

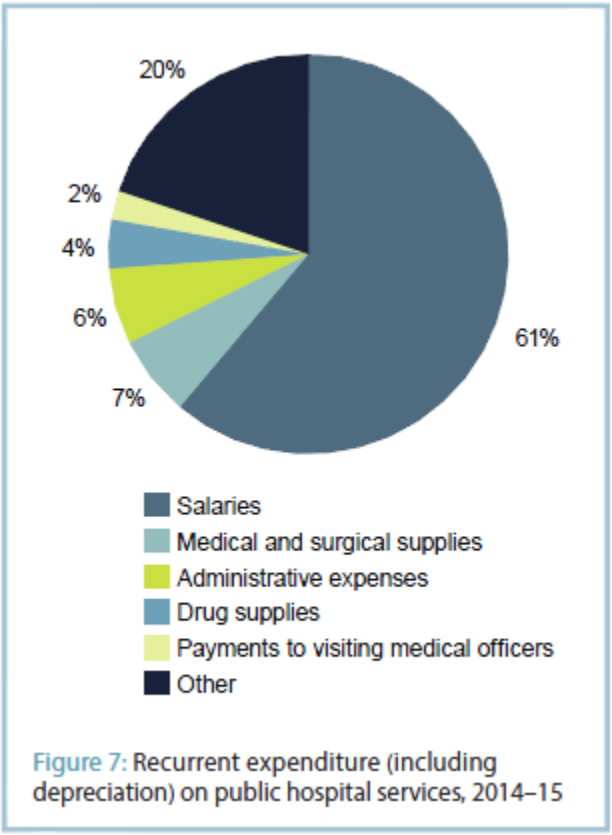
Public Hospitals Expenditure

Recurrent expenditure on public hospital services in 2014-15 was $57 billion (including depreciation), and this has increased significantly in recent years. Between 2009–10 and 2013–14, funding for public hospitals increased by an average of 4.2% each year over and above inflation, however the proportion of public hospital funding by the Australian Government decreased slightly from 38% to 37% with state and territory governments contributing the difference. Around 50% of hospitalisations were for public, government funded patients and 42% were funded by private health insurers.

Data from The Australian Institute of Health and Welfare (AIHW) shows that public hospital costs are rising across all cost areas, including recurrent salary and wage costs which made up 61% of recurrent expenditure in 2014-15 (Figure 7).

[1] Australian Institute of Health and Welfare (2016)

Figure 1-2: Recurrent Expenditure on Public Hospital Services, 2014-15[2]



Given that some of the increasing costs may be 'preventable', this paper examines some of the factors related to these costs.

[2] Australian Institute of Health and Welfare (2016) Figure 7

2. METHODS

To gather information on potentially preventable rising costs in public hospitals in Victoria, the HFMA conducted an online-survey (‘*Rising staff costs: Uncovering the barriers for Public Hospitals and Health Services 2016’ (refer Appendix 1)* followed by a Roundtable discussion with senior Victorian health care executives. AACS collated the survey results, participated in the Roundtable discussion and conducted a brief literature scan to research the key questions.

The HFMA survey was completed by 29 participants from the Victorian public health services sector. The 29 respondents were in senior positions, and included 13 metropolitan, eight regional and six rural/ remote hospitals/ health services. For details of participant roles, see Appendix 1. The survey’s thematic areas were:

- Participant and service demographics (type and size of service, role of participant);
- Preventable costs (overtime, agency use, staff under-utilisation, personnel shortages, recruitment costs, other);
- Workforce efficiency description (barriers, drivers, issues for the organisation, preventable costs);
- Workforce costs (measurement frequency, challenges, successes, agency-spend, staff turnover);
- Managing workforce efficiency (possible actions, graduate nursing intake); and
- Benchmarking (use of overtime and agency staff, how used, benefits, barriers).

A summary of the survey results can be found in Appendix 1.

The HFMA Roundtable discussion was held on 28 October 2016 with participants from 11 Victorian public sector hospitals and health services, DHHS and key staff from HFMA and Allocate Software. The Roundtable was facilitated by AACS and 18 participants were in attendance. The key discussion points were:

1. What are the major contributors to the overall ‘beyond expected’ growth in public hospital recurrent expenditure?

2. Which of the ‘appropriate’ reducible or preventable cost areas have the most potential for reducing overall cost growth? Which are the most feasible?

3. Potential solutions? What are the main drivers that will improve workforce efficiency in hospitals and health services?

a. How will the changes be implemented?
b. How will the impacts be monitored?
c. What structures, systems and processes will be needed to support and keep driving the improvements?

4. What are the main barriers to improving workforce efficiency in hospitals and health services?

a. What are the barriers to the implementation of change?
b. How can these barriers be addressed?
c. What has been tried?
d. What has worked, what hasn't and why?

This paper summarises the Roundtable discussions along with the results of a targeted academic literature scan for major reports and peer reviewed papers from the past 10 years (2006-2016), to further inform health service costs. Searching was undertaken to source the evidence-based research available on:

(i) Managing costs in hospitals; and
(ii) (ii) Hospital staff sick leave.

3. IDENTIFYING EXTERNAL CONTRIBUTORS TO HEALTH STAFF COSTS

There are many reasons that healthcare staff costs are rising. Some of these relate to internal issues associated with the hospital and its staffing models but some reasons for increasing costs are broader than and external to the hospital setting. In this chapter, external issues will be discussed, followed by information related to the hospital environment and staffing costs more directly**.**

The following sections cover the areas of:

- Population demographics;
- Economies of scale;
- Funding models; and
- Health treatment costs.

