

Trust Board Meeting in Public: Wednesday 8<sup>th</sup> March 2017

TB2017.36

<b>Title</b>	<b>Magnet ® Recognition Programme progress report and forward plan</b>
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<b>Status</b>	For approval
<b>History</b>	This is a new paper.

<b>Board Lead(s)</b>	Professor Catherine Stoddart, Deputy Chief Executive & Chief Nurse			
<b>Key purpose</b>	<b>Strategy</b>	Assurance	Policy	Performance

## Executive Summary

<p>1. Magnet ® Recognition is the world's only international accreditation program for high quality nursing and midwifery. It was developed in the United States of America (USA) in the early 1980's as a result of a study by the American Nurses Association of 160 hospitals and specifically their ability to recruit and retain nurses. Of those 160 hospitals 41 were found to have low numbers of vacancies and low and turnover and almost identical characteristics. These arguably fairly obvious characteristics, but include a strong Chief Nurse and a focused senior nursing team, access to good quality continuing professional development, mutual respect between medical and nursing staff at all levels and the involvement of frontline staff in decision making.</p>
<p>2. There are approximately 600 Magnet ® recognised facilities worldwide, including most of America's leading academic medical centres. There are multiple studies that support Magnet ® Recognition and many of those studies indicate a positive correlation between Magnet ® Recognition and clinical outcome, recruitment and retention and staff satisfaction. There are also a significant number of studies that indicate a positive correlation between Magnet ® Recognition and cost savings, hence the widespread interest in Magnet ® Recognition in the USA. The journey typically takes 3-8 years and involves complying with an evidence-based series of standards that are refreshed every 4 years.</p>
<p>3. Healthcare organisations in the United Kingdom have been slow to embrace Magnet ® Recognition but it is a recommendation in the 'Shape of Caring' (The Lord Willis Report) and is now being actively pursued by several UK hospitals including Nottingham University Hospitals, Oxford Health and NHS Grampian.</p>
<p>4. The Board supported the Chief Nurse to pursue Magnet ® Recognition in 2015 and one part-time position was originally funded from existing education resources. As a result of a successful bid to Health Education England Thames Valley (HEETV) one fixed-term post is now funded by them until April 2018. During the last two years good progress has been made against the standards.</p>
<p>5. The Board has provided significant commitment to date in order to support the delivery of Magnet ® so far and this commitment will be required in order to achieve Magnet recognition in 2020.</p>
<p>6. Section 5 outlines the Trust's progress to date against the key areas required to achieve the accreditation.</p>
<p>7. A financial business case will be presented to Trust Management Executive for approval prior to the completion of the fixed term contract supported by HEETV.</p>
<p>8. <b>Recommendation</b> The Trust Board is asked to note the progress that has been made to date, noting the support provided by Health Education England Thames Valley. The Board is also asked to support the programme going forward.</p>

