

Growing Nursing Numbers

Literature review on
nurses leaving the
NHS



The following is based on a short review of the available literature online around nurses (excluding midwives) who may be about to leave, have recently left or are registered but not practising - this cohort has euphemistically been called the 'leaky bucket'.

The literature review included a broad review of research available online in the UK and internationally. In addition there was a specific focus on finding literature on -

- Numbers of nurses in this category
- Background of nurses in this category
- Reasons why nurses leave
- Previous work done to retain and retrain nurses

In summary there is likely to be around 10% of the nursing workforce seriously considering leaving, and evidence shows that early signs of departure are strong predictors of the actual behaviour. Turnover rates are likely to be higher in inner city hospitals and in specific branches of nursing such as mental health, critical care, oncology and care for the elderly. Although some turnover can be positive, and bring in new ideas and innovation, high turnover can have a negative impact on patient care and create high costs for organisations and individuals, particularly if individuals leave due to burnout.

Newly qualified nurses and nurses nearing retirement age are likely to leave. Job satisfaction, stress and burnout have also been found to have significant correlation with intention to leave and the UK has one of the highest rates of nurses reporting burnout across Europe. There are a number of risk factors associated with job dissatisfaction and stress which are outlined in the report.

Stress and burnout are particularly high in young newly qualified nurses, where turnover rates tend to be high in the first year of qualification and remain high, or even rise during the second year of service before declining.

Many of the factors that impact on nurses' intention to leave are able to be modified to reduce the number of leavers.

A nurse retention strategy that incorporates a number of options outlined in the report is likely to be successful in reducing turnover. Focusing efforts initially around newly qualified nurses and specific branches with high turnover should be the first step. This could also enable organisations to evaluate which strategies are the most effective.

1 Defining turnover

The term 'turnover' is used to refer to the totality of nurse 'leavers' from an organisation – this will include those moving within a sector (from one trust to another), those moving between sectors (from nursing to non-nursing) and those leaving employment (due to ill health, retirement and so on). 'Wastage' refers only to those leavers who move outside of the organisation.¹

There are significant methodological challenges when attempting to measure and compare turnover. At the local level, the lack of consistency in how records of turnover are maintained presents difficulties, as the reliability of turnover determinations varies according to record keeping methods.² The different definitions of turnover used in studies also make it difficult to compare or generalise across studies.

Voluntary and involuntary turnovers are not always differentiated in studies because costs are incurred regardless of whether staff resign or are requested to leave. Some studies define turnover as any job move while others consider nurse turnover as leaving the organisation or even leaving the nursing profession.³

As well as variations in definitions limiting comparisons, it should be noted that many of the studies on turnover have incomplete survey responses which may give an incomplete picture of turnover.

2 Turnover projections - around 10% of UK nurses intend to leave

Many studies vary in their definition of 'intention to leave', and as a result studies vary significantly in their conclusion of the proportion of nurses intending to leave – a review of international studies found between 4% and 54% intended to leave.⁴ Central to the variation is the difference in the definition of 'intention to leave' used and the nature of the questioning. For example, if nurses are asked simply "would you leave nursing if you could" a high proportion say they would (38%),⁵ whereas studies that use less leading questions find the figure to be around 10%.⁶

As outlined in the table below, there is an increasing proportion of nurses leaving the Nursing and Midwifery Council (NMC) register: 6.5% of nurses left the register between 2012 and 2013, only 1.2% left due to retirement, and 1.5% are known to have left voluntarily, while there is a lack of data around the remaining proportion. The actual number of nurses leaving is also likely to be higher than 6.5% as many leave while still registered and some will also move within the NHS, but to jobs away from direct clinical care.

¹ Buchan J. (2002) Nursing and Midwifery Workforce Data – a special report 2002/03. Chamberlain Dunn Associates.

² Tai T W C, Bame S I, Robinson C D. (1998) 'Review of nursing turnover research, 1977–1996.' *Social Science and Medicine* 47 (12), 1905–1924.

³ Hayes L J, et al. (2006) 'Nurse turnover: A literature review' *International Journal of Nursing Studies* 43 (2006) 237–263

⁴ Flinkman M, Leino-Kilpi H, Salanterä S. Nurses' (2010) 'Intention to leave the profession: integrative review.' *Journal of Advanced Nursing*. 2010;66(7):1422–1434 JAN5322

⁵ Scott H, (1996) 'Nurse shortages: why are nurses leaving the NHS?' *British Journal of Nursing*, Vol. 5, Iss. 18, 12 Oct 1996, pp 1098. Available at: https://www.internurse.com/cgi-bin/go.pl/library/article.cgi?uid=17056;article=BJN_5_18_1098;format=pdf (accessed 13 April 2014)

⁶ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

It should also be noted that in England the headcount of nurses registered with the NMC was 583,285 in 2011, with just over half of these, 323,377, in the NHS in 2011,⁷ meaning 55% of registered nurses are not practicing in the NHS.

Table 1: Proportion of nurses leaving the NMC register

	2009/10	% of total qualified nursing staff	2012/13	% of total qualified nursing staff	% change from 2009/10 to 2012/13
Total qualified nursing staff working in the NHS	375,505		369,868		
Nurses who voluntarily left	4,293	1.1%	5,422	1.5%	26% increase
Nurses who retired	1,891	0.5%	4,309	1.2%	128% increase
Nurses leaving the register overall	21,949	5.8%	23,952	6.5%	7.5% increase

Data sources: National Midwifery Council⁸ and Health and Social Care Information Centre.⁹

Centre for Workforce Intelligence (CFWI) suggested that there is a 5% difference of nurses leaving under the assumption that only moderate variation is likely in the economic climate.¹⁰ However, it is unclear which nurses are in this cohort and how the proportion was arrived at.

A European study of nursing in 10 countries provides a useful insight into the proportion of UK nurses that intend to leave the profession. The study had responses from 46 hospitals in the UK (covering 413 different units) and responses from 3,000 nurses, and the study found that 10% of UK nurses intended to leave the profession. The nurses' mean age in the UK was 39.7 years and 92% of all nurses were female.¹¹ Evidence shows that early signs of departure are strong predictors of the actual behaviour.¹²

A report on nursing and midwifery workforce in 2001 found a similar proportion of nurses leaving the workforce - nursing 'wastage' (total leaving excluding transfers to other NHS units as a percentage of staff in post) was 9.4% in England and Wales.¹³ A follow on report in 2002 found nursing 'wastage' was 8.7% in England, with significant variation between regions – the North West had only 5.8% turnover

⁷ CFWI (2013) 'Future nursing workforce projections – starting the discussion' Available at: http://www.cfw.org.uk/publications/future-nursing-workforce-projections-starting%20the%20discussion/@_@publication-detail (accessed 12th April 2014)

⁸ Lintern S. (25 Nov 2013) 'Thousands of nurses exit the profession' Health Service Journal.