3.1 Population Demographics

The changing cost profiles of hospital patients is related to many factors, including the overall health of the population and age distribution. For example, the Australian population is on average older, year on year, resulting in an increasing chronic disease burden across all age groups. Medical advances, new drugs, technologies, services and procedures mean that society is now able to treat more illnesses and prolong life more than ever before. The digital world has resulted in consumers being more informed, and demanding access to treatments that are expensive but available in the hospital system. Older patients often have multiple co-morbidities in addition to the primary reason for admission, which results in additional resource utilisation. This, combined with the overall increasing prevalence of health conditions due to population ageing, means the cost of health care is increasing at a greater rate than expected. The management of chronic diseases into the future is Australia's biggest health challenge and impacts on all levels of health services from preventative and primary healthcare through to intensive care units in quaternary hospitals.

The Roundtable discussions highlighted other factors that have increased staff costs. The increasing use of drugs of addiction has been associated with patient physical aggression, resulting in higher management costs for security services and one-on-one staffing for safety of clients and health workers. Coupled with this is the cost in terms of stress on health workers and the risk of increased absenteeism (or presenteeism). Patients with dementia (more prevalent in an ageing population) and other mental health symptoms (perhaps more likely to present to

hospitals due to the decrease in availability of specialist in-patient based care in recent years) can also require above ratio nursing numbers to successfully manage their care (and staff and patient safety) in acute hospital environments.

3.2 Economies of scale

The Roundtable discussions highlighted the location of the hospital and health service as being a barrier to accessing economies of scale. In many areas, it can be difficult to access the appropriate workforce skill mix needed to provide the day-to-day care of patients.

Significant additional costs are incurred when accessing visiting medical and healthcare specialists. In rural, regional and outer metropolitan areas, health services have difficulty attracting and retaining highly skilled, appropriately trained doctors, resulting in the need to offer significantly higher salaries to attract staff to these service locations.

Recruitment and retention difficulties lead to personnel shortages. This results in the health service having fewer workforce management options and higher costs when dealing with unexpected demands or complex issues in a timely manner.

Small rural health services have a strong sense of responsibility to their local population. When there are no other choices or options they are likely to take patients in for social and not just medical reasons. The result is that service provision may be more expensive due to the size and location of health services, and a lack of access to economies of scale which impacts on the cost of salaries and supplies.

3.3 Funding Models

Australian hospitals and health services are funded using a mixed approach, based on activity based funding (ABF) through diagnosis related grouping (DRG) and block funding. Both the Grattan Institute Report (Duckett and Breadon, 2014) and the Productivity Commission paper (2015) argue that the funding should, but does not, provide financial incentives to promote clinical and cost effective health interventions. Whilst block funding is appropriate for some activities (i.e. research) and for some regions that have inefficiencies due to their size (smaller populations) or lack of access to staffing resources (resulting in higher wages), the reports suggest that funding based on volume (ABF DRG) can lead to over servicing and even futile care provision. ABF is not appropriate for managing preventative health (i.e. chronic disease management), which should be treated early and effectively in the community, to encourage consumer and

primary health practitioner awareness and management of care needs, and as a result, reduce hospitalisations.

The Productivity Commission paper (2015) recommends that the funding system be reviewed looking for long term options. The Grattan Institute Report (2014) argues that as the State government funds around 50% of the expenditure, it is an important player in this domain. The report (Duckett and Breadon, 2014) suggests that to improve efficiency, States can;

(i) set the right price that encourages efficiency

(ii) provide information to the hospitals so they can identify expenditure costs; and

(iii) encourage an improvement in culture by the way they manage the regulatory process (from self-regulation, persuasion and education, escalating to State administration and audits).

While there were concerns raised at the Roundtable discussions about the amount of funding provided for the patient journey, the two recent Australian reports into health costs (Grattan Institute Report by Duckett and Breadon; 2014; Productivity Commission Paper 2015) both argue that the funding approach needs to primarily reward efficiency over inefficiency and in this regard the Targeting Zero Report (2016) highlighted the importance of the collection and analysis of hospital data to assist with comparisons and benchmarking activities to identify preventable costs.

3.4 Health Treatment Costs

The Productivity Commission (2015) identified a gap in the evidence base for some treatments and recommended the formal assessment of subsidised health treatments to identify what works and what does not. The Commission also advocated the development of clinical guidelines which would lead best practice, and reduce wastage. The Grattan Institute report (Duckett and Breadon, 2014) commented that good information is required to inform on performance and to support good decision making. One issue is the lack of robust research evidence that can be generalised, to inform on clinical and general care to inform decisions at the hospital level. Good data is required to provide the evidence for practice and also to support monitoring and evaluation of practices and outcomes for safety and quality purposes.

Information about the effectiveness of services and treatments is currently held in a variety of locations, making it difficult for smaller or resource restricted sites to obtain appropriate information. For example, information is held in University academic databases, Australian

clinical guideline databases and libraries such as the Joanna Briggs Library. There are also State government resources and a wide variety of other holdings. As an example, from the Australian Clinical Practice Guidelines, (National Health and Medical Research Council (NHMRC), 2016) there are currently 20 guidelines related to diabetes management available, but only two are NHMRC approved. This finding supports the need for ongoing research on best practice and development and endorsement of evidence-based guidelines, which are best managed at a national level to improve consistency across jurisdictions.

The Grattan Institute Report (Duckett and Breadon, 2014) stated 'Public hospital spending is the fastest-growing area of government expenditure, but its growth can be slowed'.