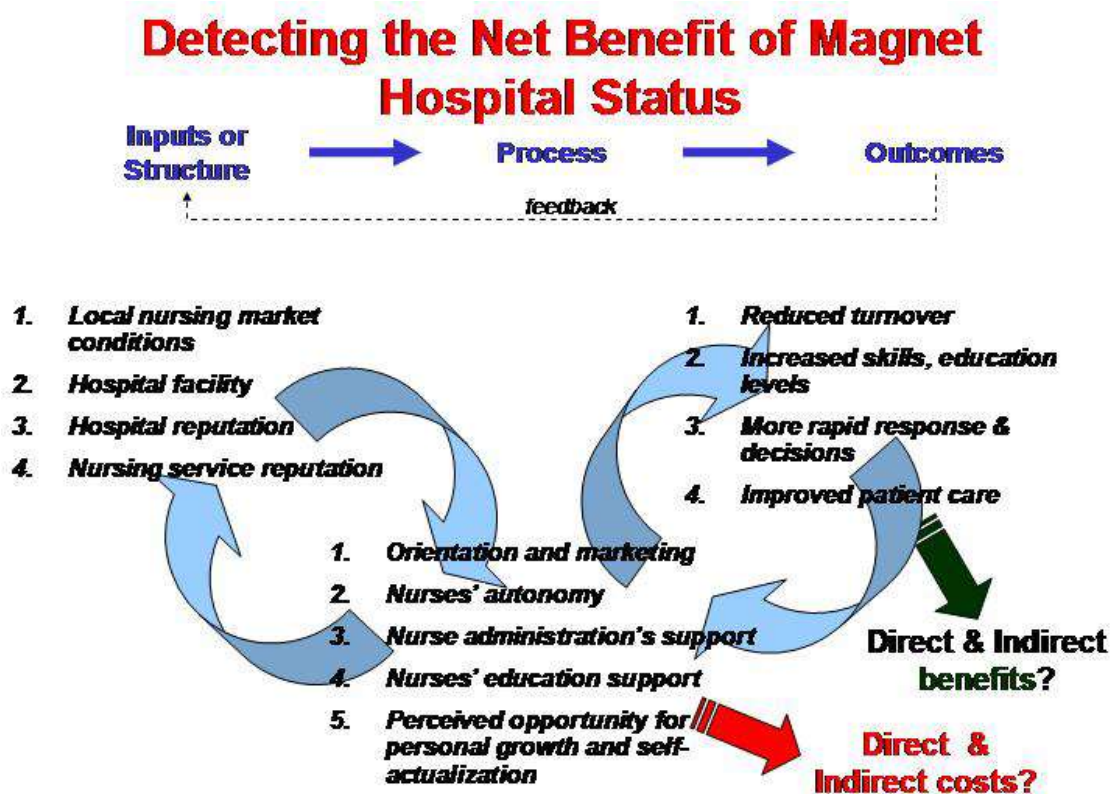
## 1. Introduction

- 1.1. UK interest in Magnet ® has started to grow in recent years. This has been driven in part as a result of the Francis Inquiry and successive reports that have focused on reforming nursing education and investing in numbers, skills-mix and better retention.
- 1.2. The most significant of these reports, the Shape of Caring review, recommended that Health Education England (HEE), the body responsible for directing education for nurses in England, should establish an expert group to examine the potential of developing and implementing Magnet ® principles to improve the education of the UK workforce and patient outcomes<sup>1</sup>.
- 1.3. The Oxford Institute for Nursing, Midwifery and Health Research (OxINMAHR) is hosting the group of UK hospitals interested in pursuing Magnet ® on behalf of Health Education England.
- 1.4. To take the Shape of Caring recommendation further, Health Education England Thames Valley have sponsored Oxford University Hospitals to organise a conference on April 28<sup>th</sup> 2017. The work at Oxford has also received considerable amounts of positive attention from NHS Improvement and the Royal Colleges.
- 1.5. This paper seeks to update the Board on progress and to ensure the continued support of the work. It has been written as a value proposition to justify the necessary investment. The case for added value will be built on researched, evaluative comparisons between Magnet ® and non-Magnet ® hospitals internationally. The main benefits, direct and indirect, are outlined in the diagram below.

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<sup>1</sup> Health Education England, Raising the Bar, Shape\_of\_caring\_review\_summary.pdf (April 2015)

## 2. Background



- 2.1. As the case for continued change is one for investing in Magnet ® recognition, it is best understood by examining Magnet ® accreditation to date and its impact on US and international hospitals.
- 2.2. During a severe nursing shortage in 1983, the American Academy of Nursing (ANA) conducted a study to identify characteristics of hospitals that attracted and retained nurses and supported professional practice. The qualitative factors revealed in that research were referred to as 'Forces of Magnetism' and the term 'Magnet ® hospital' was coined.
- 2.3. Based on the research, the American Nurses Credentialing Center (ANCC) established the Magnet ® Recognition Program in the early 1990s to recognize healthcare organizations that provide an environment that supports the professional practice of nursing. The program also sought to provide a vehicle for disseminating successful nursing practices and strategies.
- 2.4. By recognizing quality patient care, nursing excellence, and innovations in professional practice, the Magnet ® Recognition Program provides consumers with the ultimate benchmark to measure the quality of care that they can expect to receive. When *U.S. News & World Report* publishes its annual showcase of "America's Best Hospitals," being a Magnet facility contributes to the total score for quality of inpatient care. More than half of the top 20 hospitals in the most recent ranking are Magnet ® hospitals.
- 2.5. Currently, almost 600 hospitals are recognized as Magnet ® facilities. In the United States this accounts for about 6% of hospitals. There are eight further

hospitals have internationally. Three are in Australia, two in Saudi Arabia, and there are one each in Canada, Singapore and Lebanon.

