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An evaluation of workforce (re)design and skill-mix in Airedale NHSFT'S Acute Assessment Unit

Leveraging local advantage through collective and inclusive leadership in urgent care

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Julie Davies, Joanna Szulc and Julia Lattimer ● February 2020

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Foreword

This report is sponsored by the West Yorkshire & Harrogate Local Workforce Action Board (WY&H LWAB). It was commissioned by Jill Asbury, Director of Nursing, and Nick Parker, former Director of HR and Workforce, at Airedale NHS Foundation Trust (ANHSFT). The purpose of this report is to evaluate workforce (re)design and skill-mix in ANHSFT's new £7 million Acute Assessment Unit (AAU) since the unit opened in April 2018. The new facilities integrate acute medical and surgical assessment and the Ambulatory Care Unit (ACU) to optimise clinical decision-making in urgent care for serious or life-threatening emergencies. The unit is designed to facilitate patient flow with safe and dignified standards based on ANHSFT's 'right care' behaviours. The report's key recommendations are listed on page 19...

This report has been drafted in a dynamic and changing national and global policy context. In 2018, the UK's Chief Nursing Officer launched a major nursing recruitment and retention campaign. In 2019, the NHS *Long Term Plan* announced the government's aims to increase the NHS workforce, train and recruit more professionals, and make the NHS 'a better place to work'. The *Interim NHS People Plan* (NHS England, 2019a: 20) stated that 'the most urgent challenge is the current shortage of nurses'. There is a pressing need to 'close the gap' in nursing shortages (King's Fund, 2019). In terms of global developments, the World Health Organization (WHO) has designated 2020 as the 'Year of the Nurse and Midwife.' WHO (2016) has developed a 2030 workforce strategy to raise the numbers, mix, and skills of health workers (Moreira and Lafortune, 2017).

At the local level, Airedale NHS Foundation Trust's 2019/2020 People Plan is based on sustaining the Trust's clinical workforce supply, continuing to redesign its workforce by embedding new roles, especially Advanced Clinical Practitioners (ACPs) and Nursing Associates (NAs), and reconfiguring some current roles. The plan also focuses on managing a new recruitment pipeline and talent and performance at all levels. This includes a graduate programme, entry-level jobs, and growing its own workforce with an inclusion strategy to maintain employee involvement, engagement and morale. Additionally, ANHSFT's People Plan seeks to stabilise staff turnover and vacancy rates, improve nurse retention, reduce sickness absences, and maintain high levels of appraisal and quality improvement. The plan stresses the need for achieving mandatory training and enhancing employee health and wellbeing, continuing Schwartz rounds, and for engagement to be in the top quartile of employers. The plan emphasizes the importance of inclusive compassionate and accountable leaders and managers as well as reflecting the local community it serves in its policies and practices on recruitment, work experience, and apprenticeships. Essentially, ANHSFT can offer a 'job for life' although the 'job' will evolve over an employee's working life. The Trust offers opportunities for school leavers and mature individuals without qualifications by providing maths and English training to become Nursing Associates and gain training to become Registered Nurses. The AAU workforce is blended with dynamic combinations of registered and unregistered nurses and healthcare workers, with nurses representing a dominant proportion of clinicians.

Workforce (re)design in AAU is influenced by the costs of delivering acute care in a small rural hospital location (Palmer et al., 2019) and by increased acuity of patients' conditions in an ageing population with nation-wide breaches of four-hour waiting times in A&E (Triggle, 2019). There are also 'wicked' challenges in integrating health and social care with A&E, which takes the brunt of breakdowns in other services. EU staff leaving or not taking up positions because of Brexit are exacerbating these problems.

At the same time, there are interesting developments with urgent and emergency care (UEC) vanguards that are creating new workforce models. For example, using digital skills and collaborations beyond the hospital setting in the community, e.g. with GPs, paramedics and urgent care at home. The Royal College of Emergency Medicine (RCEM) (2017) is seeking to develop a multi-professional workforce and, with the Society for Acute Medicine (SAM), it provides guidance on breaking down workforce silos to deliver Same Day Emergency Care (SDEC).

In looking to the future, the global shortages and high turnover of professional healthcare workers will continue (Britnell, 2019), especially in the case of newly qualified nurses and junior doctors. It seems that many people in the UK support the idea of the NHS but do not seek employment in the NHS. In the face of these challenges, ANHSFT has been proactive in developing telemedicine to provide urgent care remotely. AAU has benefited from working with local university placement services. Senior staff can make immediate provisional offers of employment to nurses at open days, and the Trust is proactive in recruiting clinical staff from overseas. Importantly, the Trust has developed new roles in AAU such as Advanced Clinical Practitioners, Nursing Associates, Healthcare Support Workers, Flow Co-ordinator, and a Dignity and Dementia Champion to support registered nurses (RNs). Nationally, however, issues with funding back fill pay have delayed the NHS apprenticeship levy from being extended to registered nurses, while other sectors such as public health managers in the civil service have benefited from fully sponsored MBA programmes, for example through the Open University, thanks to the levy.

This report's findings (summarised in Figure 5, p. 19) highlight on-going innovations in the positive learning culture being developed in AAU at Airedale. The unit comprises small, friendly and supportive teams working in spacious and airy facilities. We found clear evidence of inclusive leadership (Randel et al., 2018) (see Appendices 4) and functional teams (see Appendix 5) where staff perceive they belong to a supportive team and feel that they are uniquely valued for their contributions (see Appendix 3 for positive twitter feed comments). However, as with urgent hospital care staff elsewhere, the workforce is susceptible to burnout (Adriaenssens et al., 2015) and concerns about 'care left undone' on busy shifts (Ball et al., 2014).

Drawing on the latest CQC (2019) feedback on Airedale's AAU and a 14-month project, this report proposes several recommendations. In line with the *NHS Long Term Plan*, these include firstly communicating and promoting the employer value proposition as a local employer of choice with opportunities for volunteering and enhancing employability. Secondly, we emphasize opportunities for Airedale to promote nursing as an exciting, rewarding and highly employable career options, and urgent

care as an attractive specialty. Furthermore, we advocate the availability of dedicated pastoral support (for example by a recent retiree) to support the well-being and professional development of newly qualified nurses (NQNs) and other staff in AAU. The purpose of this role would be to enhance retention by responding to triggers for NQNs to quit such as patient deaths (Hogan et al., 2016). We also recommend clarification about professionals working to the top of their licence (Buck et al., 2018), interprofessional boundary work, opportunities to hire and to embed Physician Associates (PAs) and other hybrid professionals who are non-medical prescribers, and further research on the integration of immigrant healthcare professionals.

In conclusion, we recommend further work in three key areas:

- Attract local hires as an anchor institution.
- Integrate new recruits, especially ACPs, APs, and immigrant nurses, to create a sense of belonging.
- Retain the friendly culture of a small rural hospital and develop inclusive and collective leadership capabilities.

A model of delivery that is shifting to integrated urgent care beyond the hospital setting is changing the current workforce configuration (see Appendix 6). We emphasize the value of leveraging the advantages of a friendly and supportive local hospital in recruiting volunteers and future employees from the local population. These initiatives need to be underpinned by close collaborations with educational institutions and other key stakeholders, including alternative service providers (Mason and Snooks, 2010). Further changes in the AAU's workforce (re)design and skill-mix will also benefit from an effective on-going media and communications campaign to raise awareness of the employer value proposition at Airedale NHSFT, and AAU in particular which is located in the Yorkshire Dales with brand new facilities.

Acknowledgements

This report is based on a Health Education England (HEE) funded project and feedback from participants at the 2019 West Yorkshire & Harrogate Local Workforce Action Board Learning Conference in Leeds (Davies et al., 2019). The aim of the research is to identify workforce design and skill-mix changes following the opening of Airedale NHSFT's new AAU in spring 2018. The work was undertaken by Dr Julie Davies, Reader, Manchester Metropolitan University; Dr Joanna Szulc, Lecturer; and Julia Lattimer, MSc graduate in Huddersfield Business School from November 2018 until December 2019. It complements the work of the West Yorkshire and Harrogate Local Workforce Action Board (WY&H LWAB) to deliver the Partnership's aim of enhancing the health and care of people across the ecosystem. LWAB's focus is on workforce transformation and making WY&H the best place to live and work. This ambition is aligned with the *Interim NHS People Plan* (NHS England, 2019a) to promote positive cultures, build a

pipeline of compassionate and engaging leaders, and make the NHS an agile, inclusive, and modern employer to attract and retain its workforce.

We would like to thank all the NHS staff working in Airedale Hospital NHS Foundation Trust who generously gave their time – participating in interviews, workshops, *ad hoc* discussions and providing ready access for observations and documentary analysis. In particular, we are grateful for insights from Jill Asbury, Brendan Brown, Louise Butterfield, Franco Guarasci, Joanne Harrison, Adrian Kennedy, Julia Nixon, Andrew Pickles, Catherine Redman, Yunus Seth, Dawn Shaw, Andrew Spink, Pauline Swales, and new cohorts of Band 5 nurses. We recognise on-going turbulent workforce and skill-mix challenges. These include significant policy reforms such as the *NHS Long Term Plan* (NHS England, 2019b), *Interim People Plan* (NHS England, 2019a), social care green paper, *Topol Review* (Health Education England, 2019), and implementation of Integrated Care Systems (ICS). Nevertheless, we hope this report provides a useful overview of strengths and areas to develop as well as a stimulus for on-going conversations, innovations and actions to support the AAU workforce in the context of the Trust's 2019/2020 People Plan and future strategic plan.

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1. Introduction

This section discusses approaches to workforce redesign and skill-mix in healthcare, noting the introduction of new roles. It provides a brief overview of the workforce in AAU at ANHSFT. AAU provides a consultant-led 24-hour service with full facilities for resuscitating patients, and cares for patients who have highly complex or acute conditions. The unit comprises 43 patient beds with typically 15-16 staff working in the unit on a shift, including registered and unregistered nurses, Nursing Associates, students, and doctors) which means there are usually 2.3 patients per staff and one registered nurse for six patients. In terms of the skill set, there are fewer mental health nurses available at night for rapid responses for patients with behaviour disorders. From winter 2020, there are plans to include 5.8 registered nurses and 5.8 health care support workers. The perfect shift establishment is impossible in AAU as the unit must allow for staff maternity leave, sick leave, training, and education.

In the six months from August 2019 until January 2020, A&E Attendances and Emergency Admissions in Airedale Hospital were highest in October 2019 (6,008) and lowest in December 2019 (4,057) (https://www.england.nhs.uk/statistics/wp-content/uploads/sites/2/2020/02/January-2020-by-provider-shf7g-v2.xls).

Motivations for this report include AAU's move to newly built £7m facilities in April 2018. The AAU includes fewer beds and services redesigned with co-location of the Emergency Department (ED) and Ambulatory Care Unit (ACU). Changes that affected the AAU workforce included new nursing leadership,

the introduction of general surgery for nurses, high turnover of newly qualified nurses, and nursing and medical staffing shortages. The creation of new roles of Advanced Nurse Practitioners (with advanced nursing skills and Master's degrees) and Nursing Associates (who fill skills gaps between unregulated health and care assistants and registered nurses), as well as the appointment of a new Chief Executive have also changed the workforce dynamics in AAU.

During this study, the Care Quality Commission (CQC, 2019) report on urgent care noted concerns about nursing and medical staffing levels in urgent care in ANHSFT. The 2019-2021 ANHSFT People Plan and NHS Long Term Plan (NHS England, 2019b) both promote an inclusive leadership which is important for this report.

1.1 Workforce redesign and skill-mix

The Nuffield Trust's report on reshaping the healthcare workforce (Imison et al., 2016) highlighted 10 lessons for workforce redesign. These included being realistic about the time and capacity needed to support change; creating a receptive culture for change; supporting transformation with a strong communication and change management strategy, and building roles on a detailed understanding of the work, staff skills and patient needs. The recommendations also stressed the importance of investing in teams; robust triage mechanisms; investing and developing in training capability; building sustainability for new and extended roles; evaluating change and adopting systematic approaches to workforce development and change. Workforce redesign also requires clarity in roles in relation to patient safety (Ross et al., 2018), regulating new roles such as physician associates (Maier et al., 2017) and including technology as a key enabler.

Skill-mix is about the right skills with issues of over-skilling and under-skilling; the right mix for chronic acute urgent care with ageing populations; and the right numbers in the supply of staff at the right time. Buchan et al. (2000: 3) define skill-mix as 'the most cost-effective combination of roles and staff to meet...needs ... exploring alternative staffing solutions ... redesigning of roles to fill the gap filled by a shortage in supply ... or...job substitution'. 'An effective remedy requires an accurate diagnosis so that the root problem is treated ... think beyond the obvious problems' (ibid: 4). Buchan et al. (2019) argue for more efficient balancing of skill-mix and an appreciation of the national labour market with improved workforce planning and policy functions. The Calderdale Framework provides a systematic approach to reviewing team and staff capabilities to streamline services for more patient-centred care (Smith and Duffy, 2010) with more efficient and effective use of resources (Nancarrow et al., 2012). Skill-mix is 'the mix of posts in the establishment; the mix of employees in a post; the combination of skills available at a specific time; ... combinations of activities that comprise each role, rather than the combination of different job titles' (Buchan et al., 2000: 3). Various methodologies adopted to determine the skill-mix include task analysis; activity analysis/sampling; daily diary/self-recording; case mix/patient reprofiling/re-engineering (zero-based); professional judgement; job analysis interviews/role reviews; and group discussion/brainstorming (ibid: 5).