The Productivity Commission paper (2015) argued that the best value from the health expenditure dollar rests on clinical and cost effective services. It found considerable benefit can be gained from reducing waste and improving the quality of healthcare. Their recommendations included:

- Reviewing scope of practice for health workforce groups; and
- The provision of quality information as a prerequisite for an efficient and effective health care system.

The Targeting Zero Report, Review of Hospital Safety and Quality Assurance in Victoria (2016), reviewed the performance of the DHHS in overseeing the safety and quality of the state health system. This report also identified the importance of *quality data* for monitoring the system by the Department, and by hospital Boards. The report identified large cost variability across similar services, which indicates there is a potential opportunity for improvement by learning from others experiences and benchmarking similar activities.

4. IDENTIFYING INTERNAL CONTRIBUTORS TO HEALTH STAFF COSTS

4.1 Workforce Issues

Workforce issues relating to increasing health service costs involve a range of areas such as:

- Inefficient work practices;
- Cultural attitudes;
- Management skills;
- Personnel shortages and rostering.

Good management approaches were often cited as a possible solution for many workforce issues. However, there is little evidence about what constitutes best management practice in this area. The major workforce issues raised in the survey, Roundtable and literature are discussed in the following sections.

Better Matching Patient Care Needs to Staffing Requirements

The Productivity Commission paper and the Roundtable discussions highlighted possible economic benefits if workplace practices were more flexible i.e if less expensive but qualified staff could undertake some of the activities of the more specialist staff. There would need to be reviews, trials and evaluations of any proposed changes to workplace scope of practice to ensure the practices are safe and appropriate. It is thought that there are efficiencies to be made if a less expensive or more readily available staff classification could undertake an activity within their scope of practice. This could include nurses undertaking some tasks (completed by nurses elsewhere) that are currently completed by a doctor, or the possibility of nurse assistants washing patients, or graduate nurses and ENs undertaking some the RN tasks. This could free up higher qualified staff to undertake higher level activities, by using lower paid staff where it is safe to do so. Rosters could be designed with the most efficient mix of staff to meet patient care needs.

Inflexible Rosters and Staff Resources

In the survey and Roundtable discussions, the nurses Enterprise Bargaining Agreement (EBA) was seen as an obstacle to workforce reforms such as flexible management of rosters and efficient use of staffing resources. If there is reduced flexibility to move staff around in

response to daily changes in patient acuity (i.e. the workload) or staff absenteeism, the outcome can often be over-staffing and under-staffing at various times throughout a 24-hour (or longer) period in various departments of the health service. Determining the correct number of staff (to roster) was seen as a difficult and inexact science, and current practices lead to employing nurses to budget rather than to the workload. To be efficient, there needs to be enough, but not excessive staff of the appropriate skill and seniority mix. It was reported that a pooled staffing model can help to address staff absenteeism and shortages, and is more economical than the use of agency staff.

Overtime was generally seen as expensive and a direct result of staff absenteeism. The literature suggests (not definitive evidence) that a supportive management approach that improves workplace culture and staff attitudes (and sense of ownership and responsibility to the service) may help to overcome some issues with staff absenteeism and encourage staff to be more flexible with rostering arrangements.

Nurse absenteeism

General absenteeism can be planned (annual leave, long service leave, study leave, maternity or parental leave etc.) or unplanned (i.e. sickness absence, special leave such as bereavement leave etc.). In some services, nurses are unavailable for direct care for up to one in four days (25%) due to absenteeism including planned and unplanned leave. Nurses were seen by Roundtable participants as taking higher rates of leave than other staff groups. This puts pressure on both roster management and balancing recurrent expenditure. However, there is a lack of data collected on the types of sick leave taken (excluding work related injury and illness), and a lack of standardised recording methods. Higher rates of sick leave for nurses are tolerated more than would be the case in other hospital departments or other industries. However, absenteeism is often an organisational issue as higher absenteeism and productivity decline are seen as warning signs of workplace issues and less than optimal management approaches. In this regard, staffing costs and rosters could be considered in many instances to be within the control of individual services.

The issue of nurse sick leave is complex, but as nurses make up 42% of the public hospital workforce (and around 28% of the recurrent expenditure in 2010-2011; Australian Institute of Health and Welfare, 2012), the costs of high sick leave rates were believed to be a major driver of employee avoidable costs. Some explanatory factors articulated in the survey, Roundtable discussion and the literature include:

- The nurse workforce is getting older. The Australian Hospital Statistics (2015) show the number of nurses (RNs and ENs) over 65 is over 10,000 in Australia, out of the 360,000 registered (Australian Institute of Health and Welfare Australia, 2017);
- Nurses take more leave not only for their own health issues, but to care for other family members;
- Nurses are under pressure as they cared for an increasingly complex cohort who require more intense attention leading to fatigue and burnout;
- A response to organisational issues of impending change; and
- A perception of unfairness, a cultural attitude of entitlement to leave and a lack of accountability for the impact of leave on productivity.

Without standardised quality data on what type of leave is taken and why, it is difficult to accurately determine the drivers of sick leave and hence design a management response.

Appropriate data collection, analysis and evaluation will help to establish individual health service area benchmarks and improve the understanding of the elements of appropriate management decisions and interventions. Benchmarks need to be specific to the context, and triggers and responses may vary across and between organisations. For some organisations, sick leave will not be as important as other issues. However, there should be a clear understanding of when the issue is to be flagged and how it will be managed to support effective management responses.