- 2.6. The Magnet ® accreditation framework is described in more detail in Section 3. The key benefit remains a reduction of turnover in the context of a nursing supply shortage. Many of the wider benefits of Magnet ® accreditation are truly transferable internationally – for example those relating to nursing career development, job satisfaction, nursing education and recruitment benefits. However, there are significant differences between the United States fee for care system and the NHS free at point of access<sup>2</sup>. Wherever possible, research to evaluate benefits in this care for change will concentrate on the experience of the three Australian hospitals (because of a more immediate read-across to the UK) or that of the US Veterans' Health Association as this organisation is a closer parallel to the NHS.
- 2.7. The Magnet ® Recognition framework has recently been endorsed in a research paper produced by the Royal College of Nursing: *'Magnet provides an evidence-based framework which recognises that nursing has evolved into a profession which, although distinct from doctors, boasts a skills-set which is just as valuable to patients. Magnet's role has been to encourage care providers to recognise and embrace this vital contribution – supporting nurses as partners in the formulation and delivery of care.*
- As a consequence, many care settings in the US have committed greater resources to extending career progression routes for nursing staff and it is likely that the perceived benefits of securing Magnet recognition has driven much of this investment, with the total number of US care settings with an active Magnet award having risen almost consistently since its founding in 1990<sup>3</sup>.*
- 2.8. The benefits of Magnet ® accreditation have been extensively researched since the beginning of the programme. The key driver for the initial programme was to address a US national nursing shortage not dissimilar to that facing the UK.
- 2.9. Once accredited, organisations benefit in multiple ways. The quantifiable benefits to the accredited organisation in addition to reducing turnover include directly improved nurse outcomes (improved job satisfaction, improved nurse education, less nurse burnout, reduced needle stick injury rates) and improvement in patient outcomes from an optimal work environment (research has measured comparative reduction in mortality rates, reduction in medication errors, post-surgical treatment for general surgery and orthopaedics, reduction in patient falls and a reduction in pressure ulcers).

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<sup>2</sup> **The Nursing Role in Integrated Care Models – Reflecting the United States Experience.** RCN, May 2014.

<sup>3</sup> **RCN Policy and International Department Discussion Paper 09/2015 July 2015: The Magnet Recognition Programme:** A discussion of its development, success and challenges for adoption in the UK

**a) Nursing supply shortage**

The main risk addressed by Magnet accreditation is reduction in turnover, helping to address the current nursing supply shortage and reduce agency spend.

In Health Education England's report produced for the HEE Nursing Supply Steering Group 'NHS QUALIFIED NURSE SUPPLY AND DEMAND SURVEY – FINDINGS' in May 2014, 104 Trusts out of 224 NHS provider organisations surveyed responded to an in-depth investigation of the nursing labour market:

- 83 per cent reported that they were experiencing qualified nursing workforce supply shortages
- 39 organisations (36 per cent) were estimated to have 50–100 FTE vacancies. Nine organisations (8 per cent) were estimated to have over 100 FTE nurse vacancies (figures ranging from 110–250 FTE)
- The overall vacancy rate across organisations that provided their nurse staffing establishment data is calculated at 10 per cent (12566.35 FTE) i.e. posts not permanently occupied

**b) Hard to fill posts**

- In the same survey, 42 surveyed organisations (39 per cent) are estimated to have between 1-50 FTE hard to fill nursing vacancies.
- Nationally reported hard to fill vacancies span a wide range of nursing areas (over 40) and generally were in low volumes by band/area. There are two exceptions at Band 5 where results may be reflective of more widespread challenges for theatre and medical nursing areas.