Beech et al. (2019) state that there are no silver bullets for 'closing the gap' on workforce shortages. The approach needs consistent and concerted action across the system on the employer offer, and new staff pipeline including international recruitment and support for overseas nurses (Ohr et al., 2014). There is also a need to focus on education and training, retention and new job roles as well as pay and conditions for health and social care staff with continued Home Office salary exemptions for international nurses' visas (Collins, 2019) and removal of visa caps in the NHS (Collins, 2018) in the context of Brexit (Dolton et al., 2018).

1.2 New roles in the NHS

The healthcare workforce comprises three main categories: trained, licensed-to-practise graduate health professionals; health associate professionals who are often non-graduates; and care workers. Workforce shortages have resulted in the creation of new advanced non-medical practitioner roles and non-graduate, non-registered roles such as nursing associates. Changing models of care require greater multidisciplinary team (MDT) working, boundary spanning and new skills development, particularly in the use of technology.

The NHS five year forward view (NHS, 2014) supported the creation of a flexible workforce. Dall'Ora et al. (2018) have reviewed the new roles of Emergency Nurse Practitioner (ENP); Emergency Care Practitioner (ECP); Advanced Nurse Practitioner (ANP); Advanced Clinical Practitioner (ACP), and Physician Assistant (PA). The authors noted the trend of nurses taking on doctors' responsibilities and support workers integrated into nursing teams, arguing that these new roles are poorly designed, lack standardisation, and their role in urgent care is under-researched.

The first physician associates (PAs) in the UK graduated in January 2018. PAs have yet to be employed in AAU at Airedale Hospital. Halter et al. (2017) found that there is an appetite for employing PAs to fill medical staffing gaps. However, there are shortages of PAs and some clinicians are reluctant to include them in teams.

1.3 Overview of AAU's workforce

The health and care workforce in AAU works in light, airy modern facilities with enthusiastic and supportive colleagues and telemedicine provided by Airedale's Digital Care Hub for patients at home, in nursing homes and prisons. In moving to new facilities, the number of beds in the AAU was reduced to be more proportionate for the size of the hospital. 'Right care' values and behaviours of commitment to quality of care, compassion, working together for patients, improving lives, everyone counts, respect and dignity.

Workforce factors need to be mitigated that affect patient flow outside the control of the AAU, such as issues of being used as a point of last resort. This is because of the unavailability of urgent care walk-in centres for patients who do not require hospital treatment or admission, and (super)stranded patients and long lengths of stay (LOs) because of social care delays. There are also delays with patient

transport and hospital pharmacy medications for patients who are discharged. This evaluation of skill-mix in the AAU is based mainly on interviews, group discussions and observations. It explores the mix of employees based on qualitative data and publicly available quantitative data such as the monthly figures for registered nurses, nurse associates and care workers in the acute assessment unit staffing reports that indicate planned and actual hours (http://www.airedale-trust.nhs.uk/nursing-and-midwifery-staffing/acute-assessment-unit-staffing/), which rarely show sufficient RNs for day shifts.

Urgent nurses' skills now encompass medical and surgical patient care and surgeons see patients in the Emergency Department and Ambulatory Care. The creation of an AAU privacy, dignity and dementia champion position has enabled specialist day-time support, while the Frail Elderly Pathway Team is working with AAU to support reductions in falls. Despite 100% turnover of newly qualified nurses prior to the move to the new facilities, there was 50% retention in 2019 and a new cohort began in October 2019. A nursing recruitment campaign took place in November 2019 in Kerala with currently employed nurses from Kerala recruiting new nurses from the region who are known for their strong work ethic. This builds on innovative nurse recruitment evenings which began in November 2017, where registered and student nurses can receive an immediate conditional employment offer. Moreover, the hospital offers a healthcare support worker apprenticeship scheme with Keighley College.

Additionally, the Advanced Nurse Practitioner role, which was piloted in September 2013 and recognised by the Yorkshire & the Humber Leadership Academy, is highly valued for providing cover on the junior doctors' rota and promoting good team communications for mutual support, skills development and being flexible about what patients want. Importantly, there is stable leadership team in the Clinical Lead Nurse position and an internal change in the Clinical Director (appointed at Airedale Hospital since August 2016), a year after the move with an interim matron (since December 2018 with 11 years' experience at Airedale), and a dedicated Clinical Educator for Urgent Care (appointed in December 2015). Since October 2019, registered and unregistered nursing associates have been included on rotas following the new two-year pilot apprenticeship programme launched in January 2017 to produce a new type of care worker to complement the work of registered nurses. Daily "Get Me Home" meetings have improved flow within the AAU.

The 2019 CQC report for urgent and emergency services at Airedale NHSFT stated that leaders were approachable, supportive and promoted a positive culture. It noted that staff had a comprehensive induction, regular appraisals and were supported to develop their knowledge and skills. The report also stated: there were good examples of teamwork within the department, and with the wider multidisciplinary team; staff and patient engagement was encouraged and valued; there were improvements in staff training management and compliance; learning from incidents was shared with staff; and all staff were found to be caring and responsive to patients' needs. Areas requiring improvement included nurse staffing levels and consultant cover; the assessment of patients with mental health needs; consistently failing to meet the four-hour emergency care standard, although this was better than the England average.

2. Local context

The 2019 Care Quality Commission report noted that from June 2017 to May 2018 there were 58,700 attendances at the Trust's urgent and emergency care services: 13,224 resulted in admission to hospital. The percentage of A&E attendances at this Trust that resulted in admission decreased in 2017/18 compared to 2016/17. In both years, the proportions were higher than the England averages.

Airedale's AAU has a multi-professional workforce where a stable leadership team facilitates collaborations and trust across professions in a friendly small hospital environment. While there has been a shift from staff-mix to skill-mix (Dubois and Singh, 2009), new advanced practitioner roles such as ACPs and non-registered health care workers such as nursing associates on degree apprenticeships have provided greater flexibility on rotas. Additionally, at Airedale, frail elderly pathways, non-clinical roles in patient flow co-ordination and dementia care support the aspiration for staff to work at the top of their licence (Buck et al., 2018) in treating the most seriously ill patients. Nationally, the implementation of nurse degree apprenticeships has been delayed because of problems with funding back fill for supernumerary time in placements, which is required by the NCM to be higher than the 20% allocation in the levy scheme (Parliament UK, 2019). Following the 2019 CQC report on urgent care in ANHSFT, there is scope to extend this innovation in roles and focus on key metrics such as reducing patient falls and long stays to expertise in understanding patients' mental health.

Figure 1 indicates the nursing and health care support workforce in Airedale AAU, ED and the ACU.

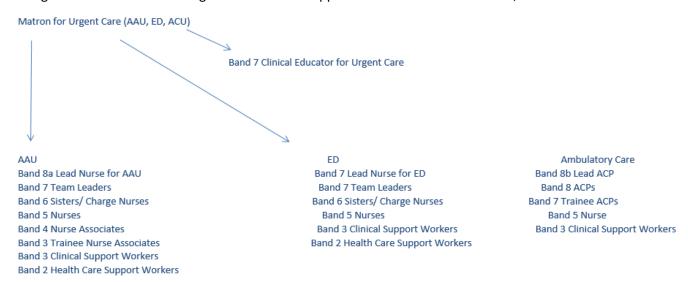


Figure 1. Staff structure in AAU, ED and ACU in Airedale NHSFT

Figure 2 illustrates the physical layout of AAU and workforce uniform differences.

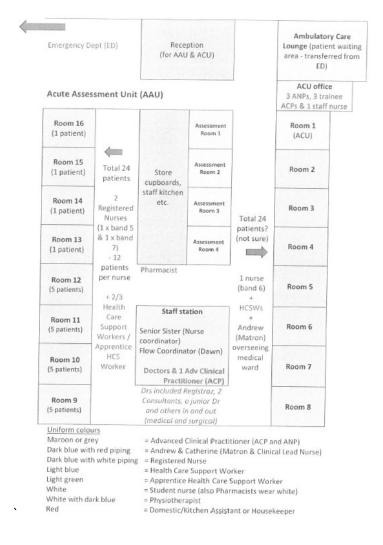


Figure 2. Layout of AAU, staffing and uniform colour scheme

3. Policy context

By 2030, there is estimated to be a global shortage of 3.2 million nurses and 1.2 million physicians (Tomblin-Murphy et al., 2016). The *Global Strategy on Human Resources for Health: Workforce 2030* (WHO, 2016) highlights the importance of and need for inter-sectoral linkages and analysis of effective investment (between the education, health, labour and finance sectors) and wider stakeholder engagement. The 2016 WHO report *Global strategy on human resources for health: workforce 2030* calls for more medical and nursing student training places, a greater reliance on domestic healthcare workers, greater use of technology especially in rural areas, a better match and more efficient use of skills, with appropriate designed curriculum and CPD.

The Securing the future workforce for emergency departments in England (NHS Improvement, 2017) report predicted that emergency medicine would be the fastest growing specialty with significant growth in physician associates (PAs). It advocated alternative routes to becoming an emergency medicine consultant and better support for emergency medicine consultants at different career stages. The report recommended growing a multi-professional emergency care workforce and reducing attrition in medical training. It aimed to ensure emergency departments are attractive places to work

despite the intense and pressurised nature of the specialty, improving retention, and the development of clinical educator strategies.

Crouch and Brown (2018) argue that future models of emergency medicine should be focused around patients' needs rather than mainly around professional roles. In terms of advanced practice, they suggest this needs local and Royal College accreditation of competences against clear standards and portability of experience. In future, with the roll out of urgent and emergency care vanguards (https://www.england.nhs.uk/new-care-models/about/uec/) and integrated care systems https://www.england.nhs.uk/integratedcare/integrated-care-systems/, there are real challenges ahead in an ecosystem that focuses on out-of-hospital urgent care with health care workers collaborating in multi partnerships.

The policy backdrop of wide-ranging policy reforms such as the *NHS Long Term Plan* (NHS England, 2019b) *Interim People Plan* (NHS England, 2019a), social care green paper, *Topol Review* (Health Education England, 2019), and implementation of Integrated Care Systems are clearly impacting on workforce development and skill-mix throughout the NHS.

Insights may be gained from vanguard urgent and emergency care initiatives (Marjanovic et al., 2018). Here there has been emphasis on breaking down boundaries between physical and mental health to improve access to UEC for people of all ages; developing more integrated care for effective treatment; providing out-of- hospital care where appropriate; prevention and self-care; and changing the way organisations work together using appropriate technology, data-driven decisions and social determinants. Such initiatives advocate 'left shift' which is essentially about moving clinically appropriate care and treatment for patients from hospitals into the community. The intention is that this will lead to better health and wellbeing, better quality of care as well as sustainable and efficient services. A key element of left shift work is to enable patients and the public to self-care. It is predicated on having strong primary and community care services in place.

4. Research design

4.1 Methodology

Various methods have been applied to studies of acute medical unit workforces. For example, video-reflexive ethnography (VRE) is being used by Suzanne Grant at the University of Dundee to stimulate discussions about the tacit and hidden aspects of inter-professional safety work in multidisciplinary teams (MDTs) working on multiple shifts on the same AMU (acute medical unit). Sankey diagram heat maps are used in Huddersfield Royal Infirmary to visualise temporal flows in urgent care in hubs in the UK to facilitate discussions with healthcare workers in the CLEAR (clinically-led workforce and activity redesign) project. This reduces the over-investigation of minors patients and has resulted in triage in ambulances with communications between medical and ambulance staff, the creation of enhanced elderly frailty units, and discussions about how Band 2s and 3s operate. John Jeans, Director of 33N, is working nationally on related projects using Sankey flow diagrams.

This report on Airedale Hospital's AAU is based on a rich focused ethnographic study involved mixed-method evaluation and combined qualitative and quantitative data collection and analysis. The approach was based around a theory of change at the Acute Assessment Unit (AAU) of Airedale General Hospital level with data collection and analysis aligned to those outputs, outcomes and impact that could be reasonably measured in the time available, i.e. 14 months.

This research design is particularly useful when a distinct problem in a specific context is evaluated (Knoblauch, 2005). It represents a pragmatic and efficient way to capture specific perspectives and to focus on common behaviours and shared experiences (Cruz and Higginbottom, 2013), especially in in practice-based disciplines such as nursing.

The team of three researchers and two research assistants immersed in the research environment to obtain a richer representation and understanding of the context and to uncover the complexities of interest. A combination of different data sources was used to meet the aims of the research:

- Observations
- Unstructured interviews
- Semi-structured single and dyadic interviews
- Focus groups
- Document analysis
- Interactive sessions
- Questionnaires

4.2 Research sample

Sample inclusion criteria consisted of clinical practitioners from urgent care. This included Healthcare Support Workers (HCSWs), Nursing Associates (NAs), Registered Nurses (RNs), Sisters, Senior Sisters, Advanced Clinical Practitioners (ACPs), nurse managers, consultants, clinical educators and clinical directors. A sample of 30 respondents at all levels was regularly approached by the team of researchers. The interactions took place face-to-face, by phone, Skype, email and via online platforms such as What's App over the period of 14 months.

4.3 Research methods

As an effective tool for understanding process, overt observation was conducted to build understanding of the setting. Monthly field visits over the period of 14 months between October 2018 and December 2019 took place on different week days and lasted from three to eight hours in length. Routine activities were observed, individuals were shadowed, and institutional meetings and external conferences were attended. These activities focused on gaining a greater understanding of both the processes being observed, the different roles being performed, and staff views on their likes and dislikes with suggestions on perceived improvements that could be made. Throughout this project, we encouraged

multiple observation viewpoints by the consistent use of two- or three-person field visit teams. The research teams frequently split up at an observation site in order to get a broader perspective.