The Royal Children's Hospital in Melbourne published *A Guide for Managers Managing Planned and Unplanned Absences/Non-Attendance* in 2012. It clearly sets out (for all stakeholders) the timeframes around when leave entitlements are to be taken, the data to be collected about the leave taken, and processes for managing excess leave. The manager is informed by the Performance Unit when guidelines have not been met, and is required to implement the appropriate management approach. The hospital believes that effective management of employee leave liability is crucial to the financial viability of the organisation and to the efficient use of human resources.

Absenteeism in a health service setting usually requires staff replacement. This may be achieved by the use of overtime, pool or agency staff. The use of agency staff was identified as a particularly expensive option compared to employed staff (rostered or pool staff). Apart from being less efficient, replacement staff are also said to be associated with lower quality of care (though the evidence for this is has not been established).

Studies have examined various factors that impact on nurse sick leave:

- Effective nurse leadership was associated with fewer and shorter sick leave events (Schreuder et al 2011);
- Higher nurse workload was associated with lower job satisfaction and higher sick leave, and poorer quality patient outcomes such as increased infections and complaint (Rauhala et al, 2007 & 2009);
- Increased long-term sickness absence is a risk following workplace re-organisation (such as merging, splitting, closing and creating units; and staff reallocation), and it affects all levels of hospital staff (Ingelsrud 2014);
- In the United Kingdom National Health System (public), health workers are reported to take twice the amount of sick leave than those in the private health system, resulting in a £3 billion annual staff absence bill (Munro 2011). A study in the UK (Hurst & Smith 2011) found workloads and time out (sick leave etc.) were higher in wards with temporary staff (compared to permanent staffed ward), but there was no difference in the quality of care. Other papers discussed the use of tougher checks on why leave was taken, the possibility of denying pay rises if more than a stated level of leave was taken, and setting up specific Fit to Work Centres to standardise the management of staff on sick leave.

Rostering

Rostering is impacted on by absenteeism (leaving gaps in the roster), mandated conditions (allowance of leave for various reasons), as well as industrial agreements (minimum staffing requirements). Rostering could be improved to better meet staff needs e.g. shorter shifts for parents, and by making changes to improve the workforce efficiency such as:

- Being able to use rostered staff between departments to fill gaps and balance workloads across wards (31.6% of HFMA survey respondents); and
- Staffing to patient demand acuity, rather than staff availability (21.1% of the HFMA survey respondents).

While mandated conditions and industrial agreements may be outside the hospital scope of influence, some aspects are amenable to good management skills. It was indicated in the Roundtable discussions that the ability to empathetically manage interpersonal and cultural issues can have a significant impact on the outcome. Examples of this would be dealing with attitude to taking sick leave for other reasons, dealing with overtime behavior, bringing staff attitudes into alignment with the hospital goals.

Recruitment and Retention

Recruitment of skilled staff was an issue for some sites. In general, the further the site is from a large metropolitan centre, the more difficult it is to recruit and retain staff. Often, higher salaries need to be offered to attract and retain staff. Nearly two in ten survey respondents also reported major issues with staff attrition and the time, effort and cost needed to recruit and train new staff.

5. OPPORTUNITIES FOR MANAGING COSTS

Section 5.1 provides an overview from two recent Australian reports on public hospital spending and the role of national and state governments – Controlling Costly Care (Duckett and Breadon, 2014) and Efficiency in Health (Productivity Commission Paper, 2015).

Section 5.2 focuses on what health networks and hospitals can do to manage rising costs in the context of the survey, Roundtable, the Grattan Institute (Duckett and Breadon, 2014), Productivity Commission (2015) and The Targeting Zero (2016) reports.

5.1 EXTERNAL COSTS

Local health services cannot change their location and related socio-demographics, nor aspects of the system such as funding models and workplace law that can have a significant effect on service costs. For example:

- Location – associated with recruitment issues;
- Size – smaller economies of scale;
- Population characteristics – lower socio economic circumstances are associated with higher burden of illnesses such as smoking and obesity-related disease, chronic illness high drug use etc.;
- Funding system – rewards volume; and
- Mandatory workforce salary awards including conditions such as Victorian nurse ratios.

However, with the appropriate evidence informing their decision making, they can make changes to their processes to reduce waste while providing safe and high quality services. The current state benchmarking data and feedback process needs to be improved in quality, content and timeliness. Whilst this is largely outside the immediate management scope of health services, they have an important role to play in identifying the issues, to ensure that data is helpful in identifying the costs that can be managed.

There is a lack of strong evidence on how the health services should make changes to their processes.

A range of actions have been recommended (by the two papers) to address the Australian health care system workforce issues identified:

- Clinicians lack information on the effectiveness of some practices. Clinical guidelines that are developed with clinician input will support their credibility, and facilitate their appropriate and timely implementation;
- Reviewing the scope of practice of the health workforce craft groups, to ensure that human resources can be most effectively managed; and
- The collection and provision of good quality information and data as a pre-requisite for an efficient and effective health care system.

Evidence-based research is important to determine how to measure care effectiveness that could subsequently be tied to payment for service provision. The Grattan Institute Report (Duckett and Breadon, 2014) states there were five options that have been tried overseas, these include measuring:

1. Never events (i.e. don't pay for what shouldn't happen; this data is available in Australia)

2. Adverse events (i.e. adjust the price if low or high rate; this data is available in Australia)

3. Readmissions (i.e. negatively adjust payments for readmissions, possibly unfair; this data is available in Australia but there can be factors outside of the hospital control)

4. Pathways (i.e. pay for the best package, however this lacks conclusive evidence; would require new data collection in the Australian context)

5. Patient reported outcomes (i.e. adjust payments based on outcomes; this would require a new data collection in the Australian context).