⁹ HSCIC (2014) 'NHS Hospital and Community Health Service (HCHS) Workforce Statistics in England, Summary of staff in the NHS - 2003-2013, Overview' Available at:

<http://www.hscic.gov.uk/searchcatalogue?productid=14368&topics=0%2fWorkforce&sort=Relevance&size=10&page=1#top> (accessed 13 April 2014)

¹⁰ CFWI (2013) 'Future nursing workforce projections – starting the discussion' Available at:

http://www.cfw.org.uk/publications/future-nursing-workforce-projections-starting%20the%20discussion/@_@publication-detail (accessed 12th April 2014)

¹¹ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

¹² Murrells T, Robinson S, Griffiths P, (2008) 'Is satisfaction a direct predictor of nursing turnover? Modelling the relationship between satisfaction, expressed intention and behaviour in a longitudinal cohort study.' Human Resources for Health 6, 22,

¹³ Buchan J (2001) 'Nursing and Midwifery Workforce Data 2000/01. A special report'. Chamberlain Dunn Associates.

compared to London with 13.6%. Table 2 outlines the main findings from the report.¹⁴

Table 2 – Leavers in the year March 2001

	Retirement %	To other NHS units %	To non-NHS units %	Other %	Don't know %	Total leaving %	Wastage rate %
Registered staff	0.9	4.5	1.1	2.4	3.9	12.7	8.3
Wales	0.6	2.0	0.2	2.9	2.9	8.6	6.6
Scotland	-	3.8	-	-	6.6	10.4	6.6
England	1.1	4.8	1.4	2.9	3.4	13.5	8.7
Northern and Yorkshire	1.0	5.1	1.5	2.5	1.8	11.8	6.7
Trent	1.0	3.9	0.7	2.8	3.8	12.1	8.2
Eastern	1.2	4.4	1.4	2.6	4.3	13.9	9.5
South East	1.3	5.3	1.3	3.1	6.9	18.0	12.6
London	0.9	5.9	3.0	4.2	5.5	19.5	13.6
South West	1.0	4.1	1.1	2.5	2.8	11.5	7.4
West Midlands	1.1	4.0	0.9	3.1	2.2	11.2	7.2
North West	1.2	5.2	1.1	2.6	0.9	11.1	5.8
Inner London	0.7	5.6	3.3	4.3	6.3	20.2	14.6
Outer London	1.2	7.6	1.8	4.6	6.4	21.6	14.0
London Fringe	1.3	9.9	1.9	3.2	7.8	24.1	14.2
Rest of Great Britain	0.8	4.1	0.9	2.2	3.5	11.5	7.4

Source: Buchan 2002¹⁵

Other studies have also found geographic differences in turnover, with retention being a more pronounced problem in inner cities and teaching trusts, particularly in London, where some turnover rates have been found to range from 11% to 38%.¹⁶

¹⁴ Buchan J. (2002) Nursing and Midwifery Workforce Data – a special report 2002/03. Chamberlain Dunn Associates.

¹⁵ Buchan J. (2002) Nursing and Midwifery Workforce Data – a special report 2002/03. Chamberlain Dunn Associates.

¹⁶ Finlayson B, Dixon J, Meadows S, Blair G. (2002) 'Mind the gap: the extent of the NHS nursing shortage'. BMJ. Sep 7, 2002; 325(7363): 538–541.

3 Why do nurses leave?

There have been a number of different models used to map nurse turnover and different studies have concluded different causes for nurses leaving, suggesting that the reason behind turnover may be dependent on a variable number of risk factors, such as the work environment, demographic variables and the individual's personal response to situations.

One study in 2000/01 found that around 10% of leavers were retirements, 24% transferred to another trust, 5% went into non-NHS healthcare employment, 5% went into non-NHS employment, 24% leave for other reasons (redundancy, career break, personal reasons), and 32% of leavers recorded no reason.¹⁷

The NMC has previously highlighted that nurses between 35-39 and 60-64 are most likely to leave; the later age group is likely to reflect nurses retiring.¹⁸

Stress and burnout have been found to significantly correlate with intention to leave.^{19,20} In a European nursing survey, 42% of UK nurses reported burnout (the highest of all 10 European countries surveyed), compared to the European average of 28%.²¹

Healthcare professionals are trained to put the needs of others before themselves and spend each working day exposed to the emotional strain of dealing with people who are sick or dying and who have extreme physical and/or emotional needs. This emotional strain, coupled with other stress factors inherent in the healthcare work environment, results in healthcare professionals being especially vulnerable to stress and burnout.²² High levels of burnout have been documented in the healthcare professions, especially nursing.²³ Table 3 outlines the stages of stress to burnout.

¹⁷ Buchan J (2001) 'Nursing and Midwifery Workforce Data 2000/01. A special report'. Chamberlain Dunn Associates.

¹⁸ RCN (2003) 'More nurses, working differently – A review of the UK nursing labour market in 2002'. RCN

¹⁹ Lafer G, Moss H, Kirtner R, et al. Solving the Nursing Shortage: A Report Prepared for the United Nurses of America, AFSCME, AFL-CIO.

²⁰ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

²¹ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

²² Maslach C. (2003) 'Burnout: The Cost of Caring.' Cambridge, MA: Malor Books

²³ Continuing Education for Healthcare Professionals. (2014) 'Burnout: Impact on Nursing'. US. Available at: <http://www.netce.com/coursecontent.php?courseid=827> (accessed 14 April 2014)

Table 3: Five stages of burnout

	Discord between expectations and reality Stress/frustration Job dissatisfaction				
	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Energetic Enthusiastic Idealistic	Mental and physical exhaustion Emotional emptiness Little or no desire to relate to patients Physical symptoms	Indifference Cynical, uncaring, disinterested, bitter Patients and family become dehumanised	Failure as a professional Not as capable, caring, competent Feeling of helplessness Patients and family feel alienated, despair of the individual	Failure as a person Self-hatred, isolation Major impact on family Absenteeism from work	Complete burnout Performs responsibilities without involvement, commitment or enthusiasm Contemplates leaving the profession

Source: *Impact of Burnout*²⁴

Job dissatisfaction is the composite reason that nurses leave, and can directly lead to stress and burnout. Table 4 summarises the commonly cited risk factors impacting on nurses' intentions to leave, which are often cited as factors contributing to job dissatisfaction.

²⁴ Spinetta JJ, Jankovic M, Ben Arush MW, et al. (2000) 'Guidelines for the recognition, prevention, and remediation of burnout in health care professionals participating in the care of children with cancer: report of the SIOP Working Committee on Psychosocial Issues in Pediatric Oncology.' *Med Pediatr Oncol*. 2000;35(2):122-125. Cited in Continuing Education for Healthcare Professionals. (2014) 'Burnout: Impact on Nursing'. US. Available at: <http://www.netce.com/coursecontent.php?courseid=827> (accessed 14 April 2014)

Table 4

Dimension	The risk factors impacting on nurses intentions to leave - Potential risk factors for job dissatisfaction, stress and burnout
<p>Work environment</p> <p>A 'healthy' work environment is associated with approximately 30% less intention to leave the profession.²⁵</p> <p>Burnout is more likely when an individual's experience (actual or</p>	<p>Work overload</p> <p>Numerous surveys and studies have indicated that workload is a primary source of job dissatisfaction among nurses.²⁶</p> <p>Long shifts, overtime, weekends, nights, holidays and weekend overtime have been found to be predictors of turnover.^{27,28} Extended shifts and overtime subject nurses to high physical and emotional demands, leaving them fatigued, with insufficient energy to cope with stress effectively.^{29,30}</p> <p>Nursing care is increasingly more intense with higher workloads as a result of increased levels of patient acuity resulting from an aging population with increasing levels of co-morbidity and advances in treatment that have led to shorter stays. Coupled with the nursing shortage, this has led to nursing workloads that are not balanced across various levels of care within the patient population.^{31,32,33, 34}</p> <p>Specific branches of nursing</p> <p>Many studies have indicated that the prevalence of burnout is higher among nurses who work in especially stressful settings, such as oncology, mental health, emergency medicine or critical care.^{35,36,37} This corresponds</p>

²⁵ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

²⁶ CFWI (2013) 'Future nursing workforce projections – starting the discussion' Available at: <http://www.cfwl.org.uk/publications/future-nursing-workforce-projections-starting%20the%20discussion/@@publication-detail> (accessed 12th April 2014)

²⁷ Shader K, Broome M, Broome C D, West M, Nash M. (2001) 'Factors influencing satisfaction and anticipated turnover for nurses in an academic medical center.' *Journal of Nursing Administration* 31 (4), 210–216.