The observational data complemented data gathered from unstructured interviews which were conducted on a regular basis with the AAU staff on shifts at the times of observations. These included two Band 2 Healthcare Support Workers (HCSWs), Band 3 Senior Healthcare Support Workers & Clinical Assistants, Band 4 Nursing Associates, Band 5-7 Registered Nurses (Staff Nurses, Sisters, Senior Sisters), and Band 8a Advanced Clinical Practitioners (ACPs/Advanced Nurse Practitioners).

Following observations and unstructured interviews that enhanced the research team's knowledge about the processes being undertaken in urgent care, single and dyadic interviews were utilised to gain explanations from individuals of their understandings of those processes. Interviews with staff in training or management-related roles focused on the drivers for change, the actions taken or planned, and the challenges being encountered in the department. Their responses provided insights that shaped subsequent interviews, for example with recently qualified nurses. In the case of newly qualified nurses, the topic of the interview questions followed the model of new graduate nurse transition (adapted from Lashinger et al. (2016) and Scott et al. (2008)) by focusing on the individual-and organisational-level factors associated with their role and organisational socialisation, to determine their job satisfaction and/or intention to stay.

Three focus groups with student nurses at different points of time facilitated exploration of their common experience of a final placement in urgent care and the decision-making process they underwent to choose this area of work for their first role as registered nurses. The group dynamics led to reflection, frank expression of personal struggles and differences of opinion, which in turn, provided rich data. Table 1 lists the semi-structure interview questions discussed with NQNs.

Table 1. Semi-structured interview questions with newly qualified nurses

- 1. What factors did you take into consideration when choosing to work in urgent care (AAU/ED)?
- 2. Did your expectations of working on the unit match reality?
- 3. What are your expectations of working in urgent care?
- 4. What has your experience of the preceptorship been like?
- 5. How do you find the skills mix on the ward?
- 6. What does a perfect shift look like for you?
- 7. Are there things about your job that you would change if you could?
- 8. What is your vision of the ward of the future?
- 9. How long do you envisage working in urgent care?

The research team sought novel and interesting ways to engage research participants in meaningful discussions. To understand the every-day struggles of newly qualified nurses, we invited the research participants to join an online discussion group. The research team further used an activity-based approach to elicit important information, i.e. informants created a graphical representation of their reactions to specific experiences while at work. This practice engaged informants in a meaningful

discussion on the topics of importance. Finally, participant-led diagramming and the Pictor Technique (Bravington and King, 2018) were used to represent professional and social networks of research participants, mapping episodes of collaborative working and/or social support to understand the complexity of relationships at the AAU environment.

To explore nurses' views and experience regarding different components of their working lives they were asked to complete adapted versions of the Work Design Questionnaire (WDQ) (Morgeson and Humphrey, 2006) and the Expanded Nursing Stress Scale (French et al., 2000) to measure their perceptions on the sources and frequency of stress.

Analysis of secondary evidence, such as the department's core training programme for registered nurses, aided understanding of the processes described in interviews. The Trust's Annual Report, Strategic Plan, People Plan, Operations Plan and 2019 CQC report as well as a number of recent NHS plans and reports, provided essential background information.

One of the tasks associated with the evaluation exercise was to develop a theory of change for the Acute Assessment Unit (AAU) at Airedale General Hospital. This is a commonly used tool in evaluation. It comprises a number of key components that together describe the changes a programme intends to achieve, the target population, the inputs, processes and outputs. The data collection techniques described above aided the development of the theory shown in Figure 3.

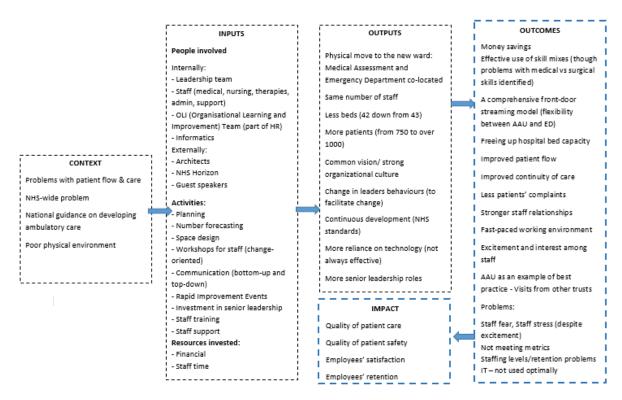


Figure 3. Transformation model in AAU

4.4 Data analysis

For most of the project, a three-person focused ethnographic team was involved in the process of data analysis. This proceeded in parallel with the data collection. The data have been thematically analysed

using a specific template analysis approach to identify, analyse, and report patterns within data. This form of analysis balances the flexibility to adapt it to the needs of a particular study with a relatively high degree of structure in the process of analysing textual data. The basic element of the technique is a coding template, developed on the basis of a subset of data, which is subsequently applied to further data, and revised and refined in the light of careful consideration of each transcript. A final version of the template agreed by all research team members served as the basis for the interpretation and illumination of the data set and for writing up findings.

4.5 Ethical considerations

The research gained University of Huddersfield and NHS ethical approval. Risks of harm to participants and the organisation were considered, such as inconvenience, intrusion into the work environment and loss of time. The research team minimised these risks by remaining sensitive to the work environment by either pre-arranging time to speak to staff or choosing quiet times to talk to individuals to reduce interrupting patient care. We took steps to maintain participants' anonymity and full informed consent was provided by all respondents.

5. Findings

Table 2 illustrates comments in AAU on the different aspects of skill-mix. Two recommendations arising from this feedback are to ask staff regularly to what extent they feel their skills are being used appropriately and to ensure NQNs are confident about delegating tasks to health care workers.

Table 2. Feedback on skills-mix in AAU – observations and interviews

Right skills	Unregistered healthcare workers felt their skills were underutilised. ACPs are
	valued on the junior doctors' rota. NQNs felt that had spent too much time at
	university writing essays rather than being familiar with practicalities such as
	equipment usage. One Clinical Educator for Urgent Care facilitates skills
	development. There is scope for more inter-professional training. Nurses spend
	time on typing up notes rather than digitally entering them in real time.
Right mix	RNs appreciated HCSWs at night and were anxious when patients died alone.
	Nurses treating surgical as well as medical patients since the move to the new
	AAU. AAU staff have strong MDT skills with constructive relationships between the
	different professions in a small, friendly hospital environment.
Right numbers	Medical and RN shortage of cover enhanced by non-registered staff. Bank and
	agency staff.
Right time	Consultants starting at 6am and more being available 6-9pm as well as continuity
	(not taking days in clinics) were seen as desirable.

Physician Associates and Advanced Nurse Practitioners deliver patient-focused care and services traditionally undertaken by doctors. While nursing associates undertake activities such as taking and recording patients' vital signs that were traditionally completed by registered nurses. This changing skill mix means that it is a challenge to ensure the right team with the right skills for patients' needs. Peers need to understand these advanced practitioner roles which include educating doctors and carrying out

research. This requires investment in the leadership of ACPs and PAs. It is recommended that a pilot study is initiated in Airedale's AAU of Physician Associates with reassurance that they are more than just substitutes for the junior doctor pipeline. Burnett et al. (2019) recommend sourcing PAs locally and supporting them post qualification with preceptorships and career pathways in primary and secondary care, clinical leadership, management, medical education and research. As hybrid liminal professionals, ANPs and PAs need to feel that they are integrated and valued. It is likely that a critical mass of such roles and new regulatory frameworks will clarify ACPs' and PAs' contributions and career paths over time.

Additionally, the use of technology can deliver service improvements. Currently, catering staff in AAU use iPads while clinical staff are observed writing up notes by hand or typing them up. It would save considerable time if they were able to input digital records directly. There were delays with NQNs being issued passwords and access to COWs (computers on wheels) on the ward, which means crowded working in the main station of computers, where conversations can be overheard by patients in nearby wards.

Appendix 1 illustrates monthly graphs for average fill rate percentages for registered nursing and care staff per shift from June until November 2019. Appendix 2 shows that the two lowest consecutive shifts of registered nurses (66.7%) were 18 and 19 November 2019 night and 19 and 20 January 2019 night. For care staff, the lowest percentage (41.6%) was on 12 November 2018 during the day. The highest percentage of RNs (147.1%) was on the night of 18 June 2019. The highest percentage of care staff (180%) was the night of 11 July 2019. Table 3 summarises these data.

Table 3. Average fill rates in AAU

Staff	Day	%	Shift
Highest RNs	26/11/2019	115	night
Lowest RNs	07/11/2019	66.7	night
Highest Care Staff	12 + 15/11/19	150	night
Lowest Care Staff	31/12/2019	66	night

The monthly publicly available data on nursing staffing on AAU in Airedale Trust (http://www.airedale-trust.nhs.uk/nursing-and-midwifery-staffing/acute-assessment-unit-staffing/) reveal that for registered nurses, March 2018 and November 2019 had the lowest number of days (two) with at least 100% shifts while December 2018 had the highest number (18) of at least 100% shifts. For care workers, September 2018 had the lowest number of nights (9) with less than 100% shifts and January 2019 was the highest (23) of 100% and over.

Table 4 illustrates qualitative responses voiced during this project highlighted by Lattimer (2019) in her Master's dissertation as part of this project.

Table 4. Insightful comments from AAU respondents

<u>Personal</u>: 'I worked as a senior health care worker in ED which prepared me well for the fast pace and acutely ill patients.' 'I live five minutes' drive from here so it's convenient.' 'I'm a bit soft and do extra stuff for people. I've had lots of 'thank you' cards from patients saying I'm doing the right thing.'

<u>Organisational</u>: 'this new unit is very spacious and airy, one of the attractions.' 'I'm going to gain a lot of skills quickly from the new graduate support programme then I can move on to a more specialist ward.'

<u>Mentoring and support</u>: 'You've got to nurture newly qualified nurses, make them feel safe, not just throw them in and hope for the best because they will leave.' 'I've had a few end-of-life patients and it was very emotional for me getting to grips with that, I was very upset at times. But my colleagues were very supportive.'

<u>Moral distress</u>: 'one of my patients died alone and I wanted to spend time with them but it was impossible.'

<u>Workload/job demands</u>: 'I've just come off four nights last week where we didn't have 'the purple uniform person' - a purple person is a Band 3 Senior Healthcare and they do the cannulation, bloods, catheterisation, ECGs, stuff like that, and they are such a massive help.'

<u>Culture</u>: 'I feel like when you walk in, people are friendly, it doesn't feel like other hospitals I've been in.'

Work schedule flexibility: 'I work set days, long days, to accommodate my child's school.'

<u>Autonomy</u>: 'We keep nurses off official shifts as supernumerary for a few weeks until we feel they are ready to be on the rota. If they feel overwhelmed, we take them off night shifts.'

<u>Patient acuity</u>: 'When patients are really sick and you don't have time for them, it can be very upsetting.'

Nurse-patient ratio: 'At night it can be very scary with so few nurses.'

<u>Clinical and social support</u>: 'I was just like, wow, a doctor has actually chatted to me and he wants to teach me. Whereas, in big hospitals you don't get that.'

<u>Task and skill variety</u>: 'There are elements of it [technology] that I like and there are elements that I don't.... that's another thing that would save us massive amounts of time if we weren't sat down writing over and over the same thing.'

<u>Intention to stay/leave</u>: 'I don't think I could imagine myself on one of the base wards at the minute because I hear they're a lot quieter.' 'I know they're trying to resolve it but as a newly-qualified nurse, having 13 patients was totally overwhelming.' 'One of the nurses became an estate agent and it was a real loss when she left.' 'When I spot someone with talent who wants to be an advanced clinical practitioner I strongly encourage them, they're as good as junior doctors here.'

Figure 4 presents a model developed by Lattimer (2019) which highlights responses in AAU for NQNs staying or leaving.