Prior to implementation of any new data collection method, research needs to be undertaken to ensure the data is fit for purpose, acceptable for the user and feasible to collect with a high degree of integrity.

5.2 INTERNAL COSTS

Both the Grattan Institute Report (Duckett and Breadon, 2014) and the Targeting Zero Report (2016) highlight the need to collect and analyse good quality data to support the monitoring process for both the governments and health service boards. Lack of access to reliable and accurate information was a common theme, interacting at all healthcare management levels. Nationally, the data is needed to support evidence-based practices, assist with the clinical guidelines and to determine funding. At a state level, good quality data is needed to monitor and regulate the system and determine funding. At a local health service level, collecting clinical outcomes and service system data is important for quality improvement activities, and to inform

about the status of the healthcare system. Good data underpins the ability to identify issues, to develop interventions to address those issues, and to evaluate those actions.

The Grattan Institute Report argues there are enough conservative gains in avoidable costs to shift the health expenditure trajectory. Using an approach comparing two matched hospitals, with adjustments made for aspects that make them more expensive (such as high cost treatments or outlier cases), the Report concluded that there was an unnecessary use of resources and time delays. Avoidable costs were determined by calculating an average cost per patient in the acute setting (73% of public hospital funding), extracting legitimate costs then conservatively adding a buffer to determine costs above this level, which were deemed avoidable (Duckett and Breadon, 2014).

Avoidable Costs: The avoidable costs included supplies and staff (part of recurrent funding), most of which is within the scope of the hospital and health service approach to reducing costs. Specific aspects associated with avoidable costs included:

- Clinical care delays;
- Time taken for the care flow process;
- Maintaining staffing levels even when there are empty beds;
- Number of procedure complications;
- Number of unnecessary admissions;
- Number of care associated infections; and
- Number of adverse drug events.

Identifying and Responding to Avoidable Costs

While a number of avoidable cost areas were discussed in the Roundtable discussions and survey, there were difficulties highlighted in identifying possible areas for cost reduction in a timely manner with the limitations imposed by currently available data. The Review of Hospital Safety and Quality Assurance in Victoria (2016) found that high quality data is fundamental to support the required monitoring and management processes at the hospital or health service level. At the system level, high quality data is a prerequisite for an efficient and effective health care funding system. Some of the identified barriers to obtaining the required high quality data are:

- The cost of collecting and analysing data; the participants (in the Roundtable discussion) voiced that it needs to be a funded activity;

- Collection and interpretation of the data will require software updates (or new software) and training at the hospital level;
- Benchmarking needs to be undertaken with 'like' organisations. Data will need to be statistically adjusted for the more severe, expensive or difficult cases (which the public system is obliged to treat). Organisation matching is time consuming and fraught with difficulties requiring adjustments and the building of strong ongoing relationships;
- The DHHS benchmarking data has limitations. Data integrity queries require ongoing attention and monitoring, both of which are challenging in resource constrained environments;
- New data will be required. For example, currently, very little data is collected on:
    - Public hospital surgical and associated theatre practices and costs, and what is collected is recorded on paper
    - Sick leave, data should identify why leave is taken to assist in the improvement of associated management practices;
- It will be a change in practice for staff to collect the required information for benchmarking and associated purposes. It will require protocol development, implementation and ongoing education;
- Currently, data associated with costs is two years old upon release. If the data is to be used to identify the variation in costs, practice variations and other issues, this will need to be provided in a timely manner.

Managing Workforce Issues

In the Roundtable discussions, participants identified and discussed the highest preventable staffing cost contributing factors at their organisation. Most commonly cited were:

- Personnel shortages;
- Unnecessary overtime;
- Agency staff expenditure;
- Recruitment costs due to attrition; and
- High rates of sick leave.

Participants reported a requirement for more timely information about staff absenteeism to assist them in knowing when and how to make the best management decisions. Participants indicated that health services need to be able to collect standardised, consistent data to be able to identify avoidable costs, to make data driven decisions, and reduce expenditure. Additionally,

they would benefit from sharing benchmarking information (that covers costs and quality) across services in an efficient manner.

The data should be used to develop nuanced benchmarks across departments and service types. For example, the expected sick leave rate will be higher for nurses (4-5%) than administration staff (1-2%). There is little benchmarking currently undertaken.

High quality data can help to identify avoidable workforce costs, and process analysis and evidence can assist in learning how to manage them. There are opportunities to reduce labour costs by:

- Better managing staff absenteeism (changing staff attitudes with the aim of reducing overtime and the use of agency staff); and
- Improving staff satisfaction (meeting staff needs where possible and reducing staff attrition), not staffing for empty beds.

The literature and the Roundtable discussions highlighted that there are opportunities for improving staff culture and attitudes (resulting in reduced sick leave and staff disengagement). Effective management styles can provide opportunities for improving staff allocation (i.e. by deploying staff across departments). These types of changes may help to meet the assigned hours per patient, per day budget. Some potential cost saving options associated with rostering and staff practices will require interventions at the system level. Changes such as rostering to resident acuity and not staff availability or to set ratios, and being able to efficiently use the available staff skill mix (i.e. by changing work practices that allow qualified but more cost-effective staff to carry out some activities) all require system level assessment and consideration. The literature indicates that decreasing sick leave rates will result in cost savings (by using fewer expensive temporary staff) and improve the quality of care by maintaining consistent staffing (turnover and understaffing have been associated with unsafe care). Sick leave is often seen as an indicator of other issues such as burnout from a high workload or high stress environment, or a sense of unfairness. For completeness in attempting to cut costs, these issues should be explored at a hospital and/ or health service level.