²⁸ Strachota E, Normandin P, O'Brien N, Clary M, Krukow B. (2003)'Reasons registered nurses leave or change employment status.' *Journal of Nursing Administration* 33 (2), 111–117.

²⁹ Geiger-Brown J, Trinkoff AM, Nielsen K, et al. (2004) 'Nurses' perception of their work environment, health, and well-being: a qualitative perspective.' *AAOHN J.* 2004;52(1):16-22.

³⁰ Page A (ed). (2004) 'Keeping Patients Safe: Transforming the Work Environment of Nurses.' Washington, DC: The National Academies Press; 2004.

³¹ Vahey DC, Aiken LH, Sloane DM, Clarke SP, Vargas D. (2004) 'Nurse burnout and patient satisfaction.' *Med Care.* 2004;42(2 Suppl): I157-I166.

³² Tai T W C, Bame S I, Robinson C D. (1998) 'Review of nursing turnover research, 1977–1996.' *Social Science and Medicine* 47 (12), 1905–1924.

³³ Hemingway M A, Smith C S. (1999) 'Organizational climate and occupational stressors as predictors of withdrawal behaviours and injuries in nurses.' *Journal of Occupational and Organizational Psychology* 72 (3), 285–299.

³⁴ Strachota E, Normandin P, O'Brien N, Clary M, Krukow B. (2003)'Reasons registered nurses leave or change employment status.' *Journal of Nursing Administration* 33 (2), 111–117.

³⁵ Quattrin R, Zanini A, Nascig E, Annunziata M, Calligaris L, Brusaferrero S.(2006) 'Level of burnout among nurses working in oncology in an Italian region.' *Oncol Nurs Forum.* 2006;33(4):815-820.

<p>perceived) does not match factors in a work environment.</p>	<p>to higher rates of turnover found in mental health, critical care, oncology and care for the elderly when associated with high levels of patient aggression (such as dementia).³⁸</p> <p>Lack of control Evidence suggests that a lack of involvement in decision making is a significant source of job dissatisfaction among nurses.³⁹</p> <p>Being unable to perform job functions the way an individual believes is the "right" way can lead to stress and burnout. Inflexible administrative policies that reduce clinical autonomy can result in turnover, although this can be context dependent (e.g. a Dutch study found that when nurses in home care felt that their autonomy was reduced, this strongly influenced their intention to leave, although this was not the case for nurses working in nursing and care homes).⁴⁰</p> <p>Insufficient reward and unfairness Absence of acknowledgment of an individual's contributions in the work environment and lack of opportunities to advance can lead to stress.⁴¹</p> <p>Studies are inconsistent in the determination of pay over turnover; some find it is strongly correlated, others find pay is less of an influence.⁴² Dissatisfaction with promotion may have a stronger impact than pay on intention to quit the NHS, therefore improved pay would only have limited success unless accompanied by improved opportunities.⁴³</p> <p>Inequality in workload, salary, or other signs of professional respect can lead to job dissatisfaction.⁴⁴</p>
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³⁶ Poncet MC, Toullic P, Papazian L, et al. (2007) 'Burnout syndrome in critical care nursing staff.' *Am J Respir Crit Care Med.* 2007;175(7):698-704.

³⁷ Browning L, Ryan C, Thomas S, Greenberg M, Rolniak S. (2007) 'Nursing specialty and burnout.' *Psychol Health Med.* 2007;12(2):148-154.

³⁸ Hayes L J, et al. (2006) 'Nurse turnover: A literature review' *International Journal of Nursing Studies* 43 (2006) 237–263

³⁹ CFWI (2013) 'Future nursing workforce projections – starting the discussion' Available at: <http://www.cfwi.org.uk/publications/future-nursing-workforce-projections-starting%20the%20discussion/@@publication-detail> (accessed 12th April 2014)

⁴⁰ Tummers L G, Groeneveld S M, Lankhaar M. J (2013) 'Why do nurses intend to leave their organization? A large-scale analysis in long-term care.' *Adv Nurs.* 2013 Dec;69(12):2826-38. doi: 10.1111/jan.12249. Epub 2013 Sep 9. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/24016210> (accessed 12th April 2014)

⁴¹ Main source - Maslach C. (2003) 'Burnout: The Cost of Caring.' Cambridge, MA: Malor Books

⁴² Hayes L J, et al. (2006) 'Nurse turnover: A literature review' *International Journal of Nursing Studies* 43 (2006) 237–263

⁴³ Shields M A, Ward M, (2001) 'Improving nurse retention in the National Health Service in England: the impact of job satisfaction on intentions to quit.' *Journal of Health Economics* 20 (5), 677–701

⁴⁴ Main source - Maslach C. (2003) 'Burnout: The Cost of Caring.' Cambridge, MA: Malor Books

	<p>Absence of community Poor working relationships, poor team work, absence of adequate supervisory or peer support, lack of praise and recognition, and poor leadership style all lead to job dissatisfaction.^{45,46} Poor nurse-physician relationships can also result in higher levels of nurse turnover.⁴⁷</p> <p>Conflict in values Disagreement between job requirements and an individual's personal principles can lead to job dissatisfaction.⁴⁸</p> <p>Quality of care There is some evidence that the quality of care delivered to patients may have an impact on intention to leave.^{49,50}</p>
<p>Demographic variables</p>	<p>Newly qualified nurses Turnover rates tend to be high in the first year of nursing and remain high, or even rise, during the second year before declining.⁵¹ One study in the early 2000s found that up to 34% of new graduate nurses were not registering to practice.⁵²</p> <p>In general, when newly qualified nurses enter the workforce they are motivated. If the work environment is not supportive of the individual, the reality of the job and the individual's expectations begin to diverge and frustration and disappointment develop. If the situation is not addressed, stress accumulates and, if left untreated, will continue through the stages of burnout.⁵³</p>

⁴⁵ Hayes L J, et al. (2006) 'Nurse turnover: A literature review' International Journal of Nursing Studies 43 (2006) 237–263

⁴⁶ CFWI (2013) 'Future nursing workforce projections – starting the discussion' Available at: <http://www.cfwi.org.uk/publications/future-nursing-workforce-projections-starting%20the%20discussion/@@publication-detail> (accessed 12th April 2014)

⁴⁷ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

⁴⁸ Main source - Maslach C. (2003) 'Burnout: The Cost of Caring.' Cambridge, MA: Malor Books

⁴⁹ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

⁵⁰ Rhéaume A, Clément L, LeBel N. (2011) 'Understanding intention to leave amongst new graduate Canadian nurses: a repeated cross sectional survey'. Int J Nurs Stud. 2011;13(4):490–500. doi: 10.1016/j.ijnurstu.2010.08.005.