**c) Recruitment difficulties**

- Skill shortages at a local or national level are the most reported reason for recruitment difficulties.
- Local action to manage supply challenges has focused on skill mix reviews/service reconfiguration, local recruitment campaigns and use of agency/temporary staff.
- 49 surveyed organisations (45 per cent) have actively recruited from outside of the UK in the last 12 months to fill nursing vacancies
- 96 per cent of reported overseas activity has been in EEA countries – the trend has been to target EEA countries to fill Band 5 experienced general nursing positions – Spain, Ireland and Portugal are most commonly targeted. Oxford University Hospitals have recruited about 600 EEA nurses at a cost of £4000 each plus a minimum of 2 months induction.
- 56 surveyed organisations (51 per cent) are considering actively recruiting qualified nursing staff from outside of the UK in the coming 12 months – Spain, Ireland and Portugal look to continue being the primary destinations. 60 surveyed organisations are looking to increase qualified nurse numbers overall. Almost half of these

organisations (28) reported that this is part of a skill mix review as a result of the publication of national safer staffing guidance.<sup>4</sup>

- d) **Clinical risks:** Nationally 700,000 patients develop pressure injuries every year. There is a national incidence rate of 4-10% in hospitals. Pressure injuries caused 27,000 deaths in 2010. They are responsible for 19% of all patient safety incidents<sup>5</sup>, cost the NHS £1.4-2.1 billion/year, (£3.8 million/day) and each patient with a Stage 4 pressure injury costs the NHS £10,500<sup>6</sup>.

### 3. Achieving recognition

- 3.1. In order to achieve recognition organizations work towards developing the characteristics are known as the '**Forces of Magnetism**' that were found to be so important in the original study on recruitment and retention.

**Component One: Transformational Leadership** includes the forces of:

- Quality of Nursing Leadership and
- Management Style.

**Component Two: Structural Empowerment** includes the forces of:

- Organisational Structure
- Personnel Policies and Programmes
- Community and the Healthcare Organisation
- Image of Nursing, and
- Professional Development.

**Component Three: Exemplary Professional Practice** includes the forces of:

- Forces of Professional Models of Care,
- Consultation and Resources,
- Autonomy,
- Nurses as Teachers, and
- Interdisciplinary Relationships.

**Component Four: New Knowledge, Innovation, & Improvements**, includes the forces of:

- Quality Improvement.

**Component Five: Empirical Quality Results** includes the forces of:

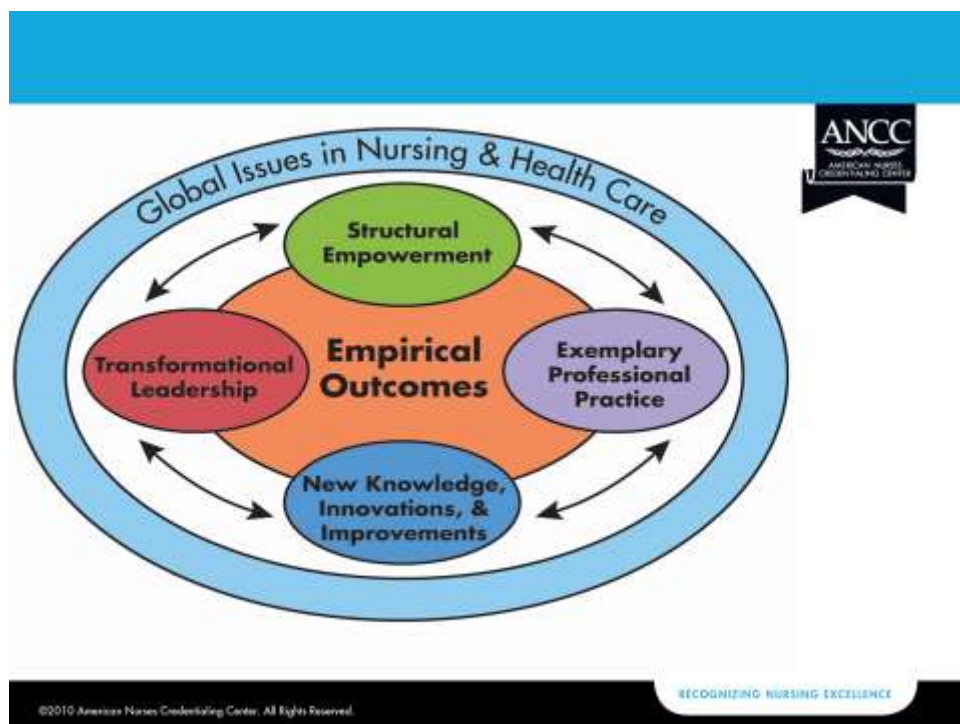
- Quality of Care.