Cultural and Organisational Change

Cultural and organisational change are two other areas identified by Roundtable participants and the literature as a method for improving workforce efficiencies by implementing best practice, and are often undertaken by individual health services. However, the Grattan Institute Report

notes there is a gap in the evidence to support how to undertake the operational changes (Duckett and Breadon, 2014).

There are various management approaches to cultural and organisational change that can involve a top down approach (e.g. Executives examining and improving their communication skills), to 15 minute huddles for all teams for improving management and communication between the team members. These types of approaches improve the team culture by building staff ownership, commitment and satisfaction, and hopefully reducing absenteeism and turnover, leading to improved satisfaction and efficiency.

Patients Benefit from Data Collection and Benchmarking Activities

An Australian study, using data from 212 public hospitals across Australia (excluding QLD) (National Hospital Costing Data Collection 2010-2011), investigated the costs of caring for children with medical complexity (Sriastava et al, 2016). They found children with medical complexity, while only accounting for a small percentage of hospitalisations, accounted for nearly one third of all hospital costs for children. The Complex Care program at the Melbourne Royal Children's Hospital (RCH news, 2016) tackled this issue (where 3% of patients were using 15% of the bed days) with a new model of care which was piloted and evaluated in 2014-15. These families were allocated a Complex Care Coordinator (Clinical Nurse Consultant) that provided care coordination, timely access to advice, and support for the family. It resulted in a 50% reduction in bed days and emergency department presentations and a 77% positive patient and family satisfaction and experience response (improved by 30%). However, benchmarking should also include Quality of Care data that can identify avoidable harm. It is important to ensure that efficiencies are not being made at the expense of safety and quality. As the recent Residential Aged Care Communique (December 2016) noted, high quality clinical data and patient reported outcomes should be used in benchmarking performance and to reduce inefficiencies and inequality. This will also link to patient-centered care, and support the concept of value based healthcare (which is care that relates to improved quality of life as assessed by the patient) in addressing the ever-increasing health expenditure.

Data that is Timely, Comparable and Accessible is Essential to Reducing Avoidable Costs and Improving Patient Outcomes

Variability across different services providing the same care, continues to be identified, indicating that knowledge on how to improve efficiency is either not being shared or not implemented (Targeting Zero Report 2016). The Grattan Institute Report proposed giving health services the

tools (data based information) and the motivation (from a supportive regulatory approach) to improve practices and processes, acknowledging each site may have slightly different solutions and that the evidence is still weak and cannot inform individual health services how they should manage operational issues (Duckett and Breadon, 2014). It is therefore important to collect objective and accurate information to identify and record the triggers and approaches taken to improve workforce efficiency and practices. This will add to and improve the current body of information, and further support the sharing of information within the industry.

The role of collecting and analysing good quality data is an ongoing continuous improvement activity. The data can help to identify new issues and lead to opportunities for improvement in workforce issues and costs. New data is required to understand the costs associated with theatre and surgery for example. The literature supports that the data should also consider the value to all stakeholders including the consumer. This may involve looking at the data from the perspective of the quality of care provided, but also from the perspective of the impact of the care on the quality of life for the patient.

Is efficiency just about meeting the budget?

While the greatest opportunities for reducing costs in the short term sit in the recurrent expenditure (and salaries make up 61%), there will always be a balance to consider regarding the safety and the quality of the healthcare provided.

The importance of access to good quality data was supported by the literature and by all Roundtable participants as a fundamental necessity for an efficient and effective health service. Unfortunately, the types of data required are not currently collected in a way that is useful and timely for health service needs and to support good decision making. In summary:

- Accurate and timely data is required to address unnecessary health service costs;
- Lack of visibility to real time workforce costs which impact on the health service's ability to identify unnecessary costs was identified as a barrier by nearly half of the survey participants;
- Accurate and timely data will support the ability to make data driven decisions which was identified by around a quarter of the survey participants as having an impact on workforce efficiency, and is strongly supported by the literature;
- Accurate and timely data will support benchmarking and fill a current data gap, (less than 50% of the survey respondents undertake any form of benchmarking);

- Agreed data items need to be collected to ensure appropriate comparisons are being made (a benchmarking presumption is that there will be few variations) when viewing differences across services or departments; and
- There may need to be different benchmarks for different departments within an organisation. For example, it will be expected that nurses will have higher absenteeism rates than administration type departments.

6. CONCLUSION

This paper was developed for the HFMA to provide insights into preventable rising costs in public hospitals in Victoria. With increasing expenditure, it is time to look in more sophisticated ways, for the solutions to problem areas of expenditure.

Whilst the Australian and state and territory governments provide around 90% of the recurrent funds (around $60 billion per year) for public hospitals, governments alone cannot be expected to find innovative solutions for this ever-rising expenditure.

With data from the AIHW showing that public hospital costs are rising across all cost areas including recurrent salary and wages costs which made up 61% of recurrent expenditure (in 2014-15) and hospital service managers recognising that staffing is an ongoing area where changes could be beneficial to the bottom line, it seems prudent to concentrate work in this area.

In many health services, there are issues of workplace culture or management practices that result in high levels of leave. There are difficulties due to outdated practices and processes and there are opportunities to do things differently, in a more cost-effective way. However, the need for relevant, high quality, real time data to monitor and compare, change and evaluate is crucial for the outcomes we all need - a great public hospital system that provides high quality care at a reasonable, and perhaps more importantly, sustainable price.