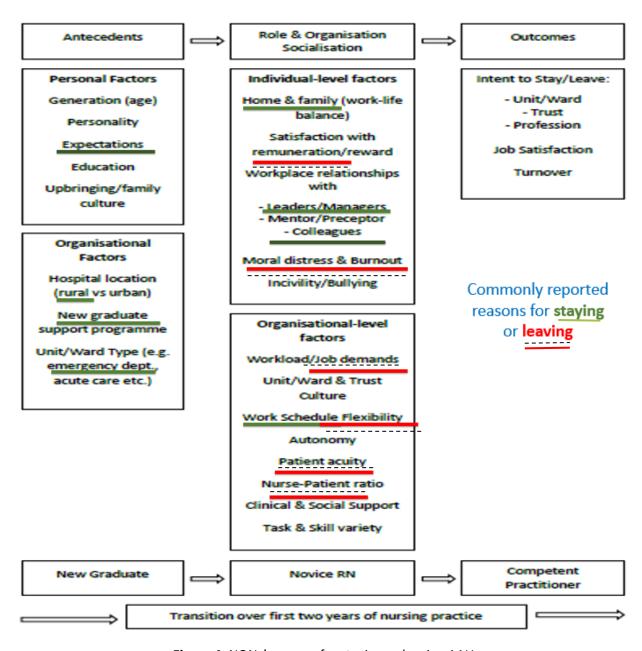


Figure 4. NQNs' reasons for staying or leaving AAU

6. Recommendations

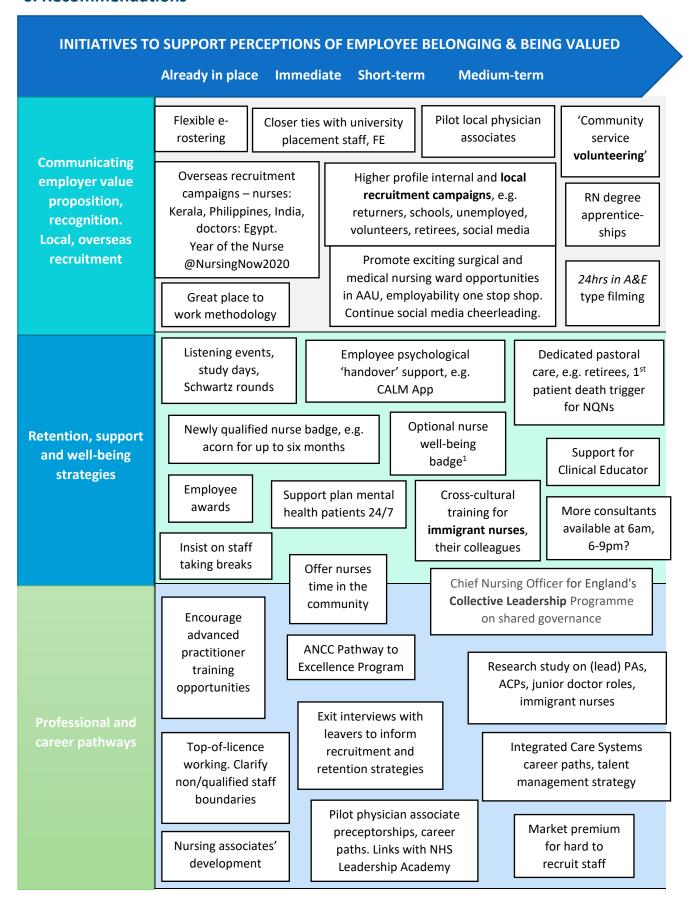


Figure 5. Indicative timeline of recommendations

¹ https://www.nursingtimes.net/news/mental-health/new-badge-launched-to-spark-conversations-for-nurse-wellbeing-20-11-2019/

Key recommendations in Figure 5 with indicative time lines include support for immigrant nurses. Dicicco-Bloom (2004) found that immigrant nurses from Kerala experience intercultural challenges, racism, sexism, and marginalisation that limit their full potential despite the material benefits of working in the West. The implications for AAU are that the voices of overseas immigrant nurses need to be encouraged and heard to support psychological safety. Additionally, cross-cultural sensitivities need to be developed amongst the immigrant nurses' colleagues to enhance confidence. ANHSFT must mitigate any factors that result in an induction crisis. There are very real differences in how families are expected to care for patients in Indian hospitals with different types of government reforms, performance indicators, and levels of power and stress. The latter can be measured by questionnaires such as the Expanded Nursing Stress Scale (ENSS) (French et al., 2000) and Bianchi Stress Scale (BSS) (Bianchi, 2009).

The recommendations in this report also incorporate the ANCC Pathway to Excellence® Program which is an accreditation designed to improve nurse satisfaction; retain the best staff and nursing leaders; cultivate inter-professional teamwork and champion high-quality nursing practice. Northampton General Hospital has achieved ANCC accreditation. In addition to Pathway to Excellence, the Director of Nursing at ANHSFT has also embarked on the Chief Nursing Officer for England's Collective Leadership Programme (https://www.england.nhs.uk/nursingmidwifery/shared-governance-and-collective-leadership/) on shared governance for local unit decision making.

The NHS Improvement 'improving staff retention' website includes useful mini-case studies. ANHSFT AAU can enhance its visibility by show casing improvements on this site and learn from others. Initiatives such as Norfolk and Norwich University Hospitals NHS Foundation Trust housing England's first A&E for older people is an interesting model. The eight-week Programme for Acute-Medicine Development Accreditation (PANDA) for junior NQNs in Birmingham (Lees-Deutsch et al., 2019) is also an interesting case study. Other approaches for nursing recruitment might consider hiring more health care workers with disabilities (Bain and Licence, 2015).

Several of the recommendations are relatively easy to implement such as acorn badges for novice nurses. Others recognise wicked problems (Rittel and Webber, 1973) that lack quick fixes. The challenges of urgent care provision can never be resolved definitively but collaborative approaches to such wicked problems can help (Roberts, 2000). Indeed, there are no adequate solutions for the shortage of nurses within current and predicted labour markets (Heinen et al., 2013) and there are a multitude of inter-related factors that influence voluntary nurse turnover (Hayes et al., 2012).

7. Conclusion

The key findings of this evaluation of workforce (re)design and skill-mix in Airedale NHSFT's acute assessment unit indicate a small friendly rural hospital advantage. We highlight scope to leverage the hospital's contributions to the local community as an anchor institution. In doing so, we recommend more proactive and visible communications to promote the institution's employer value proposition

externally. We also support the introduction of cross-cultural awareness workshops to support the integration of immigrant nurses and non-traditional entrants as part of the collective leadership programme. There is also considerable scope to develop local youth volunteering. Studies have shown the benefits of youth volunteering in hospitals (Reed, 2010), including intergenerational programmes (Santini et al., 2018) that improve patients' well-being (e.g. Jacob et al., 2020). In the UK, the social experiment of the Great NHS Experiment in Royal Derby Hospital produced by Blast! Films for the BBC provided interesting insights into youth hospital volunteering. Nicholson (2019) noted that while there were heart warming scenes in the BBC hospital scenes, she was concerned about the ethics of using unpaid labour and burdens on overstretched hospital staff to accommodate volunteers.

Airedale NHSFT can provide employability and talent management strategies in offering a one-stop shop for skills and careers development. At the higher levels of skills, ACPs and PAs represent a cadre of hybrid professionals with strong leadership skills. ANPs represent role models for mainstream nurses to aspire to top banded positions.

AAU's workforce needs to adapt continuously to new demands driven by workforce and patients' demographic changes, CQC reports, shifting burdens of disease, opportunities driven by changing technology and health and social care reforms. There is scope to learn from urgent care initiatives in other parts of the country (e.g. Marjanovic, et al., 2018). Clearly, there are changing policy contexts with suggestions raised that the four-hour minimum A&E patient waiting target may be scrapped (Triggle, 2019).

In Airedale's AAU, the (national and) local norm of RN and medical understaffing on some shifts is being compensated for by ACPs, Nursing Associates, and HCSWs. The recruitment of immigrant nurses and doctors and better retention of NQNs are also supporting workforce initiatives. We suggest that the existing workforce model is attractive for a mainly local workforce as this rural district general hospital acts as an anchor institution. Airedale offers a beautiful countryside location where there is a good standard and cost of living, and professional autonomy in a small friendly and supportive environment. Additionally, ANHSFT's telemedicine hub is another important asset. The restoration of bursaries for nursing degrees from September 2020 is a positive development in addition to the registered nurse degree apprenticeship levy for healthcare support workers.

This study was mainly explorative. It has not included implementation of any interventions arising from the project during the fieldwork. There is scope, however, for further research to evaluate the role of ANPs (building on McMurray, 2011) and interactions between junior doctors, ACPs, and PAs as recommended by Sujan et al. (2017). Observational studies could identify how actual skills are being used during shifts by multi-professional teams. Additional research might explore the integration of local volunteers and immigrant staff.

Buchan et al. (2017) argue that there is significant scope to attract younger entrants and relatively disadvantaged groups to the healthcare labour market through strategic and non-traditional career entry human resources for health (HRH) recruitment policies and practices. There may also be opportunities for overqualified and underutilised refugees living locally who have worked previously in healthcare and others who would be interested in healthcare training.

Porter-O'Grady (2019: 41) argues that 'the work of nursing leadership will continue to "push the walls" of historic patterns of behaviour..., creating even more viable and appropriate structural and practice models ... for truly sustainable and value-based healthcare.' In moving to new facilities, AAU at Airedale has demonstrated innovative workforce developments with improvements in NQN induction and retention, the importance of a strong leadership team with inclusive and collective leadership, and the integration of new hybrid ANP roles with nurses taking on surgical as well as medical tasks. Clearly, AAU's clinical workforce is adapting to rapid improvements and new configurations in the context of changing patient needs with greater dementia and mental health requirements as well as multiple comorbidities. Airedale Hospital's engagement with the CNO's (Chief Nursing Officer) Shared Governance Collective Leadership programme is a recent example of ANHSFT as a dynamic workplace. The AAU workforce will continue to move beyond traditional professional boundaries (Moreira and Lafortune, 2017) as new post-NPM (New Public Management) models of integrated health and social care emerge.

References

- Adriaenssens, J., De Gucht, V. and Maes, S. (2015) Determinants and prevalence of burnout in emergency nurses: A systematic review of 25 years of research. *International Journal of Nursing Studies*, 52(2), 649–661.
- Airedale Trust NHS UK. (2018) *Annual Report*. [online] Available at: http://www.airedale-trust.nhs.uk/AnnualReport18-19.pdf [Accessed 18 February 2020].
- ANHSFT (2019) *People Plan*. In Airedale NHSFT Operational Plan for 2019/2020. [online] Available at: http://www.airedale-trust.nhs.uk/wp/wp-content/uploads/2019/05/AnnualPlan2019March2019v2.0Governors.pdf [Accessed 18th February 2020].
- Bain, M. and Licence, K. (2015) The NHS must employ more people with disabilities. *Health Service Journal*, September 28.
- Ball, J.E., Murrells, T., Rafferty, A.M., Morrow, E. and Griffiths, P. (2014) 'Care left undone' during nursing shifts: associations with workload and perceived quality of care. *BMJ Quality Safety*, 23(2), 116–125.
- Beech, J., Bottery, S., Charlesworth, A., Evans, H., Gershlick, B., Hemmings, N., Imison, C., Kahtan, P., McKenna, H., Murray, R. and Palmer, B. (2019) *Closing the gap: key areas for action on the health and care workforce.* London: The Health Foundation, The King's Fund, The Nuffield Trust. Bianchi, E.R.F. (2009) Bianchi stress questionnaire. *Reflections*, 4, 6–14.
- Bravington, A. and King, N. (2018) Putting graphic elicitation into practice: tools and typologies for the use of participant-led diagrams in qualitative research interviews. *Qualitative Research*, https://doi.org/10.1177/1468794118781718

- Britnell, M. (2019) *Human: Solving the global workforce crisis in healthcare*. Oxford: Oxford University Press.
- Buchan J., Dhillon, I.S. and Campbell, J. (eds.) (2017) *Health employment and economic growth: an evidence base*. Geneva: World Health Organization.
- Buchan, J., Ball, J. and O'May, F. (2000) Determining skill mix in the health workforce: Guidelines for managers and health professionals. In WHO. *Issues in Health Services Delivery Discussion Paper*. Geneva: World Health Organization.
- Buchan, J., Charlesworth, A., Gershlick, B. and Seccombe, I. (2019) *A critical moment: NHS staffing, trends, retention and attrition*. London: Health Foundation.
- Buck, J., Loversidge, J., Chipps, E., Gallagher-Ford, L., Genter, L. and Yen, P. Y. (2018) Top-of-license nursing practice: describing common nursing activities and nurses' experiences that hinder top-of-license practice, part 1. *JONA: The Journal of Nursing Administration*, 48(5), 266–271.
- Burnett, K., Armer, N., Mcgregor, J., Farrell, M., Baines, J. and Baker, P. (2019) Workforce: The career aspirations and expectations of student physician associates in the UK. *Future Healthcare Journal*, 6(1), 36–40.
- Collins, A. (2019) Home Office extends salary exemption for international nurses. *Health Service Journal*, March 8.
- Collins, A. (2018) Updated: Government to scrap visa cap for non-EU doctors. HSJ, 14 June.
- CQC (2019) Airedale NHS Foundation Trust inspection report. London: Care Quality Commission. [online] Available at: https://www.cqc.org.uk/location/RCF22 [Accessed 18 February 2020].
- Crouch, R. and Brown, R. (2018) Advanced clinical practitioners in emergency care: past, present and future. *British Journal of Hospital Medicine*, 79(9), 511–515.
- Cruz E.V. and Higginbottom, G. (2013) The use of focused ethnography in nursing research. *Nurse Researcher*, 20(4), 36–43.
- Dall'Ora C., Pope, C., Crouch, R., Griffiths. P. and Sujan, M-A. (2018) Skill mix changes and new roles in emergency and urgent care. *Nursing Times* [online]; 114(1), 26–27.
- Davies, J., Szulc, J. and Lattimer, J. (2019) Workforce and skill-mix changes in a rural hospital acute assessment unit. Leeds: West Yorkshire & Harrogate Local Workforce Action Board (WY&H LWAB) Learning Conference, October 7.
- de Zulueta, P.C. (2016) Developing compassionate leadership in health care: an integrative review. *Journal of Healthcare Leadership*, 8, 1.
- Denis, J.L., Lamothe, L. and Langley, A. (2001) The dynamics of collective leadership and strategic change in pluralistic organizations. *Academy of Management Journal*, 44(4), 809–837.
- Dicicco-Bloom, B. (2004) The racial and gendered experiences of immigrant nurses from Kerala, India. *Journal of Transcultural Nursing*, 15, 26–33.
- Dolton, P., Nguyen, D., Castellanos, M. and Rolfe, H. (2018) *Brexit and the health and social care workforce in the UK*. London: National Institute of Economic and Social Research.
- Dubois, C.A. and Singh, D. (2009) From staff-mix to skill-mix and beyond: towards a systemic approach to health workforce management. *Human Resources for Health*, 7(1), 87.
- French, S.E., Lenton, R., Walters., V. and Eyles, J. (2000) An empirical evaluation of an expanded nursing stress scale. *Journal of Nursing Measurement*, 8(2), 161–178.
- Halter, M., Wheeler, C., Drennan, V.M., de Lusignan, S., Grant, R., Gabe, J., Gage, H., Ennis, J. and Parle, J. (2017) Physician associates in England's hospitals: a survey of medical directors exploring current usage and factors affecting recruitment. *Clinical Medicine*, 17(2), 126–131.
- Hayes, L.J., O'Brien-Pallas, L., Duffield, C., Shamian, J., Buchan, J., Hughes, F., Laschinger, H.K.S. and North, N. (2012) Nurse turnover: a literature review—an update. *International Journal of Nursing Studies*, 49(7), 887–905.