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<sup>4</sup> **NHS QUALIFIED NURSE SUPPLY AND DEMAND SURVEY – FINDINGS:** Report produced for the Health Education England Nursing Supply Steering Group, NHS Confederation, May 2014.

<sup>5</sup> NICE 2015

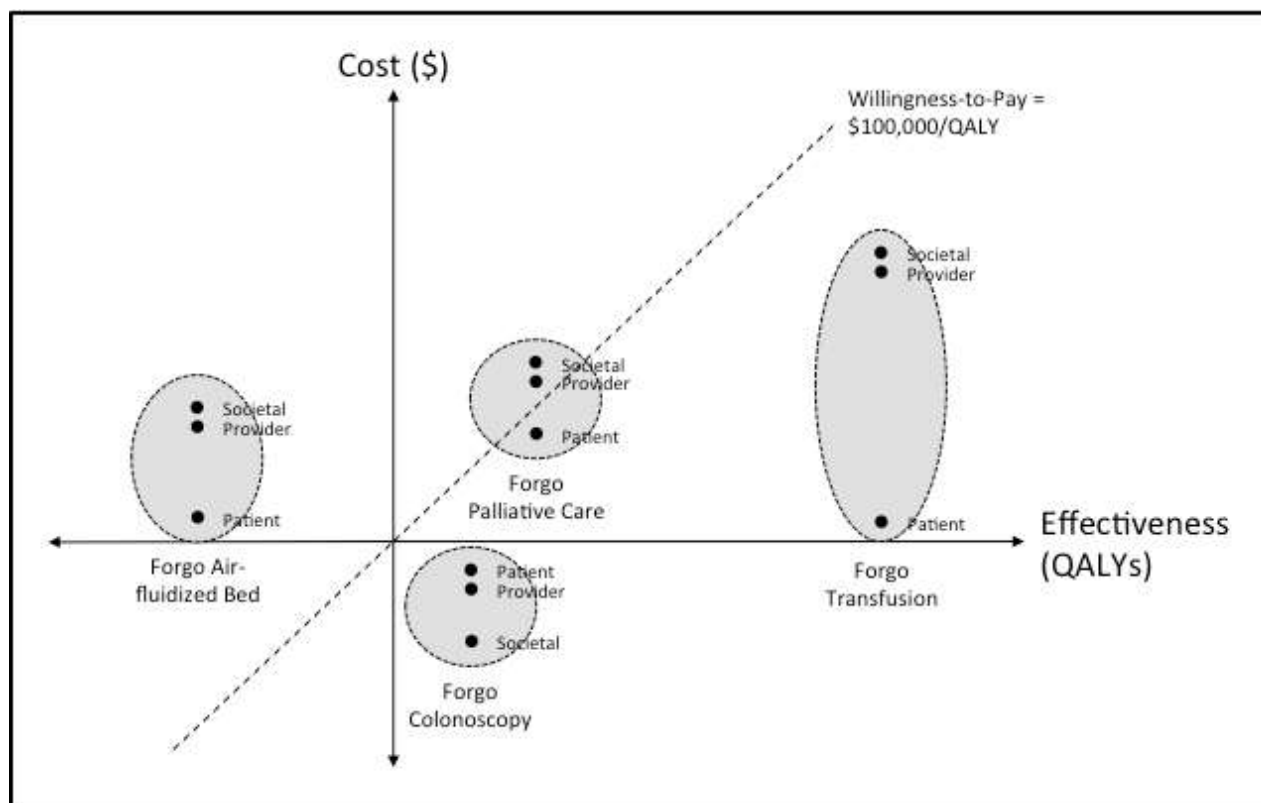
<sup>6</sup> NICE 2015



- a) **Financial savings from reduction in costs of controllable recruitment and retention:** There is a substantial body of evidence to prove that both seeking Magnet accreditation and then the optimal care environment it creates improves staff morale, satisfaction and retention. Lower turnover means lower costs of nurse recruitment, orientation, under-productive time before a new starter assumes full patient responsibility. Increased retention means cost savings passed directly into the trust's operational expense budget.
- b) **Clinical improvements in nurse-sensitive patient outcomes:** These will need to be quantified in three different ways. The critical issue here is patient benefit/effectiveness, which is normally quantified in 'QALY's (Quality Adjusted Life Years), with each being worth £25,000 (the US quantifies at \$100,000 for private healthcare):

<sup>7</sup> Overview of ANCC Magnet Recognition Programme New Model, ANCC, 2008.