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Further Reference Material can be obtained from AIHW companion reports:

Elective surgery waiting times 2014–15: Australian hospital statistics (AIHW 2015a)

Emergency department care 2014–15: Australian hospital statistics (AIHW 2015b)

Staphylococcus aureus *bacteraemia in Australia's public hospitals 2014–15: Australian hospital statistics* (AIHW 2015d)

Admitted patient care 2014–15: Australian hospital statistics (AIHW 2016a)

Hospital resources 2014–15: Australian hospital statistics (AIHW 2016b)

Non-admitted patient care 2014–15: Australian hospital statistics (AIHW 2016c).

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Further detail is also available in spreadsheets and interactive data cubes at <www.aihw.gov.au>.

APPENDIX – SURVEY RESULTS

Survey: Rising staff costs: Uncovering the barriers for Public Hospitals and Health Services

Q1. What type of hospital or health service do you primarily work in?

Answer Options	Frequency	Percent
Metropolitan hospital or health service	**13**	**44.8 %**
Regional hospital or health service	8	27.6 %
Rural or remote hospital or health service	6	20.7 %
Other (please specify)	2	6.9 %
Total	29	100%

Q2. How would you categorise the size of your hospital or health service?

Answer Options	Frequency	Percent
Up to 100 employees	1	3.4 %
From 101 to 499 employees	5	17.2 %
Between 500 and 1500 employees	5	17.2 %
Above 1500 employees	**18**	**62.1 %**
Total	29	100%

Q3. Which of the following best describes your role?

Answer Options	Frequency	Percent
Executive Director - Finance	4	13.8 %
Executive Director - other	**7**	**24.1 %**
Finance Manager	2	6.9 %
Payroll Director	3	10.3 %
Payroll Manager	**7**	**24.1 %**
Other (refer 3a)	6	20.7 %
Total	29	100%

Q3a. Other - Which of the following best describes your role?

Human Resources Manager in charge of Payroll
Chief Financial Officer
HRIS Support Analyst Team Leader
Industrial relations manager
Payroll Officer
Payroll HRIS support analyst

Q4. In your opinion, how is workforce efficiency defined in your organisation?

Answer Options	Frequency	Percent
Meeting 'work hours per patient day metrics	**5**	**22.7 %**
Reducing agency use	3	13.6 %
Improving staff utilisation between departments	3	13.6 %
Reducing the payroll bill	**6**	**27.3 %**
Other (please specify)	**5**	**22.7 %**
Total	22	100%

Q4a. Other - In your opinion, how is workforce efficiency defined in your organisation?
Productivity and efficiency gains with less staff
Meeting budget
Meeting budgeted FTE allowance
As per the legislated nurse\patient ratios
Meeting agreed budget staffing, which may not be set at an efficient level.

Q5. What do you see as the biggest barrier to achieving workforce efficiency in your organisation?

Answer Options	Frequency	Percent
Lack of real time visibility across workforce costs which hinders the ability to identify unnecessary expenditure	10	45.5 %
A siloed organisational structure which restricts the ability to use staff between wards	3	13.6 %
Poor management of staff leave and overtime	5	22.7 %
Other (please specify)	4	18.2 %
Total	22	100%

5a. Other
Limited workforce options
Industrial agreements/ lack of appetite for workforce reform
Unnecessary complexity and huge variance between allowances/benefits/entitlements depending on your professional area. Very difficult to interpret correctly and time consuming.
Nursing EBA and nurse patient ratios in rural areas

Q6. In addition to improved financial outcomes, which of the following do you believe represents the biggest driver for improving workforce efficiency in your organisation?

Answer Options	Frequency	Percent
Meeting the assigned 'work hours per patient day budget	4	18.2 %
Improving the experience for our staff in order to reduce attrition rates	4	18.2 %
Improving the way we allocate staff to patients to deliver better outcomes	7	31.8 %
Improving rostering to reduce the need to use agency staff	7	31.8 %
Total	22	100%

Q7. Of the following potential issues, which concerns you most in relation to your organisation?

Answer Options	Frequency	Percent
Departments exceeding budget costs with overtime	3	13.6 %
Departments exceeding budgeted costs with agency spend	1	4.5 %
Staff under-utilisation	4	18.2 %
Personnel shortages and staff retention	13	59.1 %
Not enough funding from the Department to meet rising costs	1	4.5 %
Total	22	100%

Q8. Which of the following do you believe represents the highest contributor of preventable costs in your organisation?

Answer Options	Frequency	Percent
Unnecessary overtime	4	18.2 %
Agency expenditure	4	18.2 %
Under-utilising existing contracted staff	2	9.1 %
Personnel shortages within the organisation	7	31.8 %
Recruitment costs due to high attrition	4	18.2 %
Impact of sick leave and other non-productive time	1	4.5 %
Total	22	100%

Q9. How frequently do you (or your organisation) measure staffing costs against budget?

Answer Options	Frequency	Percent
Monthly	17	77.3 %
Fortnightly	4	18.2 %
Unsure	1	4.5 %
Total	22	100%

Q10. Do you believe your organisation struggles to align workforce costs to budget?

Answer Options	Frequency	Percent
Yes	15	68.2 %
No	7	31.8 %
Total	22	100%

Q11. What is your primary challenge in ensuring workforce costs align to budget?