- Health Education England (2019) *Topol Review*. [online] Available at: https://www.hee.nhs.uk/ourwork/topol-review [Accessed 20th February 2020]
- Heinen, M.M., van Achterberg, T., Schwendimann, R., Zander, B., Matthews, A., Kózka, M., Ensio, A., Sjetne, I.S., Casbas, T.M., Ball, J. and Schoonhoven, L. (2013) Nurses' intention to leave their profession: a cross sectional observational study in 10 European countries. *International Journal of Nursing Studies*, 50(2), 174–184.
- Hogan, K.A., Fothergill-Bourbonnais, F., Brajtman, S., Phillips, S. and Wilson, K.G. (2016) When someone dies in the emergency department: perspectives of emergency nurses. *Journal of Emergency Nursing*, 42(3), 207–212.
- Imison, C., Castle-Clarke, S. and Watson, R. (2016) *Reshaping the workforce to deliver the care patients need*. London: Nuffield Trust.
- Jacob, C., Roff, K., Fleet, J., Jones, J., Wood, C.A., Jensen, H., Allen, S., Bryan, A., Romero, D., Ray, L. and Meldrum, T. (2020) Can volunteers improve the well-being, participation and activity of patients on an acute older-persons' unit in hospital? *Age and Ageing*, 49(Supplement 1), i14–i1.
- Kehoe, A., McLachlan, J., Metcalf, J., Forrest, S., Carter, M. and Illing, J. (2016) Supporting international medical graduates' transition to their host-country: realist synthesis. *Medical Education*, 50(10), 1015–1032.
- King's Fund. (2019) Closing the gap. London: King's Fund.
- Knoblauch, H., (2005) Focused ethnography. In *Forum qualitative sozialforschung/forum: Qualitative Social Research*, 6(3), Art. 44, http://nbn-resolving.de/urn:nbn:de:0114-fqs0503440.
- Laschinger, H.K.S., Cummings, G., Leiter, M., Wong, C., MacPhee, M., Ritchie, J., . . . Read, E. (2016) Starting out: A time-lagged study of new graduate nurses' transition to practice. *International Journal of Nursing Studies*, 57, 82–95.
- Lattimer, J. (2019) Will they stay in urgent care or will they go? A qualitative case study of how new graduate nurses successfully transition to their first role in a small rural hospital. MSc dissertation. Huddersfield: University of Huddersfield.
- Lees-Deutsch, L., Thompson-Kempson, J., and Coughlan, A. (2019). An education programme for junior nurses working in acute medicine. *Nursing Times*, 115(9), 48–50.
- Lencioni, P. (2006) The five dysfunctions of a team. Chichester: John Wiley & Sons.
- Maier, C.B. and Buchan, J. (2018) Integrating nurses in advanced roles in health systems to address the growing burden of chronic conditions. *Eurohealth*, 24(1), 24–27.
- Marjanovic, S., Garrod, B., Dubow, T., Pitchforth, E., Lichten, C.A., Elston, J., Harte, E., Sussex, J., Yang, M., Malik, F. and Lewis, R. (2018) Transforming urgent and emergency care and the vanguard initiative: learning from evaluation of the southern cluster. *Rand Health Quarterly*, 7(4), 1–269.
- Mason, S. and Snooks, H. (2010) Alternative services to deliver urgent care in the community. *Emergency Medicine Journal*, 27(3), 183-185.
- McMurray, R. (2011) The struggle to professionalize: An ethnographic account of the occupational position of Advanced Nurse Practitioners. *Human Relations*, 64(6), 801–822.
- Moreira, L. and Lafortune, G. (2017) 'Equipping health workers with the right skills, in the right mix and in the right numbers, in OECD countries.' In Buchan J., Dhillon, I.S. and Campbell, J. (eds.) (2017) *Health Employment and Economic Growth: An Evidence Base*. Geneva: World Health Organization, 307–341.
- Morgeson, F.P. and Humphrey, S.E. (2006) The Work Design Questionnaire (WDQ): developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91(6), 1321–1339.
- Nancarrow, S., Moran, A., Wiseman, L., Pighills, A.C. and Murphy, K. (2012) Assessing the implementation process and outcomes of newly introduced assistant roles: a qualitative study

- to examine the utility of the Calderdale Framework as an appraisal tool. *Journal of Multidisciplinary Healthcare*, 5, 307–317.
- NHS England (2014) NHS Five Year forward View. London: NHS England. [online] Available at: www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf [Accessed 3rd January 2020].
- NHS England (2019a) *Interim NHS people plan*. [online] Available at: https://www.longtermplan.nhs.uk/wp-content/uploads/2019/05/Interim-NHS-People-Plan June2019.pdf [Accessed 18th February 2020].
- NHS England (2019b) *The NHS long term plan.* [online] Available at: https://www.longtermplan.nhs.uk/wp-content/uploads/2019/01/nhs-long-term-plan.pdf [Accessed 18th February 2020].
- NHS Improvement (2017) Securing the future workforce for emergency departments in England.

 London: NHS Improvement. [online] Available at:

 https://improvement.nhs.uk/documents/1826/Emergency_department_workforce_plan__111017_Final.3.pdf [Accessed 18 th February 2020].
- Nicholson, R. (2019) The Big Hospital Experiment review can a volunteer army save the NHS? *The Guardian*, September 4.
- Ohr, S.O., Jeong, S., Parker, V. and McMillan, M. (2014) Organizational support in the recruitment and transition of overseas-qualified nurses: lessons learnt from a study tour. *Nursing and Health Sciences*, 16(2), 255–261.
- Palmer, B., Appleby, J. and Spencer, J. (2019) *Rural health care: A rapid review of the impact of rurality on the costs of delivering health care*. London: Nuffield Trust.
- Parliament UK (2019). Nursing degree apprenticeships: in poor health?: government response to the committee's eighth report of session 2017–19. [online] Available at: https://publications.parliament.uk/pa/cm201719/cmselect/cmeduc/2007/200702.htm [Accessed 18th February 2020].
- Porter-O'Grady, T. (2019) Principles for sustaining shared/professional governance in nursing. *Nursing Management*, 50(1), 36–41.
- Randel, A. E., Galvin, B. M., Shore, L. M., Ehrhart, K. H., Chung, B. G., Dean, M. A. and Kedharnath, U. (2018) Inclusive leadership: realizing positive outcomes through belongingness and being valued for uniqueness. *Human Resource Management Review*, 28(2), 190–203.
- Read, R. (2010) Creating reflexive volunteers? Young people's participation in Czech hospital volunteer programmes. *Journal of Youth Studies*, 13(5), 549–563.
- Rittel, H.W. and Webber, M.M. (1973) Planning problems are wicked. Polity, 4(155), p.e169.
- Roberts, N. (2000) Wicked problems and network approaches to resolution. *International public Management Review*, 1(1), 1–19.
- Ross, S., Fenney, D., Ward, D. and Buck, D. (2018) The role of volunteers in the NHS: views from the front line. London: The King's Fund.
- Royal College of Emergency Medicine (2017) *Securing the future workforce for emergency departments in England*. [online] Available at:
- https://improvement.nhs.uk/documents/1826/Emergency_department_workforce_plan_-_111017_Final.3.pdf [Accessed 18 February 2020].
 - Santini, S., Tombolesi, V., Baschiera, B. and Lamura, G. (2018) Intergenerational programs involving adolescents, institutionalized elderly, and older volunteers: Results from a pilot research-action in Italy. *BioMed Research International*, 1–14.
- Scott, E.S., Keehner Engelke, M. and Swanson, M. (2008) New graduate nurse transitioning: Necessary or nice? *Applied Nursing Research*, 21(2), 75–83.
- Smith, R. and Duffy, J. (2010) Developing a competent and flexible workforce using the Calderdale Framework. *International Journal of Therapy and Rehabilitation*, 17(5), 254–262.

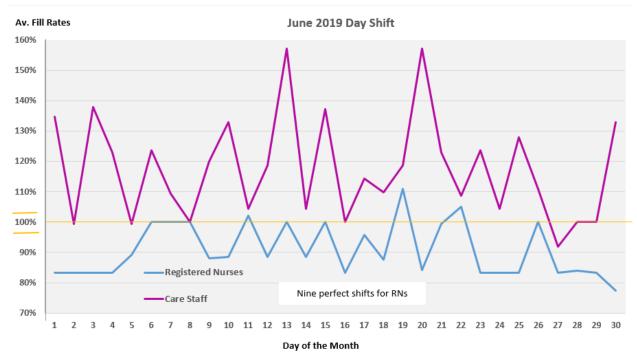
- Sujan, M., Howard-Franks, H., Swann, G., Soanes, K., Pope, C., Crouch, R., Staniszewska, S., Maxwell, E., Huang, H. and Cooke, M. (2017) Impact of advanced autonomous non-medical practitioners in emergency care: protocol for a scoping study. *BMJ Open*, 7(1), p.e014612.
- Triggle, N. (2019) NHS signals four-hour A&E target may end. BBC News, March 11.
- WHO (2016) *Global strategy on human resources for health: Workforce 2030*. Geneva: World Health Organization.

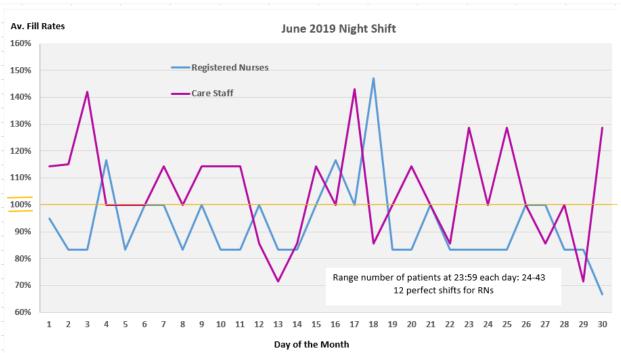
Bibliography

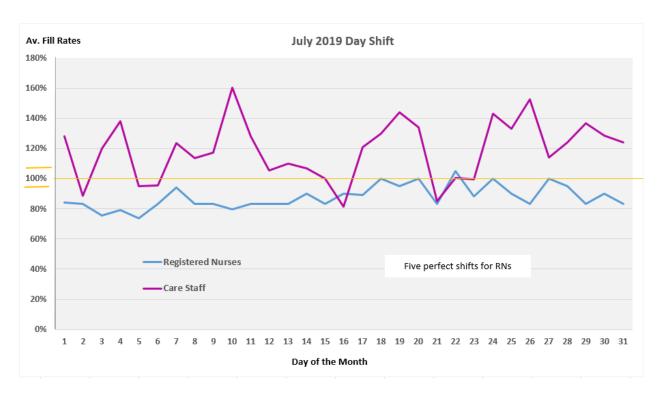
- Dall'Ora, C., Pope, C., Crouch, R., Sujan, M. and Griffiths, P. D. (2018) Skill mix changes and new roles in emergency and urgent care. *Nursing Times*, 114(1), 26–27.
- Doherty, C. (2009) A qualitative study of health service reform on nurses' working lives: learning from the UK National Health Service (NHS). *International Journal of Nursing Studies*, 46(8), 1134–1142.
- Donnelly, D.P. and Quirin, J.J. (2006) An extension of Lee and Mitchell's unfolding model of voluntary turnover. *Journal of Organizational Behavior*, 27(1), 59–77.
- Grant, A.M. and Parker, S.K. (2009) 7 redesigning work design theories: the rise of relational and proactive perspectives. *Academy of Management Annals*, 3(1), 317–375.
- Kulik, C.T., Treuren, G. and Bordia, P. (2012) Shocks and final straws: using exit-interview data to examine the unfolding model's decision paths. *Human Resource Management*, 51(1), 25–46.
- Laschinger, H.K.S., Cummings, G., Leiter, M., Wong, C., MacPhee, M., Ritchie, J., . . . Read, E. (2016) Starting out: a time-lagged study of new graduate nurses' transition to practice. *International Journal of Nursing Studies*, 57, 82–95.
- Lasserson, D.S., Harris, C., Elias, T.N.E., Bowen, J.S.T. and Clare, S. (2018) What is the evidence base for ambulatory care for acute medical illness? *Acute Medicine Journal*, 17(3), 148–153.
- Lee, T.W. and Maurer, S.D. (1997) The retention of knowledge workers with the unfolding model of voluntary turnover. *Human Resource Management Review*, 7, 247–275.
- Lee, T.W. and Mitchell, T.R. (1991) The unfolding aspects of organizational commitment and anticipated job satisfaction on voluntary employee turnover. *Motivation and Emotion*, 15(1), 99–121.
- Lee, T.W. and Mitchell, T.R. (1994) An alternative approach: the unfolding model of voluntary employee turnover. *Academy of Management Review*, 19, 51–89.
- Lee, T.W., Mitchell, T.R., Holtom, B., McDaniel, L. and Hill, J. (1999) The unfolding model of voluntary turnover: A replication and extension. *Academy of Management Journal*, 42, 450–462.
- Morrell, K. (2005) Towards a typology of nursing turnover: the role of shocks in nurses' decisions to leave. *Journal of Advanced Nursing*, 49(3), 315–322.
- NHS England and NHS Improvement. (2019) *Developing and supporting resilience in the new workforce*. [online] Available at: https://improvement.nhs.uk/documents/6040/W_Suffolk_developing_resilience.pdf [Accessed 29th February 2020]
- Vaughan, L., Edwards, N., Imison, C. and Collins, B. (2018) *Rethinking acute medical care in smaller hospitals*. London: Nuffield Trust.