All quality improvement programmes require investment or the reallocation of existing resources and clarification of cost-benefit. However, there are two further ways of quantifying such benefits. Reduction in mortality rates is a moral imperative and creates a reputational benefit, but does not necessarily drive cost savings. However, reduction in medication errors, patient falls, pressure ulcers and complaints all cause financial savings. So a distinction between QALYs, reputational gain and financial saving needs to be made when quantifying these benefits.

- c) **Positive publicity resulting from Magnet accreditation, visibility and professional acknowledgement from nursing and clinical research from professional staff members:** In the United States this benefit of Magnet ® recognition is financially important as the hospital market is fully competitive. In the NHS, individual hospital 'brand' development such as this does result in some financial gain, even if not directly quantifiable, as it influences both regulator ratings and patient choice.

**So in summary, the cost-benefit analysis for this value proposition will concentrate only on:**

- Reduction in % of pressure ulcers
- Reduction in % of patient falls
- Staffing: Reduced Registered Nurse Vacancies, occupational health, Turnover and Agency costs
- Reduction in nursing occupational injuries – needle stick injuries, other health and safety at work incidents and nurse burn-out
- Reduction in advertising and recruitment costs.

#### 4. Research quantifying the benefit criteria mentioned above – comparison of Magnet ® and non-Magnet ® hospitals

##### 4.1. Research summary

Research on Magnet ® hospitals was conducted through the 1980s and early 1990s primarily focused on identifying the organisational features common to Magnet ® hospitals and associated nurse job satisfaction (see e.g. Kramer & Schmalenberg 1988, 1991, Kramer & Hafner 1989). These studies used the Nursing Work Index (NWI) as a research tool to examine characteristics of samples of nurses in Magnet and comparison hospitals. Nurse turnover and vacancy rates in the Magnet hospitals were found to be significantly lower and reported nurse job satisfaction higher, than in the comparison hospitals.

Condition specific studies were undertaken, also with appropriate comparators.

More recent research has diversified into examining the outcomes of care and the organisational impact of Magnet accreditation. An early example of this looked at the only UK hospital to achieve Magnet accreditation – Rochdale Infirmary – surveying nurses in this demonstration hospital in a pre-accreditation and post-accreditation timeframe, then comparing results to survey results of nurses practicing in 30 other NHS Trusts. This showed a shift from Rochdale's less than positive and lower than comparators nursing work environment in two years, with lower levels of job satisfaction, to measurable improvements in job satisfaction and appraisals of quality of care. Critically, the quality of the nurse practice environment was better than that of the national sample of NHS Trusts.<sup>8</sup> Improved nurse outcomes were because of the improved practice environment rather than staffing enhancements.

Research has also concentrated on measuring 'Magnetism' in Australia. Researchers created an Australia-specific version of the NWI (Nursing Work Index Revised: Australia)<sup>9</sup> and surveyed 262 nurses in four hospitals, concluding that nurses in Magnet hospitals consider positively the quality of care and the level of support from management in their workplace. The calibre of leadership and support was also considered favourably as were the relationships between health professionals.

The individual research relating to cost-benefit assumptions is mentioned in more detail below.

##### 4.2. Reduction in costs of controllable recruitment and retention

Calculating the reduced costs of recruitment and retention requires the assessment of multiple factors:

- Using the % reduction in vacancy rate to estimate the number of FTE RN vacancies reduced
- Estimating the cost of agency staff to fill that number of FTE RN vacancies
- Estimating the reduced costs of recruitment and training of that number of FTE RN vacancies

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<sup>8</sup> **Transformative impact of Magnet designation: England case study.** Aiken, Buchan, Ball & Rafferty, *Journal of Clinical Nursing*, December 2008.

<sup>9</sup> **Measuring Magnetism in Australian Nursing Work Environments.** Joanne Joyce-McCoach & Patrick Crookes, *Australian Journal of Advanced Nursing*, Vol 29 no.2.

- Estimating the cost of the induction period in terms of non-productive hours for that number of FTE RN vacancies.

The sum of these reductions in costs will give the financial benefit from Magnet ® accreditation's impact on staff turnover through better retention.