Answer Options	Frequency	Percent
Personnel shortages make it challenging to align overtime costs to budget	1	7.7 %
We can't deliver the level of care required and/or expected within budget	3	23.1 %
We lack the insight into our workforce costs to identify to root cause	7	53.8 %
Other (please specify)	2	15.4 %
Total	13	100%

11a. Other
Managing the growing workforce costs associated with sick leave and carer's leave with an aging workforce
Inability to permanently recruit to medical positions. So ongoing high locum and placement costs as well as lower productivity

Q12. In your opinion, why is your organisation successful in maintaining workforce costs within budget?

Answer Options	Frequency	Percent
We utilise a casual pool across the organisation to keep agency spend to a minimum	1	14.3 %
We compare planned and actual staffing costs against budget estimates on a regular basis	3	42.9 %
We improved staff utilisation to reduce overall payroll costs	2	28.6 %
We achieve high staff retention	1	14.3 %
Total	7	100%

Q13. Which of the following workforce challenges do you believe has the biggest impact on your organisation? (Choose the answer that applies the most)

Answer Options	Frequency	Percent
Personnel shortages	6	30.0 %
High sick leave rates	13	65.0 %
staff seniority	1	5.0 %
Total	20	100%

Q14. In relation to your answer to question 12, how would you define that impact?

Answer Options	Frequency	Percent
Financial	10	50.0 %
Cultural	8	40.0 %
Other (please specify)	2	10.0 %
Total	20	100%
14a. Other		
Both Financial and the ability to have consistency in medical approach with constant locum usage		
Competitive Market within the Metro Area		

Q15. Which of the following do you believe represents the biggest contributor to agency spend?

Answer Options	Frequency	Percent
Poor annual leave planning	1	5.0 %
Spikes in patient numbers requiring additional duties and shifts to be added at late notice	2	10.0 %
High sick leave rates contributing to unfilled shifts	8	40.0 %
Personnel shortages resulting in the on-call roster often being fully-utilised	5	25.0 %
We have a known issue with roster managers using agency staff above requirements	2	10.0 %
Limited casual availability	1	5.0 %
No agency	1	5.0 %
Total	20	100%

Q16. What do you believe is the biggest cause of personnel shortages in your organisation?

Answer Options	Frequency	Percent
Inflexible rostering that limits our ability to retain staff	2	10.0 %
An industry skills gap that makes it difficult to find appropriately-skilled staff	10	50.0 %
Lack of visibility of causation between staffing requirements, demand and alignment to HR policies	8	40.0 %

Total	20	100%

Q17. Aside from recruiting additional staff, which of the following actions do you think could have the greatest impact on staff retention?

Answer Options	Frequency	Percent
Reduced sick leave	6	31.6 %
Improved leave planning	2	10.5 %
Better utilisation of staff between departments	5	26.3 %
Increased flexibility in rostering	5	26.3 %
Multiskilling staff	1	5.3 %
Total	19	100%

Q18. Which of the following actions do you believe could have the greatest positive impact on workforce efficiency in your organisation?

Answer Options	Frequency	Percent
Reducing administrative tasks	2	10.5 %
Making data-driven decisions	5	26.3 %
Staffing to patient demand acuity as opposed to staff availability	4	21.1 %
Breaking down the silos to maximise staff hours and balance workloads between wards	6	31.6 %
Reducing labour costs by cutting overtime	1	5.3 %
Reducing labour costs by cutting agency spend	1	5.3 %
Total	19	100%

Q19. Do you have an annual graduate intake for nursing?

Answer Options	Frequency	Percent
Yes	15	78.9 %
No	3	15.8 %
Unsure	1	5.3 %
Total	19	100%

Q20. Does your organisation correlate agency spend against graduate intake?

Answer Options	Frequency	Percent
Yes - there has been a notable reduction in agency usage	2	13.3 %
No	12	80.0 %

Unsure	1	6.7 %
Total	15	100%

Q21. Do you benchmark agency costs between wards?

Answer Options	Frequency	Percent
Yes	3	15.8 %
No	10	52.6 %
Unsure	6	31.6 %
Total	19	100%

Q22. How is this benchmarking information used?

Answer Options	Frequency	Percent
For comparison and cost reduction focus.	1	33.3%
To try and reduce agency usage	1	33.3%
Agency is used in one area predominantly	1	33.3%
Total	3	100%

Q23. Are there any reasons why your organisation does not benchmark agency costs between wards?

Answer Options
Services aren't comparable
We only utilise agency costs in one ward
Unable to accurately measure
Don't use agencies - have a large casual bank instead.
Internal Casual Pool
We are a sub-regional facility, we occasionally use nursing agency staff perhaps a 3 month contract every 18mths but not on a daily basis as would occur in metro areas. We have our own casual nurse back and monitor use of this in each area rather that benchmarking of costs between wards
Haven't set KPIs
We don't have the ability to use nursing agencies due to our remoteness. We only have agency staff on a locum basis in the medical workforce

Q24. Do you benchmark overtime costs between wards?

Answer Options	Frequency	Percent
Yes	3	15.8 %
No	9	47.4 %

Unsure	7	36.8 %
Total	19	100%

Q25. What are the reasons why your organisation does not benchmark overtime costs between wards?

Answer Options
Not applicable to this hospital
Only one ward
Paid overtime is approved on rare occasions.
We use very little overtime
We have been wary of comparing one managers results to another as they face different challenges with staffing requirements
Does not reflect common usage between wards
Overtime is reviewed monthly but not benchmarked against each ward as we are not comparing apples with apples generally but if one ward had higher OT it would be investigated
No KPIs set
Each ward has different needs and requirements. Wards are measured by their overtime costs compared to budget. We measure overtime in funding streams for internal benchmarking.