⁵¹ Gray A M, Phillips V L. (1996) 'Labour turnover in the British National Health Service: a local labour market analysis.' Health Policy 36 (3), 273–289.

⁵² Finlayson B, Dixon J, Meadows S, Blair G. (2002) 'Mind the gap: the extent of the NHS nursing shortage'. BMJ. Sep 7, 2002; 325(7363): 538–541.

⁵³ Spinetta JJ, Jankovic M, Ben Arush MW, et al. (2000) 'Guidelines for the recognition, prevention, and remediation of burnout in health care professionals participating in the care of children with cancer: report of the SIOP Working Committee on Psychosocial Issues in Pediatric Oncology.' Med Pediatr Oncol. 2000;35(2):122-125.

It is unlikely newly qualified nurses are sufficiently empowered to cope with work-related stressors and to create satisfactory working conditions for themselves.⁵⁴

The increased rate of burnout among younger individuals is sometimes viewed as a function of a "survival of the fittest" concept. Burnout usually occurs early in one's career (in the first 1 to 5 years), and many young, burned out individuals leave the profession; as a result, the remaining individuals in an occupation are the "survivors".⁵⁵

Family

Rates of burnout are higher among single workers and workers with no children than among married workers and those with children. The emotional resources provided by a family are thought to be the reason for this difference.⁵⁶

However some nurses who go on maternity leave do not return to nursing practice.

Higher levels of education

Educational level is believed to impact turnover, in that more highly educated individuals are more likely to quit in order to seek career advancement, especially if there are limited opportunities in their current organisation.^{57,58}

When jobs are plentiful, turnover is high and when jobs are scarce, turnover is low.⁵⁹ However even where many alternative job opportunities exist, many nurses prefer an internal move.⁶⁰

In several studies, male, younger and more qualified nurses were more likely to leave the profession.⁶¹

Pattern of work

Nurses who work full-time are less likely to consider a future outside nursing.⁶²

⁵⁴ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

⁵⁵ McKee MG, Ashton K. (2004) 'Stresses of daily life'. In: Lang R, Hensrud DD (eds). Clinical Preventive Medicine. 3rd ed. Chicago, IL: AMA Press; 2004: 81-91.

⁵⁶ Flinkman M, Leino-Kilpi H, Salanterä S. Nurses' (2010) 'Intention to leave the profession: integrative review.' Journal of Advanced Nursing. 2010;66(7):1422-1434JAN5322

⁵⁷ Tai T W C, Bame S I, Robinson C D. (1998) 'Review of nursing turnover research, 1977-1996.' Social Science and Medicine 47 (12), 1905-1924.

⁵⁸ Yin J T, Yang K A. (2002) 'Nursing turnover in Taiwan: a meta-analysis of related factors.' International Journal of Nursing Studies 39 (6), 573-581.

⁵⁹ Price J L, Mueller C W, (1981). 'A causal model of turnover for nurses.' Academy of Management Journal 24 (3),543-565

⁶⁰ Krausz M. et al (1995) 'Predictors of intentions to leave the ward, the hospital, and the nursing profession.' Journal of Organizational Behavior 16, 277-288.

⁶¹ Flinkman M, Leino-Kilpi H, Salanterä S. Nurses' (2010) 'Intention to leave the profession: integrative review.' Journal of Advanced Nursing. 2010;66(7):1422-1434JAN5322

⁶² Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

	<p>Age Burnout is less prevalent among older nurses; some studies find that mature nurses have greater job satisfaction, productivity and organisational commitment.⁶³ However, a large scale European study found that older nurses are more likely to consider leaving their profession,⁶⁴ possibly as a result of nearing retirement.</p>
<p>Personality traits</p>	<p>Many of the personal risk factors described below are common among healthcare professionals; in fact, several are essential for success in the healthcare field. This may explain, in part, the high levels of burnout in the healthcare setting.⁶⁵</p> <ul style="list-style-type: none"> • Overachieving • Need for autonomy • Empathy • Extreme conscientiousness • Perfectionism • Self-giving • Impatience • Intolerance • Low self-esteem or confidence • No recognition of personal limits • Need for approval • Type D personality – which is defined as the tendency towards negative affectivity (e.g. worry, irritability, gloom) and social inhibition (e.g. reticence and a lack of self-assurance)

⁶³ Hayes L J, et al. (2006) 'Nurse turnover: A literature review' International Journal of Nursing Studies 43 (2006) 237–263

⁶⁴ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

⁶⁵ Main source - Maslach C. (2003) 'Burnout: The Cost of Caring.' Cambridge, MA: Malor Books

4 Job embeddedness

The above risk factors around job dissatisfaction, stress and burnout are a variable set of factors that impact on turnover. The high volume and inter-relatedness of factors around turnover led to the development of the 'embedded' workforce model. Being 'embedded' in an organisation has been found to be a more accurate predictor of turnover.⁶⁶

The six dimensions of job embeddedness

Job embeddedness is the collection of forces that influence employee retention; the emphasis is on all of the positive factors that keep an employee in the job. Job embeddedness is conceptualised as six dimensions: links, fit, and sacrifice between the employee and organisation, and links, fit and sacrifice between the employee and the community.⁶⁷

The level of job embeddedness also influences turnover if there is a sudden change in circumstances, such as re-organisation or an unsolicited job offer.⁶⁸

Fit - The better fit one has with the organisation and the community, the more embedded one is in the job.⁶⁹ Important components of fit between an employee and the organisation include an individual's: career goals; personal values; job knowledge; demands; skills; and abilities. In terms of an employee's surrounding environment, components include weather, location, amenities, political climate, and availability of entertainment options.

Links - The more (formal and informal) links a person has with the organisation and community, the more embedded the individual is in the organisation.⁷⁰ Links between the employee and the organisation may include connections with other people or groups in the organisation, while community-specific links encompass relationships with family members and non-work friends, to other off-the-job social institutions and the physical environment itself.

Sacrifice - The perceived cost of material or psychological benefits that may be forfeited from broken links with the organisation and/or community by leaving a job. Organisational sacrifices are the loss of colleagues, worthwhile projects, job-related perks, as well as "switching costs" (e.g. the loss of job stability and/or possibility of advancement, accrued eligibility for a pension plan). Community sacrifices might be the loss of a safe, attractive home, desirable neighbourhood characteristics, non-work friends, or an easy commute.⁷¹

⁶⁶ Holtom B C, O'Neill B S. (2004) 'Job embeddedness: a theoretical foundation for developing a comprehensive nurse retention plan.' *Journal of Nursing Administration* 34 (5), 216–227.

⁶⁷ Lee T W, Mitchell T R, Sablynski C J, Burton J P, Holtom B C. (2004). 'Job Embeddedness in a Culturally Diverse Environment.' *Academy of Management Journal* 47: 711–722.

⁶⁸ Holtom B C, Inderrieden E J. (2006) 'Integrating the unfolding model and job embeddedness model to better understand voluntary turnover.' *Journal of Management Issues* 18

⁶⁹ Mitchell T R, Holtom B C, Lee T W, Sablynski C J, Erez M. (2001). 'Why People Stay: Using Job Embeddedness to Predict Voluntary Turnover.' *The Academy of Management Journal* 44: 1102–1121.

⁷⁰ Reitz O Ed. Anderson M A. (2011), 'An Overview of Job Embeddedness'. *Journal of Professional Nursing* 27 (5): 320–327. doi:10.1016/j.profnurs.2011.04.004. ISSN 8755-7223. Retrieved 2012-09-17.