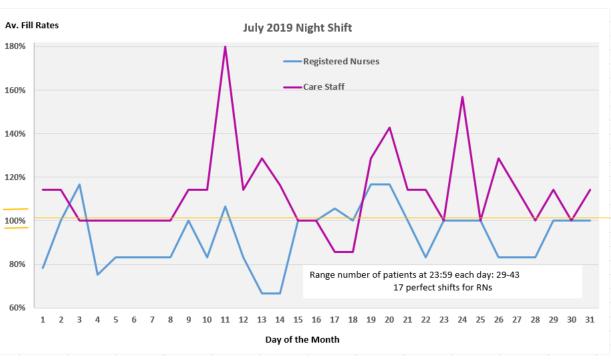
Appendix 1. AAU registered nursing and care staff June-November 2019

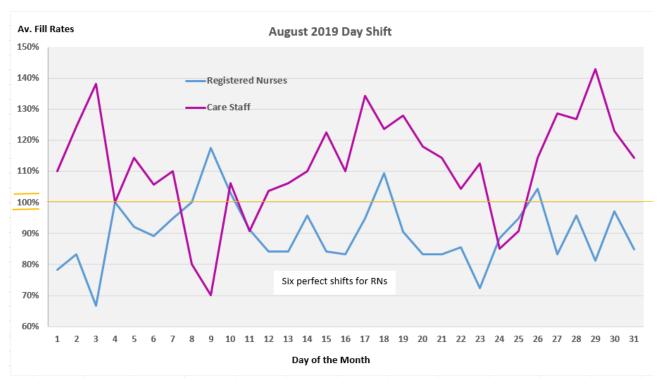
Trade offs are made. For example, when there are fewer registered nurses more regular health care workers rather than agency RNs may be employed.

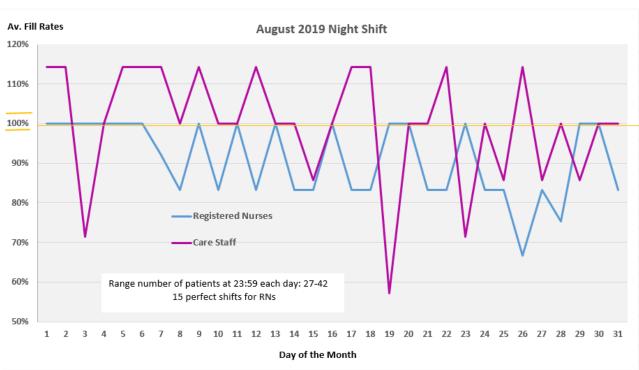


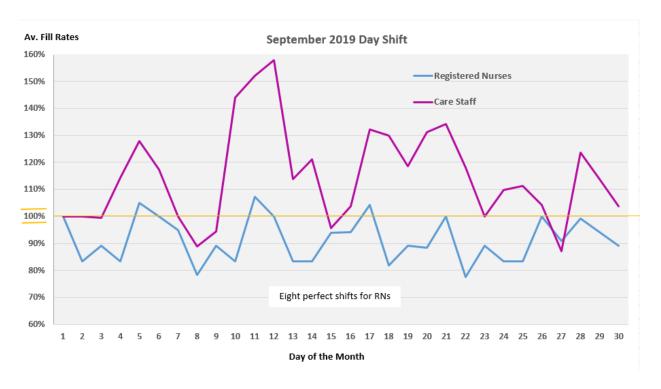


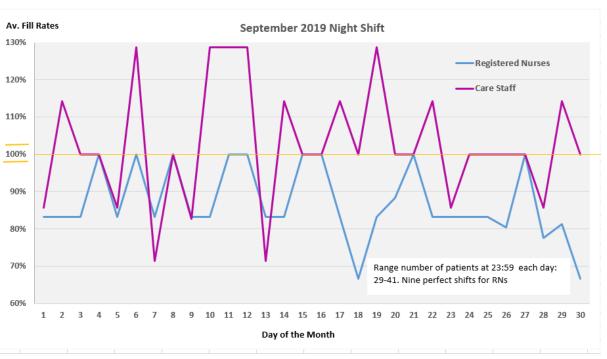






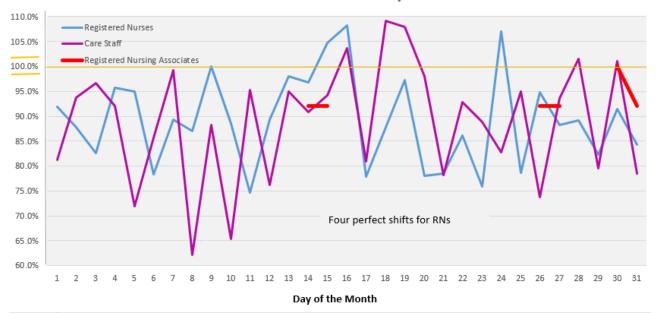


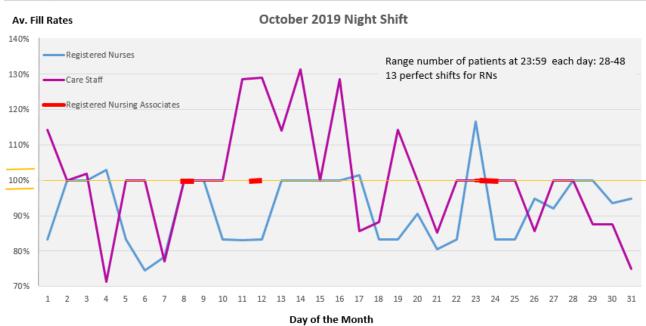




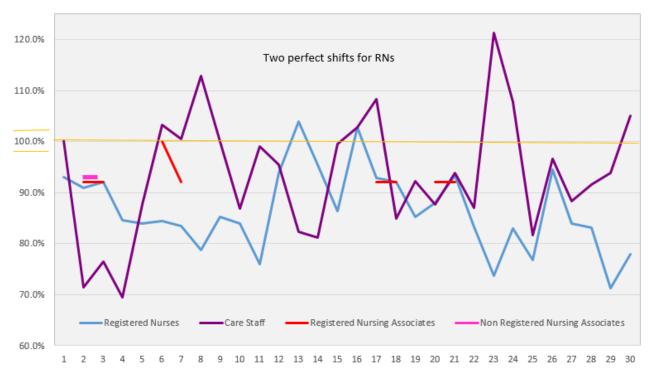


October 2019 Day Shift

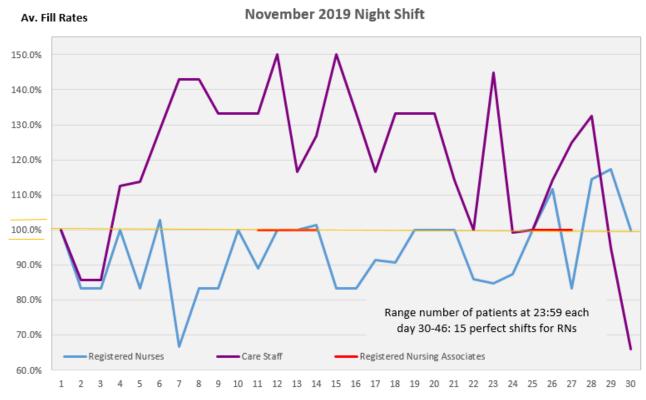








Day of the Month



Day of the Month

Appendix 2. November 2018-November 2019 % of registered nurses and care staff in AAU

Н	lighe	est F	RNs			Higl	hest	car	e sta	aff																					
L	owe	est F	RNs			Lov	vest	care	e sta	aff																					
Nov 2019					_	١.	I _			l	l	l	l	l		l	l	l	l I		l I		l						1	1	
Night	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Registered Nurses	100.0%	83.3%	83.3%	100.0%	83.3%	102.9%	66.7%	83.3%	83.3%	100%	89.1%	100.0%	100.0%	101.4%	83.3%	83.3%	91.3%	90.6%	100%	100%	100%	85.9%	84.8%	87.3%	100%	111.5%	83.3%	114.5%	117.4%	100%	
Care Staff	100.0%	85.7%	85.7%	112.5%	113.7%	128.6%	142.9%	142.9%	133%	133.3%	133.3%	150.0%	116.7%	126.8%	150%	133.3%	116.7%	133.3%	133.3%	133.3%	114.3%	100%	144.9%	99.3%	100.0%	114.3%	125%	132.6%	95%	66%	
Nov 2019 Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Registered Nurses	93.0%	91.0%	92.0%	84.6%	84.0%	84.5%	83.4%	78.7%	85.3%	84.0%	75.9%	93.9%	103.9%	95.4%	86.4%	102.7%	92.8%	92.0%	85.3%	88.0%	93.3%	83.3%	73.7%	83.0%	76.8%	94.5%	83.9%	83.1%	71.3%	78.0%	
Care Staff	100.2%	71.5%	76.5%	69.4%	87.7%	103.2%	100.5%	112.8%	100%	86.8%	99.1%	95.4%	82.3%	811%	99.5%	102.7%	108.3%	84.9%	92.2%	87.6%	93.9%	87%	121.3%	107.8%	81.6%	96.6%	88.3%	91.5%	93.9%	105%	04
Oct 2019 Day	1 000/	2	3	40007	5	6	7	8 1000/	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Registered Nurses	83%	100%	100%	103%	83%	75%	78%	100%	100%	83%	83%	83%	100%	100%	100%	100%	101%	83%	83%	91%	80%	83%	117%	83%	83%	95%	92%	100%	100%	94%	95%
Care Staff	114%	100%	102%	71%	100%	100%	77%	100%	100%	100%	129%	129%	114%	131%	100%	129%	86% 17	88%	114%	100%	85%	100%	100%	100%	100%	86%	100%	100%	88%	88%	75%
Oct 2019 Day	91.9%	2 87.8%	3 82.6%	95.8%	5 94.9%	6 78.4%	89.3%	8 87.0%	9 100.0%	10 88.5%	74.7%	12 89.3%	98.0%	96.8%	15 104.7%	16 108.3%	77.9%	18 87.8%	19 97.3%	20 70.1%	21 78.5%	22 86.1%	23 75.9%	24 107.0%	25 78.7%	26 94.8%	27 88.2%	28 89.2%	29 82.3%	30 91.5%	31 84.3%
Registered Nurses Care Staff	81.3%	93.8%	96.7%	92.0%	71.9%	85.6%	99.2%	62.2%	88.2%	65.4%	95.3%	76.2%	95.0%	90.9%	94.2%	103.7%	80.9%	109.1%	107.9%	98.0%	78.2%	92.9%	75.5% 88.9%	82.8%	95.0%	73.7%	93.6%	101.5%	79.6%	101.1%	78.5%
Sept 2019 Night	1	2	30.776	32.U/s	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	70.3/6
Registered Nurses	83.3%	83.3%	83.3%	100.0%	83.3%	100.0%	83.3%	100.0%	83.3%	83.3%	100.0%	100.0%	83.3%	83.3%	100.0%	100.0%	83.3%	66.7%	83.3%	88.4%	100.0%	83.3%	83.3%	83.3%	83.3%	80.4%	100.0%	77.5%	81.2%	56.7%	
Care Staff	85.7%	114.3%	100.0%	100.0%	85.7%	128.6%	71.4%	100.0%	82.6%	128.6%	128.6%	128.6%	71.4%	114.3%	100.0%	100.0%	114.3%	100.0%	128.6%	100.0%	100.0%	114.3%	85.7%	100.0%	100.0%	100.0%	100.0%	85.7%	114.3%	100.0%	
Sept 2019 Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Registered Nurses	100.0%	83.3%	89.1%	83.3%	105.1%	100.0%	94.9%	78.3%	89.1%	83.3%	107.2%	100.0%	83.3%	83.3%	94.0%	94.2%	104.3%	81.9%	89.1%	88.4%	100.0%	77.5%	89.1%	83.3%	83.3%	100.0%	90.9%	99.3%	94.2%	89.1%	
Care Staff	100.0%	100.0%	99.4%	114.3%	128.0%	117.4%	100.0%	88.8%	94.4%	144.1%	152.2%	157.8%	113.7%	121.1%	95.7%	103.7%	132.3%	129.8%	118.6%	131.1%	134.2%	118.0%	100.0%	109.9%	111.2%	104.3%	87.0%	123.6%	113.7%	103.7%	
Aug 2019 Night	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Registered Nurses	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	92.0%	83.3%	100.0%	83.3%	100.0%	83.3%	100.0%	83.3%	83.3%	100.0%	83.3%	83.3%	100.0%	100.0%	83.3%	83.3%	100.0%	83.3%	83.3%	66.7%	83.3%	75.4%	100.0%	100.0%	83.3%
Care Staff	114.3%	114.3%	71.4%	100.0%	114.3%	114.3%	114.3%	100.0%	114.3%	100.0%	100.0%	114.3%	100.0%	100.0%	85.7%	100.0%	114.3%	114.3%	57.1%	100.0%	100.0%	114.3%	71.4%	100.0%	85.7%	114.3%	85.7%	100.0%	85.7%	100.0%	100.0%
Aug 2019 Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Registered Nurses	78.3%	83.3%	66.7%	100.0%	92.0%	89.1%	94.9%	100.0%	117.4%	102.9%	91.3%	84.1%	84.1%	95.7%	84.1%	83.3%	94.9%	109.4%	90.6%	83.3%	83.3%	85.5%	72.5%	88.4%	94.9%	104.3%	83.3%	95.7%	81.2%	97.1%	84.8%
Care Staff	109.9%	124.2%	138.0%	100.0%	114.3%	105.6%	109.9%	80.1%	70.2%	106.2%	90.7%	103.7%	106.2%	109.9%	122.4%	109.9%	134.2%	123.6%	128.0%	118.0%	114.3%	104.3%	112.4%	85.1%	90.7%	114.3%	128.6%	126.7%	142.9%	123.0%	114.3%
July 2019 Night	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Registered Nurses	78.3%	100.0%	116.7%	75.4%	83.3%	83.3%	83.3%	83.3%	100.0%	83.3%	106.5%	83.3%	66.7%	66.7%	100.0%	100.0%	105.8%	100.0%	116.7%	116.7%	100.0%	83.3%	100.0%	100.0%	100.0%	83.3%	83.3%	83.3%	100.0%	100.0%	100.0%
Care Staff	114.3%	114.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	114.3%	114.3%	180.0%	114.3%	128.6%	116.3%	100.0%	100.0%	85.7%	85.7%	128.6%	142.9%	114.3%	114.3%	100.0%	157.1%	100.0%	128.6%	114.3%	100.0%	114.3%	100.0%	114.3%
July 2019 Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Registered Nurses	84.1%	83.3%	75.4%	79.0%	73.9%	83.3%	94.2%	83.3%	83.3%	79.7%	83.3%	83.3%	83.3%	89.9%	83.3%	89.9%	89.1%	100.0%	94.9%	100.0%	83.3%	105.1%	88.4%	100.0%	89.9%	83.3%	100.0%	94.9%	83.3%	89.9%	83.3%
Care Staff	128.0%	88.8%	119.9%	137.9%	95.0%	95.7%	123.6%	113.7%	117.4%	160.2%	128.0%	105.6%	109.9%	106.7%	100.0%	81.4%	121.1%	129.8%	144.1%	134.2%	85.1%	100.6%	99.4%	142.9%	132.9%	152.8%	114.3%	124.2%	136.6%	128.6%	124.2%
June 2019 Night	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Registered Nurses	94.9%	83.3%	83.3%	116.7%	83.3%	100.0%	100.0%	83.3%	100.0%	83.3%	83.3%	100.0%	83.3%	83.3%	100.0%	116.7%	100.0%	147.1%	83.3%	83.3%	100.0%	83.3%	83.3%	83.3%	83.3%	100.0%	100.0%	83.3%	83.3%	66.7%	
Care Staff	114.3%	115.0%	142.0%	100.0%	100.0%	100.0%	114.3%	100.0%	114.3%	114.3%	114.3%	85.7%	71.4%	85.7%	114.3%	100.0%	142.9%	85.7%	100.0%	114.3%	100.0%	85.7%	128.6%	100.0%	128.6%	100.0%	85.7%	100.0%	71.4%	128.6%	
June 2019 Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Registered Nurses	83.3%	83.3%	83.3%	83.3%	89.1%	100.0%	100.0%	100.0%	88.0%	88.4%	102.2%	88.4%	100.0%	88.4%	100.0%	83.3%	95.7%	87.7%	110.9%	84.1%	99.3%	105.1%	83.3%	83.3%	83.3%	100.0%	83.3%	83.9%	83.3%	77.5%	
Care Staff	134.8%	99.4%	137.9%	123.0%	99.4%	123.6%	109.3%	100.0%	119.9%	132.9%	104.3%	118.6%	157.1%	104.3%	137.3%	100.0%	114.3%	109.9%	118.6%	157.1%	123.0%	108.7%	123.6%	104.3%	128.0%	111.0%	91.9%	100.0%	100.0%	132.9%	
May 2019 Night	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Registered Nurses	100.0%	83.3%	83.3%	83.3%	100.0%	100.0%	100.0%	100.0%	100.0%	83.3%	83.3%	100.0%	83.3%	100.0%	83.3%	100.0%	83.3%	83.3%	100.0%	100.0%	116.7%	100.0%	100.0%	100.0%	100.0%	83.3%	79.7%	100.0%	100.0%	116.7%	108.0%
Care Staff	100.0%	100.0%	100.0%	85.7%	114.3%	142.9%	128.6%	114.3%	114.3%	142.9%	128.6%	85.7%	100.0%	114.3%	142.9%	123.0%	128.6%	128.6%	114.3%	71.4%	114.3%	114.3%	91.3%	100.0%	100.0%	98.1%	78.9%	128.6%	100.0%	114.3%	128.6%