#### 4.3. Improvements in nurse-sensitive patient outcomes

Perhaps the most important patient benefit from Magnet ® accreditation is a reduction in mortality. Research into Medicare mortality rates comparing 39 of the 41 original Magnet ® hospitals with 195 comparator hospitals (five per hospital selected by demography, geography and size), adjusted for predicted mortality showed that the Magnet ® hospitals had a 4.6% lower mortality rate<sup>10</sup>.

Lowering the mortality rate is a moral imperative. However, to quantify the benefits of improved clinical outcomes for benefits, two clear cost reduction elements will be considered – reduction in % of pressure ulcers and reduction in % of patient falls.

##### a) Reduction in % of pressure ulcers

Several comparative studies have been undertaken comparing Magnet and non-Magnet ® hospitals and the impact on reduction in % of pressure ulcers. The impact comes mainly from pressure injury prevention and quality of care improvement – achieved under Magnet ® components 3 & 5 (Exemplary Professional Practice, Empirical Clinical Results).

A study of the cost-effectiveness of pressure ulcer prevention suggested that there is an improvement of just less than two QALY's in terms of quality of care.<sup>11</sup> Treating Pressure Injuries costs the NHS £3.8 million nationally, resulting in 9.3 QALYs per patient x 700,000 patients. Cost of prevention through quality of care improvement is estimated to be substantially cheaper, and resulted in 11.2 QALYs per patient x 700,000 patients.

The estimated improvement in incidence of pressure ulcers in Magnet ® hospitals compared with non-Magnet comparators is 5%. An example of the supporting research is from the Veterans' Health Association which compares Magnet ® and non-Magnet ® hospitals within its group.<sup>12</sup>

The calculation for this benefit will therefore be to take 5% of the annual number of stage 3 & 4 ulcers at OUHFT as the size of the improvement, and multiply by NICE's estimate of the cost of treating a stage 4 ulcer - £10,500.

##### b) Reduction in % of falls

The co-relation between missed nursing care and falls has been established in several studies<sup>13</sup>. The key interventions to reduce falls are multiple – from ambulation, toilet assistance, patient assessments, and call light responses to

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<sup>10</sup> Aiken LH, et al. **Lower Medicare mortality among a set of hospitals known for good nursing care.** Med Care. 1994

<sup>11</sup> **Improving the Quality of Pressure Ulcer Care With Prevention A Cost-Effectiveness Analysis** William V. Padula, Manish K. Mishra, Mary Beth F. Makic, Patrick W. Sullivan.

<sup>12</sup> **Building a Business Case for Magnet Designation in VHA**, Lauren G. Doloresco, Nov 2004

<sup>13</sup> **Missed Nursing Care, Staffing and Patient Falls**, Journal of Nursing Care, 2012

reduction in medication errors. The Magnet ® approach to evidence-based professional practice is particularly suited to achieving a reduction in patient safety incidents with multiple causes. Research by the American Nursing Credentialing Centre comparing Magnet ® hospitals with non-Magnet ® hospitals suggests that there is a reduction of 10.3% in the numbers of falls in comparative hospitals.

Estimating the cost of individual falls and therefore the benefit from reduction in falls is difficult. The commonest serious injury from a fall is hip fracture, which affects approximately 60,000 people per year in the UK, and costs the National Health Service (NHS) approximately £1.7 billion and results in up to 14,000 deaths<sup>14</sup>. Even if the fall does not result in a hip fracture, it is likely to drive substantial cost – increased length of stay, higher likelihood of residential or nursing care support from decreased mobility.

Most research has looked at the costs of falls generically rather than those occurring within a hospital. The Kings Fund's study of patient-level data in Torbay suggests that on average, the cost of hospital, community and social care services for each patient who fell were almost four times as much in the 12 months after admission for a fall as the costs of the admission itself. Comparing the 12 months before and after a fall, the most dramatic increase was in community care costs (160 per cent), compared to a 37 per cent increase in social care costs and a 35 per cent increase in acute hospital care costs<sup>15</sup>.

In order not to inflate artificially the benefit from reduction in falls, the benefit calculation has been restricted to immediate cost of the fall in terms of bed occupancy and increased length of stay resulting from delays in being medically fit for discharge. A figure of £1500 per fall will be chosen for this calculation but it should be noted that this seriously under-estimates the whole system cost.