⁷¹ Mitchell T R, Holtom B C, Lee T W, Sablynski C J, Erez M. (2001). 'Why People Stay: Using Job Embeddedness to Predict Voluntary Turnover.' *The Academy of Management Journal* 44: 1102–1121.

5 The impact of nurses leaving

Organisational costs

Turnover costs have been estimated to range between 0.75 to 2.0 times the salary of the nurse that left.⁷² However, these estimates may vary depending on the education, experience and seniority of the nurse who leaves and the period of time that they leave (e.g. at the beginning vs. the height of a nurse shortage) and other organisational and environmental factors, such as the local labour market and whether the organisation is in a rural or urban location.⁷³

Nurse turnover can lead to both direct and indirect costs and benefits; these are outlined in the table below. It is important to acknowledge that some renewal of nursing staff can be viewed as beneficial to an organisation; for example, if nurses move to jobs where they are better suited and perform better, or if the opportunity is taken to rebalance skill sets and potentially reduce staff costs.⁷⁴

Table 5: Costs and benefits of nurse turnover to the organisation^{75,76}

Costs of nurse turnover	Benefits of nurse turnover
<ul style="list-style-type: none"> • Advertising and recruitment • Vacancy costs (e.g., paying for agency nurses, overtime, closed beds, hospital diversions, etc.) • Hiring • Orientation and training • Decreased productivity • Absenteeism • Termination • Potential patient errors, compromised quality of care • Poor work environment and culture, dissatisfaction, distrust • Loss of organisational knowledge • Additional turnover 	<ul style="list-style-type: none"> • Reductions in salaries and benefits for newly hired nurses vs. departing nurses • Savings from performance related pay not paid to outgoing nurses • Replacement nurses bring new ideas, creativity, and innovations as well as knowledge of competitors • Elimination of poor performers

High nurse turnover can result in higher costs and can impact on an organisation's capacity to meet patient needs and provide quality care.^{77,78,79}

⁷² McConnell C.R. (1999). 'Staff turnover: Occasional friend, frequent foe, and continuing frustration.' *Health Care Manager*, 8; 1-13.

⁷³ Bland Jones, C, Gates M. (2007) 'The Costs and Benefits of Nurse Turnover: A Business Case for Nurse Retention'. *OJIN*. Vol.12 – 2007 No 3.

⁷⁴ Hayes L J, et al. (2006) 'Nurse turnover: A literature review' *International Journal of Nursing Studies* 43 (2006) 237–263

⁷⁵ Bland Jones, C, Gates M. (2007) 'The Costs and Benefits of Nurse Turnover: A Business Case for Nurse Retention'. *OJIN*. Vol.12 – 2007 No 3.

⁷⁶ McKee MG, Ashton K. (2004) 'Stresses of daily life'. In: Lang R, Hensrud DD (eds). *Clinical Preventive Medicine*. 3rd ed. Chicago, IL: AMA Press; 2004: 81-91.

⁷⁷ Gray A M, Phillips V L. (1996) 'Labour turnover in the British National Health Service: a local labour market analysis.' *Health Policy* 36 (3), 273–289.

⁷⁸ Shields M A, Ward M, (2001) 'Improving nurse retention in the National Health Service in England: the impact of job satisfaction on intentions to quit.' *Journal of Health Economics* 20 (5), 677–701.

⁷⁹ Finlayson B, Dixon J, Meadows S, Blair G. (2002) 'Mind the gap: the extent of the NHS nursing shortage'. *BMJ*. Sep 7, 2002; 325(7363): 538–541.

At the clinical team level, high turnover can affect the morale of nurses and the productivity of those who remain to provide care while new staff members are hired and orientated.⁸⁰ Inadequate nursing staffing levels caused by excessive turnover have been significantly associated with nursing errors and poorer patient outcomes.^{81,82,83,84,85,86} One study reports that organisations with low turnover rates (ranging between 4% and 12%) had lower risk-adjusted mortality and lower patient lengths of stay compared to organisations with moderate (12% to 22%) or high (22% to 44%) turnover rates.⁸⁷

A variety of professional consequences are related to prolonged stress and burnout, and poor work performance is the ultimate result. Emotional exhaustion leads to absenteeism and decreased productivity, both of which affect work overload for other nurses and can compromise patient care. As a result, burned out individuals create distance between themselves and patients as well as colleagues (referred to as depersonalisation), potentially decreasing the quality of care.⁸⁸

Motivation is down, frustration is up, and an unsympathetic, 'work to rule' attitude can predominate. There is then a high risk that burnt out nurses don't take enough care in making judgements or considering the outcome. In a broad sense burnt out nurses do the minimum and are stale rather than innovative and fresh. This decline in attitude and behavior has been associated with an increased incidence of errors in clinical care and has serious implications for the care and safety of patients.⁸⁹

Personal costs

Job dissatisfaction and stress are key factors in why nurses leave the profession and there are physical impacts on individuals such as headaches, insomnia and cardiovascular and immune diseases.⁹⁰

Work-related stress that is left unaddressed has the potential to develop into burnout over a long period of time. The personal costs of burnout are even higher than stress and affect not only the well-being of the individual and clinical team, but that of the individual's family, friends, and colleagues.⁹¹

⁸⁰ Cavanagh S J, Coffin D A, (1992). 'Staff turnover among hospital nurses.' *Journal of Advanced Nursing* 17 (11), 1369–1376.

⁸¹ Ludwick R, Silva MC. (2003) 'Errors, the nursing shortage and ethics: survey results.' *Online J Issues Nursing*. 2003;8(3):9.

⁸² Aiken LH, Clarke SP, Sloane DM, Sochalski J, Silber JH. (2002) 'Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction'. *JAMA*. 2002;288(16):1987-1993.

⁸³ Hugonnet S, Chevrolet JC, Pittet D. (2007) 'The effect of workload on infection risk in critically ill patients.' *Crit Care Med*. 2007;35(1): 76-81.

⁸⁴ Stone PW, Mooney-Kane C, Larson EL, et al. (2007) 'Nurse working conditions and patient safety outcomes.' *Med Care*. 2007;45(6): 571-578.

⁸⁵ Kane RL, Shamliyan TA, Mueller C, Duval S, Wilt TJ. (2007) 'The association of registered nurse staffing levels and patient outcomes: systematic review and meta-analysis.' *Med Care*. 2007;45(12):1195-1204.

⁸⁶ Zimmerman S, Gruber-Baldini AL, Hebel JR, Sloane PD, Magaziner J. (2002) 'Nursing home facility risk factors for infection and hospitalization: importance of registered nurse turnover, administration, and social factors.' *J Am Geriatr Soc*. 2002;13(12):1987–1995. doi: 10.1046/j.1532-5415.2002.50610.x.

⁸⁷ VHA Inc. (2002). *The business case for workforce stability*.

⁸⁸ Maslach C. (2003) *Burnout: The Cost of Caring*. Cambridge, MA: Malor Books

⁸⁹ Lyckholm L. (2001) 'Stress, burnout, and grief. In: ASCO Curriculum: Optimizing Care—The Importance of Symptom Management.' Alexandria, VA: Kendall/Hunt Publishing Co.; 2001

⁹⁰ McKee MG, Ashton K. (2004) 'Stresses of daily life'. In: Lang R, Hensrud DD (eds). *Clinical Preventive Medicine*. 3rd ed. Chicago, IL: AMA Press; 2004: 81-91.