May 2019 Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Registered Nurses	83.3%	83.3%	83.3%	82.6%	100.0%	94.2%	77.5%	77.5%	94.2%	94.2%	83.3%	94.2%	74.6%	94.2%	83.3%	94.2%	89.1%	83.3%	94.2%	100.0%	94.2%	91.3%	94.9%	83.3%	100.0%	78.3%	78.3%	83.3%	66.7%	76.1%	94.9%
Care Staff	118.6%	100.0%	100.0%	100.0%	108.7%	142.9%	132.9%	109.3%	113.7%	123.6%	132.9%	132.9%	100.0%	109.3%	118.6%	142.2%	104.3%	123.6%	151.6%	95.0%	152.2%	175.2%	105.6%	102.5%	104.3%	117.4%	119.9%	109.3%	109.3%	117.4%	156.5%
April 2019 Nighl	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Registered Nurses	66.7%	73.2%	83.3%	111.6%	100.0%	83.3%	100.0%	100.0%	116.7%	133.3%	100.0%	100.0%	83.3%	83.3%	100.0%	100.0%	83.3%	100.0%	87.0%	81.2%	66.7%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	133.3%	
Care Staff	85.7%	85.7%	114.3%	128.6%	114.3%	100.0%	100.0%	100.0%	114.3%	85.7%	85.7%	100.0%	114.3%	100.0%	114.3%	100.0%	114.3%	100.0%	119.3%	71.4%	114.3%	100.0%	71.4%	100.0%	100.0%	114.3%	100.0%	114.3%	114.3%	85.7%	
April 2019 Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Registered Nurses	88.4%	99.3%	105.1%	93.5%	77.5%	77.5%	77.8%	83.3%	83.3%	100.0%	83.3%	94.2%	100.0%	83.3%	105.1%	94.2%	96.4%	110.1%	87.0%	96.4%	913%	78.3%	92.8%	66.7%	83.3%	88.4%	83.3%	99.3%	100.0%	83.3%	
Care Staff	85.7%	128.0%	91.3%	100.0%	104.3%	118.6%	104.3%	90.1%	95.0%	80.7%	85.7%	104.3%	113.6%	100.0%	75.8%	100.0%	137.3%	128.4%	119.3%	96.0%	125.6%	67.1%	81.4%	74.4%	87.5%	75.8%	104.3%	108.7%	123.6%	100.3%	
Aarch 2019 Nigh	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Registered Nurses	83.3%	100.0%	100.0%	83.3%	100.0%	83.3%	100.0%	100.0%	83.3%	83.3%	83.3%	100.0%	100.0%	83.3%	83.3%	100.0%	83.3%	83.3%	92.0%	92.0%	79.7%	83.3%	83.3%	66.7%	83.3%	83.3%	100.0%	83.3%	100.0%	83.3%	83.3%
Care Staff	128.6%	100.0%	114.3%	100.0%	100.0%	114.3%	85.7%	85.7%	85.7%	100.0%	71.4%	98.8%	101.9%	114.3%	100.0%	100.0%	71.4%	128.6%	128.6%	114.3%	85.7%	114.3%	100.0%	114.3%	114.3%	114.3%	114.3%	100.0%	114.3%	128.6%	100.0%
March 2019 Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Registered Nurses	84.8%	83.3%	83.3%	83.3%	83.3%	94.9%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	99.3%	94.2%	80.4%	88.4%	79.7%	93.5%	88.4%	88.4%	88.4%	77.5%	94.2%	83.3%	913%	105.1%	83.3%	100.0%
Care Staff	142.9%	128.6%	83.2%	99.4%	100.0%	100.0%	104.3%	71.4%	109.9%	129.2%	114.3%	109.3%	100.0%	157.1%	114.3%	108.7%	96.9%	134.8%	109.3%	126.0%	103.1%	109.9%	85.1%	95.0%	129.2%	123.6%	128.6%	108.7%	71.4%	128.6%	100.0%
Feb 2019 Night	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28			
Registered Nurses	83.3%	83.3%	100.0%	100.0%	120.0%	83.3%	120.0%	115.0%	120.0%	120.0%	100.0%	100.0%	100.0%	116.7%	83.3%	100.0%	100.0%	120.0%	100.0%	100.0%	83.3%	111.6%	100.0%	83.3%	83.3%	83.3%	83.3%	83.3%			
Care Staff	114.3%	100.0%	85.7%	100.0%	114.3%	100.0%	100.0%	71.4%	100.0%	100.0%	114.3%	100.0%	100.0%	100.0%	100.0%	114.3%	114.3%	133.3%	112.4%	128.6%	100.0%	85.7%	85.7%	85.7%	100.0%	114.3%	114.3%	128.6%			
Feb 2019 Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28			
Registered Nurses	94.2%	77.5%	83.3%	83.3%	94.9%	94.9%	83.3%	85.5%	105.1%	100.0%	87.0%	103.6%	103.6%	78.4%	84.1%	100.0%	100.0%	83.3%	115.9%	100.0%	94.9%	90.6%	83.3%	100.0%	83.3%	94.2%	88.4%	96.4%			
Care Staff	127.3%	111.2%	100.0%	114.3%	71.4%	95.0%	93.2%	128.6%	95.0%	123.6%	126.1%	129.8%	129.8%	105.6%	107.0%	119.9%	84.8%	152.8%	101.9%	114.9%	124.2%	109.3%	123.6%	100.0%	100.0%	114.3%	104.3%	118.6%			
Jan 2019 Night	1 400.004	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Registered Nurses	120.0%	120.0%	89.1%	89.1%	83.3%	100.0%	100.0%	100.0%	120.0%	100.0%	120.0%	100.0%	100.0%	100.0%	100.0%	100.0%	83.3%	83.3%	66.7%	66.7%	100.0%	100.0%	100.0%	120.0%	100.0%	100.0%	83.3%	100.0%	100.0%	116.7%	100.0%
Care Staff	85.7%	85.7%	100.0%	100.0%	100.0%	114.3%	85.7%	89.4%	100.0%	85.7%	100.0%	98.8%	85.7%	98.8%	114.3%	100.0%	114.3%	114.3%	157.1%	142.9%	85.7%	100.0%	114.3%	100.0%	108.1%	100.0%	100.0%	142.9%	128.6%	100.0%	85.7%
Jan 2019 Day	01.09/	2	3	400.09/	5 02.29/	900.00/	00.09/	70.00/	9 00.79/	10	11	77.00/	13	02.09/	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Registered Nurses	94.2%	83.3%	81.2%	100.0%	83.3%	100.0%	99.3%	78.3%	82.7% Mains/	82.7%	84.1%	77.5%	94.2%	92.8%	83.3%	83.3%	83.3%	105.8%	94.9%	100.0%	92.8%	83.3% #11.0%	00.0%	83.3%	94.2%	94.9%	100.0%	94.9%	102.2%	83.3%	83.3%
Care Staff Dec 2018 Night	94.4%	109.3%	114.3%	114.3%	123.6%	100.0%	100.0%	100.0%	142.9% 9	85.7% 10	94.4%	91.9% 12	128.6%	132.9% 14	92.5% 15	90.1% 16	100.0% 17	94.4% 18	114.3% 19	142.2% 20	123.6% 21	123.6% 22	98.8% 23	117.4%	123.6% 25	100.6% 26	116.1%	124.2% 28	142.9% 29	134.2% 30	109.3% 31
Registered Nurses	100.0%	83.3%	100.0%	100,0%	102.9%	83.9%	100.0%	100.0%	120.0%	120.0%	120.0%	83.3%	100.0%	120.0%	100.0%	120.0%	120.0%	00.0%	833%	100.0%	83.3%	83.3%	100.0%	833%	100.0%	833%	83.3%	100.0%	100.0%	100.0%	83.3%
Care Staff	114.3%	100.0%	89.4%	85.7%	114.3%	85.7%	128.6%	107.5%	85.7%	85.7%	85.7%	114.3%	100.0%	114.3%	71.4%	85.7%	85.7%	114.3%	114.3%	100.0%	100.0%	71.4%	85.7%	100.0%	100.0%	100.0%	128.6%	108.1%	142.9%	85.7%	71.4%
Dec 2019 Day	1	2	3	4	5	G.176	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Registered Nurses	100.0%	100.0%	100.0%	88.4%	100.0%	83.3%	93.3%	833%	87.7%	83.3%	100.0%	110.9%	83.3%	111.6%	94,9%	100.0%	113.8%	116.7%	111.6%	100.0%	110.9%	83.3%	100.0%	89.1%	100.0%	116.7%	83.3%	89.9%	66.7%	105.8%	105.8%
Care Staff	100.0%	100.0%	100.0%	108.7%	100.0%	85.7%	89.4%	100.0%	85.7%	90.1%	81.4%	123.6%	85.7%	100.0%	101.2%	114.3%	128.6%	114.3%	108.7%	100.0%	108.7%	123.0%	99.4%	95.7%	108.7%	95.7%	114.3%	104.3%	114.3%	109.3%	142.9%
Nov 2018 Night	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1161374
Registered Nurses	100.0%	83.3%	83.3%	120.0%	100.0%	66.7%	83.3%	83.3%	83.3%	83.3%	100.0%	83.3%	100.0%	83.3%	100.0%	120.0%	100.0%	66.7%	66.7%	88.3%	100.0%	120.0%	100.0%	83.3%	83.3%	83.3%	100.0%	116.7%	100.0%	83.3%	
Care Staff	114.3%		100.0%	85.7%	71.4%	71.4%	85.7%	85.7%	100.0%	114.0%	85.0%	67.0%	100.0%	85.0%	114.3%	100.0%	100.0%	85.7%	85.7%	_	114.3%	100.0%	85.7%	85.7%	100.0%	100.0%	128,6%	85.7%	85.7%	114.3%	
Nov 2018 Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Registered Nurse:	83.3%	83.3%	83.3%	100.0%	83.3%	83.3%	83.3%	73.2%	83.3%	83.3%	106.5%	94.2%	88.4%	101.4%	83.3%	100.0%	83.3%	116.7%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	100.0%	100.0%	100.0%	
Care Staff	114.3%	100.0%	95.0%	85.7%	100.0%	114.3%	100.0%	100.0%	100.0%	96.9%	85.7%	41.6%	100.0%	100.0%	137.9%	133.5%	114.3%	114.3%	109.3%	114.3%	109.3%	100.0%	113.7%	104.3%	100.0%	113.7%	114.3%	85.7%	114.3%	128.6%	
-10 00011												121070		1	2011270						1							1			