The calculation for this benefit will therefore take 10.3% reduction in numbers of falls, with £1,500 as the average immediate cost of a patient fall.

## 5. Oxford Progress to Magnet ® Recognition

Given the size and complexity of both the programme and the organisation and the minimal human resources available progress has been steady rather than speedy. The work started with a substantial programme of staff engagement. 350 frontline nurses and midwives were involved in focus groups to determine how the programme should proceed and to establish priorities. Several key themes emerged but most significantly a desire for international benchmarking of nurse-sensitive indicators leading to practice improvement.

The work led to the development of a formal 'RAG rated' Gap Analysis comparing nursing and midwifery at the trust against the Magnet ® 2014 Standards. This has provided the blueprint for the work program.

## The Oxford Professional Practice Model

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<sup>14</sup> **Older People's Experiences of Falls and Bone Health Services (England)**, Royal College of Physicians, 2008

<sup>15</sup> **Exploring the system-wide costs of falls in older people in Torbay**, Tian, Thompson, Buck & Sonola, August 2013.

This work quickly moved into the development of the Oxford Model of Exemplary Professional Nursing & Midwifery Practice (PPM). The model was launched in May 2016 and is a key building block for the entire programme. It is now being embedded in clinical areas and forms part of the appraisal process. The PPM has also formed the basis of our well-evaluated Post-Graduate Certificate in Nursing and Midwifery Leadership.

### **RN/ RM Education**

Given the well-established link between graduate nursing education and mortality, the entry criteria for Magnet ® require nurses and midwives at band 7 and above to be graduates (as opposed to the 'old' diploma level qualification). This is one of the most difficult elements of the programme to achieve in any hospital but given the evidence it should be a priority, regardless of Magnet.

All 628 band 7 nurses and midwives at the trust must be graduates before the trust can be considered. Good progress is now being made towards this goal and 71% now meet the criteria. Education clearly takes time and resource so it was vital to start this work first. There are now plans in place for the remaining staff. The "Leading Compassionate Excellence" post graduate certificate in partnership with Northampton University has provided foundation management and leadership skills for band 7's and has received outstanding feedback from the staff involved.

**Advanced Nursing and Midwifery Practice** forms part of the standards and a major piece of work has been completed that brings arrangements at the trust in line with national and international best practice. This positions the Trust well following the revised standards from RCN and new credentialing standards to be applied.

### **Shared Governance**

Involving frontline nurses and midwives in making decisions about policies and practice is key to Magnet ® and has been found to be a key issue in improving staff retention. This is known as Shared Governance. Shared Governance pilots are now underway in a number of clinical areas with Cardiac and Renal leading the way with a huge amount of enthusiasm.

### **The Magnet Ambassador programme**

The programme is now also underway and 60 frontline nurses and midwives have volunteered and attended training so far. Their role is to educate their colleagues and all members of the multi-disciplinary team about Magnet and to promote the Oxford Model.

### **Nurse Quality Indicators**

Evaluating nurse-sensitive indicators is a challenge because to ensure that international benchmarking robust there must be 100% adherence to the correct definitions. In some cases international definitions differ from those used in the NHS. Nevertheless, a pilot is now underway at the Nuffield Orthopaedic Centre using the US National Database for Nursing Quality Indicators (NDNQI). This enables us to compare indicators such as pressure ulcers (anonymously) against 2000 other orthopaedic units worldwide.

This is the first time that NDNQI has been used in the UK and it is hoped that this will not only enable us to collect the data we need for Magnet ® but also enable staff improve practice or indeed celebrate best practice.

The target date for the submission of a Magnet ® application is 2020. This is a realistic but challenging target and will require resources, commitment and support. A business case will be presented to Trust Management Executive for approval.

**6. Recommendation**

The Trust Board is asked to note the progress that has been made to date and to record their thanks for the support provided by Health Education England Thames Valley. The Board is also asked to support the programme going forward.

**Author: Professor Dickon Weir-Hughes, Magnet Program Director**

**The support of Alison Alsbury, MA (Oxon), Health Economist and Workforce Modelling Lead at the Department of Health (England) in preparing this paper is acknowledged.**

**Date: 1<sup>st</sup> March 2017**