⁹¹ Continuing Education for Healthcare Professionals. (2014) 'Burnout: Impact on Nursing'. US. Available at: <http://www.netce.com/coursecontent.php?courseid=827> (accessed 14 April 2014)

6 Previous NHS initiatives to retain nurses

The government launched local and national initiatives to tackle the problems of recruiting and retaining nursing staff in the early 2000s. At the time it was found that turnover was a significant issue, particularly in inner cities and teaching trusts, where some turnover rates were found to range from 11% to 38%.⁹² It was also found that up to 34% of new graduate nurses were not registering to practice.⁹³

The causes were found to be associated with: pay and the cost of living; the changing nature of the job; feeling valued; and the availability of other employment opportunities.⁹⁴ The government developed a number of initiatives in response to turnover, and charged National Taskforces with following up on implementation.⁹⁵ However, it is unclear how effective the initiatives were in retaining staff and whether they were fully implemented.

Pay and cost of living - The government sought to improve nurses' salaries through a series of annual increases and special allowances. In addition the government aimed to increase nursing accommodation in London and a scheme to help public sector workers buy their own home was implemented.

Employment opportunities - There was support for extending nurses' prescribing rights, allowing nurses to make and receive referrals, and admit and discharge patients. The government championed these and other new ways of working.⁹⁶

Increasing nursing numbers - The government sought to increase nursing numbers through recruiting overseas nurses and some increases in education commissions.

There were also a number of high profile recruitment drives aimed at returning non-practicing nurses. The campaigns in 1999 and 2000 yielded 6,000 and 5,797 returners respectively by September 2000,⁹⁷ although areas with the highest vacancy rates, such as London, received a disproportionately low share of these nurses.⁹⁸ A third high profile campaign, in 2001, recruited 713 returners between April and July 2001.⁹⁹

Feeling valued - Some of the initiatives at the time supported nurses feeling valued, such as: on-going staff development; flexible and family friendly work arrangements; zero tolerance policies on violence against staff; and policies to eradicate harassment and discrimination in the NHS. However, rhetoric from government can

⁹² Finlayson B, Dixon J, Meadows S, Blair G. (2002) 'Mind the gap: the extent of the NHS nursing shortage'. BMJ. Sep 7, 2002; 325(7363): 538–541.

⁹³ Finlayson B, Dixon J, Meadows S, Blair G. (2002) 'Mind the gap: the extent of the NHS nursing shortage'. BMJ. Sep 7, 2002; 325(7363): 538–541.

⁹⁴ Finlayson B, Dixon J, Meadows S, Blair G. (2002) 'Mind the gap: the extent of the NHS nursing shortage'. BMJ. Sep 7, 2002; 325(7363): 538–541.

⁹⁵ Finlayson B, Dixon J, Meadows S, Blair G. (2002) 'Mind the gap: the policy response to the NHS nursing shortage' BMJ. Sep 7, 2002; 325(7363): 541–544.

⁹⁶ Department of Health. The NHS plan: a plan for investment, a plan for reform. Norwich: Stationery Office; 2000.

⁹⁷ NHS Executive. Recruiting and retaining nurses, midwives and health visitors in the NHS—a progress report. London: Department of Health; 2000.

⁹⁸ Royal College of Nursing. Making up the difference: A review of the UK nursing labour market in 2000. London: RCN; 2000.

⁹⁹ Department of Health. Milburn: we are delivering on pledge to bring in more nurses. Press release, 13 July 2001

sometimes be negative towards public sector workers, which would undermine efforts to make workers feel valued.¹⁰⁰

7 What stops nurses leaving?

One of the main conclusions of the recent CFWI briefing on future nursing workforce projections is that there needs to be increased retention of new graduates and current staff, encouragement of older staff to delay retirement and encouragement of staff to increase to closer to full time working.¹⁰¹

Evidence shows that early signs of departure are strong predictors of the actual behaviour;¹⁰² however, many of the factors that have an impact on intention to leave are able to be modified to potentially reduce the number of leavers.

Given the impact of stress and burnout on nurses leaving, the primary goal should be to stop the burnout cycle early by preventing the accumulation of stress. When implemented appropriately, preventing burnout is easier and more cost-effective than resolving it once it has occurred.¹⁰³

Central to retaining nurses is the development of a supportive work environment that prevents intention to leave the profession as well as actual leaving.¹⁰⁴ In addition, being embedded in an organisation is critical in reducing staff turnover – on a basic level nurses who are psychologically engaged and actively involved in organisations report a lower intention to leave their current job.^{105,106}

Cross-referencing the risk factors of burnout against the dimensions of job embeddedness identified the following supportive actions organisations could adopt when developing a retention strategy with the aim of reducing nurse turnover. However, it is unclear which are likely to be the most successful, and part of any retention strategy should build in evaluation of approaches.

Determine levels of intention to leave, stress and burnout and monitor the impact of strategies to improve

Determining the baseline of: turnover; the proportion of nurses that intend to leave; levels of job dissatisfaction; and stress would be helpful in targeting strategies to particular units to improve retention and prevent nurse turnover.

¹⁰⁰ Finlayson B, Dixon J, Meadows S, Blair G. (2002) 'Mind the gap: the policy response to the NHS nursing shortage' *BMJ*. Sep 7, 2002; 325(7363): 541–544.

¹⁰¹ CFWI (2013) 'Future nursing workforce projections – starting the discussion' Available at: http://www.cfw.org.uk/publications/future-nursing-workforce-projections-starting%20the%20discussion/@_@publication-detail (accessed 12th April 2014)

¹⁰² Murrells T, Robinson S, Griffiths P, (2008) 'Is satisfaction a direct predictor of nursing turnover? Modelling the relationship between satisfaction, expressed intention and behaviour in a longitudinal cohort study.' *Human Resources for Health* 6, 22,

¹⁰³ Maslach C, Leiter MP. (1997) 'The Truth about Burnout: How Organizations Cause Personal Stress and What to Do About it.' San Francisco, CA: Jossey-Bass; 1997.

¹⁰⁴ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

¹⁰⁵ Carter M R, Tourangeau A E. (2012) 'Staying in nursing: what factors determine whether nurses intend to remain employed?' *J Adv Nurs*. 2012 Jul;68(7):1589-600. doi: 10.1111/j.1365-2648.2012.05973.x. Epub 2012 Mar 28.

¹⁰⁶ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

The NHS Staff Survey¹⁰⁷ and a number of other tools could be used to determine baseline data, for example the Maslach Burnout Inventory.^{108,109}

Make improving retention and staff engagement a key strategy

Retention strategies are likely to be significantly cheaper than recruitment strategies. Having the leadership of the organisation committed to nurse retention and staff focusing on developing and maintaining nurse retention strategies and relationships with nurses is likely to reduce nurse turnover.¹¹⁰

Many of the options to improve job satisfaction and reduce burnout will require consistent leadership to provide the 'right' culture, unblock issues and provide resources.

Develop nurse leaders and nurse line managers

The effective leadership of the nursing unit is critical to: improving nurse satisfaction; the provision of a positive a working environment; improving staff retention; and reducing turnover.¹¹¹ Developing nurses as leaders will require organisational leadership from the nurse executive, and also a stable nurse executive with opportunities for growth.¹¹²

There should be a focus on developing nurses as people managers; providing feedback, praise and recognition as well as the skills to identify and action poor performance.

