Clinical Practice
Evidence in brief
Magnet hospitals

In this article...
● What Magnet-accredited hospitals are and their reported benefits
● Evaluation of the research comparing Magnet and non-Magnet hospitals
● The planned method and aims of the new Magnet4Europe study

Evaluating the evidence: are Magnet hospitals better for staff and patients?

Key points
The UK reports high levels of burnout and staff shortages among nurses.
High-performing US hospitals formed the basis of the Magnet model; there are now 502 Magnet-accredited hospitals worldwide.
Studies have shown the model improves staff wellbeing and patient outcomes.
Systematic reviews have not found conclusive evidence of general benefits.
A new four-year study will evaluate a Magnet-based intervention in Europe.

In the EU, mental health and wellbeing are among the highest priorities of the public health agenda (SUPPORT Project, 2005). Job-related burnout and other mental health morbidities are more prevalent in the healthcare workforce than in workers of other settings (Kim et al, 2018; Shanafelt et al, 2012). In the RN4CAST study, Aiken et al (2012) found that 42% of registered nurses surveyed in general acute hospitals in England reported emotional exhaustion, as measured by the Maslach Burnout Inventory (Maslach, 1997); of the 12 countries studied, only Greece had a higher level of burnout. Burnout in the healthcare workforce affects staff’s mental health and can lead to depression, substance abuse and suicide (Dyrbye et al, 2008); it has also been associated with higher staff turnover (Dall’Ora et al, 2020).

The UK has an ongoing shortage of health professionals, with around 40,000 registered nurse vacancies in the NHS in England alone (Macdonald and Baker, 2020). In the early 1980s, the US also faced a shortage of nurses; some hospitals with good reputations for patient care appeared better able to both attract and retain staff, described as almost ‘magnetic’ properties.

What is the Magnet model?
The Magnet model was inspired by the characteristics of these exemplary hospitals that facilitated excellence in professional nursing practice. Research revealed the hospitals’ human resources practices, organisational strategies, structures and systems (Goode et al, 2011); the characteristics identified were labelled ‘the forces of magnetism’ (Petit dit Dariel and Regnaux, 2015). The American Nurses Credentialing Center runs the Magnet Recognition Program, intended to motivate hospitals to improve nurses’ working environment and, in turn, patient care. Hospitals gain Magnet accreditation if they meet all the required standards. There are currently 502 Magnet-accredited hospitals in eight countries, but >90% are in the US; only one is in Europe. The Willis report (Health Education England, 2015) highlighted the potential of adopting a Magnet-style model for the UK, while recognising the need to understand how well the model might transfer.

Keywords Research/Staff experience/ Patient outcomes

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Abstract Job-related stress and burnout are prevalent among healthcare staff; in particular, nurses in the UK have one of the highest levels of burnout in Europe. Tackling this problem is a high priority in the UK and in other countries where shortages of health professionals affect healthcare delivery. Magnet hospitals are reputed to attract and retain staff and achieve better patient outcomes, but systematic reviews have not shown conclusive evidence of the benefit of Magnet status in general. A new study, launching this year, aims to evaluate a Magnet-based intervention across six countries in Europe.

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What is the evidence?
Since the 1980s, a large body of evidence (mainly from US hospitals) has shown the Magnet model to have many important effects, such as:

- Improved staff wellbeing, including lower levels of burnout, increased job satisfaction and reduced intent to leave jobs (Kelly et al, 2011);
- Positive financial outcomes for organisations (Jayawardhana et al, 2014);

Kelly et al (2011) reported that, compared with their non-Magnet counterparts, Magnet hospitals were more likely to have working environments that supported professional nursing care and employed more highly educated nurses. They also found that nurses in Magnet hospitals were less likely to be dissatisfied with their job or report a high level of burnout. Longitudinal and repeated-measures studies – for example, that by Kutney-Lee et al (2015) – have found that hospitals following the Magnet model have improved work environments, staff wellbeing and patient outcomes over time, compared with non-Magnet hospitals.

In testing the transferability and effectiveness of the Magnet model outside the US, two international pilot studies have shown positive outcomes: one in England (Aiken et al, 2008), one in Armenia and Russia (Aiken and Poghosyan, 2009). Both demonstrated the ability to transfer the model, and outcomes included:

- Reduced staff dissatisfaction, intent to leave and emotional exhaustion;
- Improved work environments and perceived quality of care.

Several reviews have also been undertaken. One systematic review, by Petit dit Dariel and Regnaux (2015), identified 141 studies, but only 10 quantitative studies comparing nurse and patient outcomes in Magnet-accredited and non-Magnet hospitals were eligible for inclusion. Notably, there were no studies of the preferred types – namely, controlled clinical trials, controlled before-and-after studies or interrupted time-series studies. Of the 10 studies included, nine were retrospective analyses of data extracted from existing databases; only one study collected original data. Anderson et al (2018) undertook an integrative review exploring the impact of the Magnet model on organisational culture in nursing; they identified 29 studies and reported that not having standardised evaluation tools made it difficult to compare study results. Despite methodological challenges, both reviews nonetheless reported positive results for Magnet hospitals, including:

- Better organisational culture;
- Higher job satisfaction and lower intent to leave and turnover rates among staff;
- Lower rates of pressure ulcers, patient falls, failure to rescue and 30-day inpatient mortality.

The knowledge gaps
Evidence has shown positive findings associated with some Magnet hospitals but systematic reviews have not been able to give conclusive evidence of the positive effect of Magnet status in general, due to differences in study methods and tools, ineligibility of study types and, in some cases, low quality. Neither of the two reviews mentioned above were able to find conclusive answers to the questions they investigated.

The lack of conclusive results from systematic reviews may explain, in part, why uptake of the Magnet model is low in Europe, despite the large body of primary evidence that appears to support it. To make evidence-based decisions in practice, it is vital to have the best-available generalisable evidence. As systematic reviews or meta-analyses of randomised controlled trials (RCTs) give the best evidence on which to base decisions to change practice, a large-scale RCT could help test the effectiveness of Magnet organisational redesign.

New research in Europe
The MagnetEurope study, recently funded by Horizon 2020, aims to evaluate how implementing a Magnet-based intervention affects nurses’ and doctors’ mental health and wellbeing. The four-year study is a mixed-methods evaluation of organisational redesign, using a wait-list RCT (wards start the implementation on different dates) and process evaluation.

The study plans to recruit at least 60 hospitals across the UK, Ireland, Belgium, Sweden, Norway and Germany. Each will be twinned with a Magnet hospital in the US and supported via regular learning collaboratives with other European hospitals in the study and the teams in each country.

Professor Jane Ball, from the University of Southampton, is leading the initiative in the UK, working with Professor Anne Marie Rafferty from King’s College London. It is due to launch in autumn 2020.

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