Appendix 3. AAU twitter feed examples

This comprises supportive comments to celebrate individual and team achievements, gratitude, and examples of continuous professional development.





Acute Assessment Unit Airedale @acute unit · 4 Feb AAU team award 12 months ago. When I see this I see how much we have really come together as a team in this last 12 months @JuliaNixACP 💗





Acute Assessment Unit Airedale @acute_unit · 31 Dec 2019 Team AAU would like to wish everyone a safe, healthy and happy 2020. Thank you to all our neighbouring teams, units, wards and everyone that continue to support us in keeping our patients safe and well cared for #Happy2020 @AiredaleNHSFT



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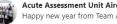
Acute Assessment Unit Airedale @acute_unit · 30 Dec 2019 If you're finding this time of year challenging & feel your mental health is deteriorating, call First Response 01274 221181. Trained professionals are waiting to take your call 24/7. You can ask to be referred to a safe space, including @CellarHaven @MindinBradford





Acute Assessment Unit Airedale @acute_unit · 4 Nov 2019 I most certainly will be nominating some of the amazing people we have that inspire me everyday. We have some amazing people at Airedale, let's celebrate it, recognise it and be thankful the the amazing team that is Airedale 👍 🤎





Acute Assessment Unit Airedale @acute_unit · 1 Jan Happy new year from Team AAU working today #happynewyear2020



Acute Assessment Unit Airedale @acute_unit · 15 Dec 2019 Hi it's Airen again. I have now left the ED and have been admitted to the AAU. The staff on here really do work so hard and are extremely kind to me @AiredaleNHSFT #AirenTheElf





Our #PrideofAiredale 2020 award categories are #ExcellenceInInnovatio #LeaderoftheYear #TraineeoftheYear #VolunteeroftheYear #UnsungHerc #OutstandingPatientExperience #PartnershipAward #ColleagueoftheYea #WardoftheYear #TeamoftheYear #AnnualPrideAward ${\it \#Behind the Scenes Award}.$



Julia Nixon RN @JuliaNixACP · 4 Nov 2019
 @acute_unit @AiredaleNHSFT @Airedale_ED new RN recruit day.
Learning from our new RNs



Acute Assessment Unit Airedale @acute_unit · 22 Oct 2019

Audience interactive paeds simulation... live online quizzes. Great lea tool.



Acute Assessment Unit Airedale @acute_unit · 29 Oct 2019 Medical equipment training day for new band 5's in AAU as part of their training programme. Talking hypothermia here. Very productive day, all



Acute Assessment Unit Airedale @acute_unit · 20 Oct 2019

After just short of 30 years at Airedale today we say goodbye to Kath our senior clinical support worker. Happy retirement Kath. You are amazing, a true leader and example of right care. We are going to miss you and THANKYOU from AAU, the whole of AGH and all your patients



Acute Assessment Unit Airedale @acute_unit · 20 Oct 2019



Alan Hart-Thomas @AlanHartThomas1 · 20 Oct 2019

This weekend has reminded me why I do this job. #teamwork Fantastic care for acutely ill patients, sensitive care of patients and families/carers at end of life, and #homefirst when the it's the right thing.

@AiredaleNHSFT @Airedale_ED @acute_unit @AiredaleUnit

@Airedaleahps



Acute Assessment Unit Airedale @acute_unit · 11 Oct 2019
Our very own AAU CD presenting at #samonthemoor our senior sister.
all released from duty to go and found it extremely beneficial #TeamA
@Adriankennedy @JuliaNixACP







Appendix 4. Model of inclusive leadership applied to AAU

This model (Randel et al., 2018:191) provides examples of inclusive leadership in ANHSFT's AAU with pro-diversity leaders who support employees to feel they belong and are valued.

+1+

Leader Individual Difference Factors

- Pro-diversity beliefs: Annual improvement plan 2019: leadership and management development all levels, inclusive, compassionate and accountable leadership. EDI policy, plans. Nursing recruitment campaigns in Kerala, hiring doctors from Egypt.
- •Humility: Hello my name is ... compassion campaign. Executive directors conduct 'listening sessions' with employee groups regularly. Fund raising with colleagues for local food banks.
- •Cognitive complexity: Leaders recognise newly qualified nurses' strengths based on their up-to-date knowledge in university and from placements while understanding their limitations and need for lots of pastoral support and encouragement. Managers are willing to take stressed nurses off night shifts. Understanding that newcomers feel dazed by patients' acute co-morbidities, under-staffing, need for fast patient flow in urgent and emergency care, potential for burnout.

Inclusive Leadership

Facilitates belongingness

- •Supports individuals as group members: Schwartz Rounds for all staff for mutual support reduce hierarchies, stress and isolation, appreciate each other's roles
- •Ensures justice and equity: A motivated, included, valued workforce helps to deliver high quality patient care, increased patient satisfaction, improves patient safety. Reporting requirements: Workforce Race and Workforce Disability Equality Standards, Gender pay data. Advanced nurses on junior doctors' rotas how manage?
- •Shares decision-making: Inclusion Strategy. Foundation Trust Members 4 staff representatives. Unions, staff organisations representing employees. Joint Local Negotiating Committee. Annual local employee surveys.

Values uniqueness

- •Encourages diverse contributions: Inclusive approaches to recruitment, training, staff development. Annual Pride of Airedale staff awards. Bi-monthly team awards, instant rewards for one-off achievements, long service awards. The Trust aims to be an employer of choice. Celebrating staff events, e.g. twitter After just short of 30 years at Airedale today we say goodbye to Kath our senior clinical support worker. You are amazing, a true leader and example of right care. THANKYOU from AAU, the whole of AGH and all your patients ▶
- •Helps group members fully contribute: Deputy Medical Director and other leaders tweet gratitude for groups members' hard work @AlanHartThomas1: Weekend on call. Really appreciate the hard work from all of our teams in @acute_unit @AiredaleNHSFT on a really challenging weekend. #proud #teamwork #aboveandbeyond

Follower Perceptions of Inclusion

Member perceptions of work group belongingness

People are really friendly in this small hospital. They smile at you in the corridors and people know each others' names. It's quite different from working in large teaching hospitals in Leeds where if you ask for help, especially from doctors, the first response is 'no.' There's a real team spirit in AAU which is quite different from the base wards. Senior nurses and consultants present at conferences together.

Member perceptions of work group valuing uniqueness

In October 2019, around 500 employees participated in an employee event at Airedale Hospital which celebrated difference. Employee Health and Wellbeing service. Employee assistance programme. Work Mental Health Support Service. Employee Wellness Programme. Foundation Trust's People Plan. It would help if we had a badge in the first year indicating to colleagues that we're newly qualified nurses to they appreciate we can't do everything.

Member Work Group Identification

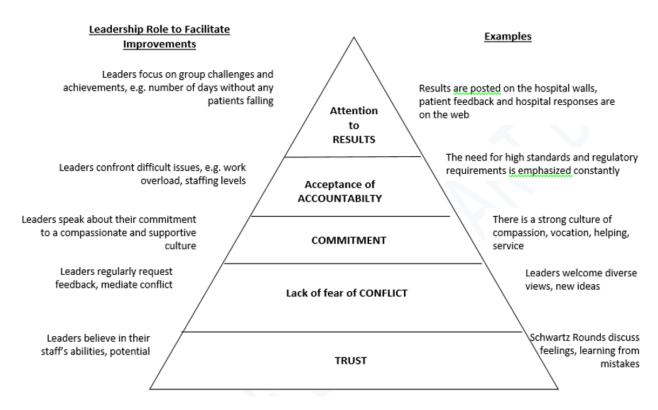
The strict uniform policy indicates employees' role: navy with red trim for senior nurses, staff nurses in pale blue with a white trim, catering staff wear red. Away days, Schwartz rounds, Rapid Improvement Events. Gender Focus Group. Workforce Race Equality Standards March 2019 report 13.96%. Informal networking, "e.g. doctors' games and curry nights, nurses' spa days are self-funded.

Member Psychological Empowerment

Senior nurses control rotas, can express their opinions and contribute to decisions feel psychological empowerment and are more likely to stay in their team/organisation and enhance performance. They try to create psychological empowerment for their staff nursing colleagues by checking in with them regularly, in team meetings, rapid improvement events and away days. Senior nurses mediate when junior nurses disagree with doctors' decisions.

Member Behaviour Outcomes

- Creativity: New position of acute dementia pathway with a tearoom to help patients' memories. Annual rapid improvement events. In urgent care, little down time for reflection. NHS innovation, NHS Innovation Accelerator showcase new ideas. Fun on AAU twitter @acute_unit, e.g. ♥♣ ★ #Airentheelf
- Job performance: 4-hour waiting targets missed. CQC 2019 report stated that overall the hospital requires
 improvement. Performance is constrained by understaffing as shown in publicly available monthly nursing
 figures and constant recruitment campaigns #WeAreTheNHS & we're always recruiting.
- •Reduced turnover: 100% turnover of newly qualified nurses in AAU in 2018. 50% turnover in 2019 since move to new facilities. The Trust is currently piloting a new approach to staff exit surveys to gain feedback to support retention. There are significant challenges in being able to recruit nurses and doctors. This has had a significant impact on patient flow and the provision of safe staffing levels, particularly over the winter period. It has been an ongoing balance to ensure that safety and quality are not compromised while managing agency expenditure.



Appendix 5 is based on Lencioni's (2002) model of teams. Feedback from AAU staff suggest that they are inspired by collective leadership (Denis et al., 2001) and compassionate leadership (de Zulueta, 2016) in a small friendly rural hospital which is less evident in their experiences of working in large teaching hospitals.

Appendix 6. AAU workforce

Job Category/Title

Receptionist

Dignity Champion

Flow Co-ordinator

Band 2

Band 3

Band 4

Band 5 NQN

Band 5 > 6 months experience

Band 6

Band 7

Band 8

ANP

Lead Nurse

Matron

Junior doctor

Registrar

Consultant

Clinical Director

Glossary

A&E Accident & Emergency
AAU Acute Assessment Unit

ACP Advanced Clinical Practitioner

ACU Ambulatory Care Unit

ANCC American Nurses' Credentialing Center

ANHSFT Airedale NHS Foundation Trust
ANP Advanced Nurse Practitioner

CD Clinical Director
CNO Chief Nursing Officer
CQC Care Quality Commission
ED Emergency Department

ENP Emergency Nursing Practitioner
ENSS Expanded Nursing Stress Scale

FE Further Education

HCSW Health Care Support Worker
HEE Health Education England
HRH Human resources for health
ICS Integrated Care System

LoS Length of Stay

LWAB Local Workforce Advisory Board

NA Nursing Associate

NP Nurse Practitioner

NQN Newly Qualified Nurse

PA Physician Associate

PANDA Programme for Acute-Medicine Development Accreditation

RCEM Royal College of Emergency Medicine

RN Registered Nurse

SAM Society for Acute Medicine
SDEC Same Day Emergency Care
UEC Urgent and Emergency Care
VRE Video-reflexive ethnography
WDQ Work Design Questionnaire
WY&H West Yorkshire & Harrogate

@AiredaleNHSFT @acute_unit







Our new Acute Assessment Unit is up and running

The new Access Assessment (1976) approach in classes in patients and a processor and patients are street of proportion and patients are street of color reports of proportion and patients are street of color reports. The new 40 body all this directly.

The new 40 body all this directly on the Designating of the patients are street of the patients and the color reports of the patients are street, and in patients are street, and are street, and the street, replaced approaches and the patients are street, reports or patients are street, and are street, and





near thirties have Assessment limit operand at the end of April

Contact: Dr Julie Davies

julie.davies@mmu.ac.uk

@juliedaviesuk @mmu_decentwork