Line managers should ensure an individual's career goals and personal values are aligned to the organisation and that they have the knowledge, skills and ability to carry out their job role. They should put in place support and an action plan to develop an individual if there isn't a good 'fit' with the individual and their job role.

Poor performance and behaviours must be managed effectively and in a timely fashion. The organisation should view handing poor performance as central to improving quality and supporting clinical teams.

Provide flexible scheduling options

Nursing is a 24/7 business and there will always be the need for unsociable shift hours, but there can be improvements made to scheduling to reduce stress. Line managers and clinical leaders should be provided with the tools to engage staff in decision making and to develop scheduling that supports a work/life balance as much as possible.

¹⁰⁷ Available at: www.nhsstaffsurveys.com (accessed 14 April 2014)

¹⁰⁸ Maslach Burnout Inventory. Available at: <http://www.outcomesdatabase.org/content/maslach-burnout-inventory> (accessed 14 April 2014)

¹⁰⁹ Pflifferling JH. Burnout Risk Appraisal. Available at http://www.cpw.org/burnout_information.htm (accessed 13 April 2014)

¹¹⁰ Bland Jones, C, Gates M. (2007) 'The Costs and Benefits of Nurse Turnover: A Business Case for Nurse Retention'. OJIN. Vol.12 – 2007 No 3.

¹¹¹ Duffield CM, Roche MA, Blay N, Stasa H (2011) 'Nursing unit managers, staff retention and the work environment.' J Clin Nurs. 2011 Jan; 20(1-2):23-33.

¹¹² Duffield C, Roche M, Blay N, Thoms D, Stasa H. (2011) 'The consequences of executive turnover.' J Res Nurs. 2011;13(6):503–514. doi: 10.1177/1744987111422419.

Flexible working options and options such as self-scheduling, flexibility in schedules, family-friendly policies and social hours improve health care provider retention.^{113,114,115}

Review patient case mix and align staffing and tasks

Patients are more likely to have a higher acuity and stay for shorter periods of time. This shift, alongside developments in care pathways, additional assessments and the volume of note taking, has undoubtedly led to increased stress on the nursing workforce. It is recognised that nurses have experienced an increase in paperwork over recent years, partly as a result of regular audit and clinical governance activities. Like other professionals working in the NHS, it was found that nurses usually do not have good administrative support and work overtime as a result.¹¹⁶

These changes maybe more pronounced in some branches of nursing, and organisations should look to review the 'standard' case mix and assess burnout in clinical units with a high nurse turnover and determine if there is the appropriate level of nursing staff, and look to develop the team's resources to better manage the workload. This may also involve task restructuring to make better use of administrators, healthcare assistants, while freeing up nursing time.

In addition changing organisational processes, so that the nursing staff have additional autonomy, can improve organisational commitment and decrease turnover.¹¹⁷

Provide mentorship and continual professional development

Effective clinical supervision has a positive influence on recruitment and retention and works best when there was a good supervisor-mentee relationship.¹¹⁸

A number of studies have found that despite difficult work environments some nurses remain due to their sense of professionalism and vocation.^{119,120} Professional commitment has been found to be stronger than organisational commitment in determining turnover.¹²¹ Having a good clinical mentor and access to on-going personal development opportunities is likely to improve nurse retention.

¹¹³ Hunter E, Nicol M. (2002) 'Systematic review: evidence of the value of continuing professional development to enhance recruitment and retention of occupational therapists in mental health.' *Br J Occup Ther.* 2002;13(6):207–215.

¹¹⁴ Chenoweth L, Jeon Y-H, Merlyn T, Brodaty H. (2010) 'A systematic review of what factors attract and retain nurses in aged and dementia care.' *J Clin Nurs.* 2010;13:156–167. doi: 10.1111/j.1365-2702.2009.02955.x.

¹¹⁵ Butler M, Collins R, Drennan J, Halligan P, O'Mathúna DP, Schultz TJ, Sheridan A, Vilis E. (2011) Hospital nurse staffing models and patient and staff-related outcomes. *Cochrane Database of Systematic Reviews.* 2011. Art. No.: CD007019. doi:10.1002/14651858.CD007019.pub2.

¹¹⁶ Smith G, Seccombe I. *Changing times: a survey of registered nurses in 1998.* Brighton: Institute for Employment Studies; 1998.

¹¹⁷ Gess E, Manojlovich M, Warner S. (2008) 'An evidence-based protocol for nurse retention.' *J Nurs Adm.* 2008;13(10):441–447. doi: 10.1097/01.NNA.0000338152.17977.ca. doi:10.1097/1001.NNA.0000338152.0000317977.ca

¹¹⁸ Chenoweth L, Jeon YH, Merlyn T, Brodaty H (2010) 'Review A systematic review of what factors attract and retain nurses in aged and dementia care.' *J Clin Nurs.* 2010 Jan; 19(1-2):156-67.

¹¹⁹ Moore K A. (2001) 'Hospital restructuring: impact on nurses mediated by social support and a perception of challenge.' *Journal of Health and Human Services Administration* 23 (4), 490–517.

¹²⁰ Angerami E L, Gomes D L, Mendes I J. (2000) 'Permanence of nurses in their profession.' *Revista Latino-Americana de Enfermagem* 8 (5), 52–57 [Article in Portuguese].

¹²¹ Lu K Y, Lin PL, Wu C M, Hsieh Y L, Chang Y Y. (2002) 'The relationship among turnover intentions, professional commitment, and job satisfaction of hospital nurses.' *Journal of Professional Nursing* 18 (4), 214–219.

Career commitment is a more stable determinant of turnover that can transcend situational and personal influences; this supports the role of continuing education and professional development opportunities in nurse retention.¹²²

In addition more highly educated nurses are more likely to leave to seek career progression – around 28% of the UK nursing workforce is educated to degree level¹²³ and organisations should ensure there are career development opportunities for nurses that wish to progress.

On-going education, learning and career advancement opportunities and tuition reimbursement could all improve retention.¹²⁴

Provide rewards and recognition for high performers

Having a clear focus on values-based nursing reflected in the recruitment, staff objectives, appraisals and the reward system is likely to improve retention. Offering nurses rewards and recognition for their work improves organisational commitment, and decreases turnover.¹²⁵

Salary increases and performance related pay are likely to help improve retention, but only if linked to career development opportunities.

Organisations should look to offer employee benefit packages, such as discounts on gym membership and entertainment, and work with the local community to set up volunteering links for staff and their families and talks with local schools and community groups. Community events should be promoted internally, such as concerts, fetes, sponsored walks and so on.

Invest in the nurse workforce

A well-trained and flexible workforce is likely to make fewer errors and to have the skills to deal with patients and events that are out of the ordinary. Instilling techniques such as Lean as a key part of workforce training enables a workforce to focus on improvement, experimentation and learning as standard practice.

Focus on newly qualified nurses

Many nurses stay due to a commitment to nursing. However, this commitment is not as strong in the first few years of nursing, and organisational factors play a stronger role in influencing turnover.¹²⁶

Employers can have a crucial role in creating healthy work environments and supporting newly qualified nurses, as it is unlikely these nurses are sufficiently

¹²² Hayes L J, et al. (2006) 'Nurse turnover: A literature review' *International Journal of Nursing Studies* 43 (2006) 237–263

¹²³ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

¹²⁴ Bland Jones, C, Gates M. (2007) 'The Costs and Benefits of Nurse Turnover: A Business Case for Nurse Retention'. *OJIN*. Vol.12 – 2007 No 3.

¹²⁵ Gess E, Manojlovich M, Warner S. (2008) 'An evidence-based protocol for nurse retention.' *J Nurs Adm.* 2008;13(10):441–447. doi: 10.1097/01.NNA.0000338152.17977.ca. doi:10.1097/1001.NNA.0000338152.0000317977.ca

¹²⁶ Gardner D L, (1992) 'Career commitment in nursing.' *Journal of Professional Nursing* 8 (3), 155–160.

empowered to cope with work-related stressors and to create satisfactory working conditions for themselves.¹²⁷

Providing supportive mentorship, preceptorships and peer support networks could reduce turnover of newly qualified nurses. There is strong evidence that the newly qualified nurse benefits from a period of supported and structured preceptorship, which translates to improved recruitment and retention for the employing organisations¹²⁸

Providing support for newly qualified health professionals through preceptorship has long been advocated as a means of improving patient care by assisting new practitioners in developing confidence, clinical skills, and encouraging workforce retention by supporting students in the transition to being a registered practitioner.¹²⁹ Preceptorships are likely to be more effective when they are longer than four months in length, and when preceptors are trained in the role and offered some form of reward or recognition.¹³⁰

Provide flexible retirement options

Phased retirement options would benefit the organisation, by retaining experienced mature staff, as well as supporting an aging workforce.¹³¹

Nurses coming up to retirement age may not wish to remain in the high pressured environment of frontline clinical care, or work full time; however, there are a number of options that could be explored to support more mature nurses staying on, such as:^{132,133,134}

- Working in a lower band role
- Working part-time with shift flexibility (particularly for nurses with caring responsibilities)
- Flexible pension provision
- Improving access to continuing professional development
- Considering the use of nurses near retirement in roles that are less physically demanding, such as: mentors or preceptors; teaching; clinical audit; investigating incidents and complaints; sharing good practice across clinical teams.

¹²⁷ Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

¹²⁸ Whitehead B, et al (2013) 'Supporting newly qualified nurses in the UK: A systematic literature review' Nurse Education Today Volume 33, Issue 4 , Pages 370-377, April 2013. Available at: [http://www.nurseeducationtoday.com/article/S0260-6917\(13\)00010-5/abstract](http://www.nurseeducationtoday.com/article/S0260-6917(13)00010-5/abstract) (accessed 14 April 2014)

¹²⁹ Kings College London (2009) 'Providing preceptorship for newly qualified nurses: What are the components of success?' Available at: <http://www.kcl.ac.uk/nursing/research/nrru/policy/Policy-Plus-Issues-by-Theme/nurseeducationtraining/PolicyIssue16.pdf> (accessed 18 April 2014)

¹³⁰ Kings College London (2009) 'Providing preceptorship for newly qualified nurses: What are the components of success?' Available at: <http://www.kcl.ac.uk/nursing/research/nrru/policy/Policy-Plus-Issues-by-Theme/nurseeducationtraining/PolicyIssue16.pdf> (accessed 18 April 2014)

¹³¹ Hirschhorn CA, West TB, Hill KS, Cleary BL, Hewlett PO (2010) Experienced nurse retention strategies: what can be learned from top-performing organizations. J Nurs Adm. 2010 Nov; 40(11):463-7.

¹³² Buchan J. (1999) 'The 'greying' of the United Kingdom nursing workforce: implications for employment policy and practice.' J Adv Nurs. 1999 Oct;30(4):818-26.

¹³³ Flexible retirement case studies. NHS Employers. Available at: <http://www.nhsemployers.org/your-workforce/pay-and-reward/pensions/flexible-retirement/flexible-retirement-case-studies> (accessed 18 April 2014)

¹³⁴ Andrews J, Manthorpe J, Watson R. (2005) 'Employment transitions for older nurses: a qualitative study.' J Adv Nurs. 2005 Aug;51(3):298-306.

Develop and continue staff engagement

Organisations with a participative management style are associated with low turnover.¹³⁵ The executive should look to utilise staff engagement techniques,¹³⁶ as well as mechanisms for communication and voicing concerns (e.g. providing anonymous suggestions, on-going surveys, 360 degree feedback).¹³⁷

Promote stress management

Stress management techniques and other interventions to ensure psychosocial well-being should be a priority for both individuals and organisations, with a goal of preventing stress and managing it while in its early stages.

Promote positive nurse – physician relationships

Collaborative nurse to physician relationships should be developed and led from the very top – the Director of Nursing and Medical Director. Similarly, poor behaviours should be identified and acted upon quickly.

Promote connections internally and externally

Clinical teams should not be isolated and the leadership should promote a culture where all parts of the system communicate with each other. Promote connections between different clinical groups in the organisation, such as learning sets for: nurse mentors; health care assistants undertaking additional education; staff nurses with specific interests such as in infection control.

Promote the formation of groups across the organisation, such as netball teams, choirs, and reading groups and look to provide discounts for groups who need to access local leisure facilities to meet.

8 Conclusion

Around 10% of the nursing workforce intends to leave, which is likely to result in actual turnover if mitigating strategies are not put in place. Turnover rates are higher for newly qualified nurses, specific nursing practices and possibly nurses approaching retirement.

It is less expensive to retain the nurses than to recruit, train and place new ones. Many healthcare providers struggle to fill nursing vacancies and need to develop robust nurse retention strategies to prevent further nurses leaving.

Investing in improved nursing work environments is a key strategy to retain nurses.¹³⁸ No single approach is likely to stop nurses leaving, but by adopting a number of different options there are likely to be significant gains in retaining nurses.

Further evaluation is needed to determine the most effective strategies for nurse retention.

¹³⁵ Van den Heede K. et al (2013) 'Effective strategies for nurse retention in acute hospitals: A mixed method study' International Journal of Nursing Studies. Volume 50, Issue 2 , Pages 185-194, February 2013.

¹³⁶ NHS Employers Staff Engagement Toolkit. Available at: <http://www.nhsemployers.org/EmploymentPolicyAndPractice/staff-engagement/Staff-engagement-toolkit/Pages/Staff-engagement-toolkit.aspx> (accessed 14 April 2014)

¹³⁷ Bland Jones, C, Gates M. (2007) 'The Costs and Benefits of Nurse Turnover: A Business Case for Nurse Retention'. OJIN. Vol.12 – 2007 No 3.

¹³⁸ Van den Heede K. et al (2013) 'Effective strategies for nurse retention in acute hospitals: A mixed method study' International Journal of Nursing Studies. Volume 50, Issue 2 , Pages 185-194, February 2013.

References

- Aiken LH, Clarke SP, Sloane DM, Sochalski J, Silber JH. (2002) 'Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction'. *JAMA*. 2002;288(16):1987-1993.
- Andrews J, Manthorpe J, Watson R. (2005) 'Employment transitions for older nurses: a qualitative study.' *J Adv Nurs*. 2005 Aug;51(3):298-306.
- Angerami E L, Gomes D L, Mendes I J. (2000) 'Permanence of nurses in their profession.' *Revista Latino-Americana de Enfermagem* 8 (5), 52–57
- Bland Jones, C, Gates M. (2007) 'The Costs and Benefits of Nurse Turnover: A Business Case for Nurse Retention'. *OJIN*. Vol.12 – 2007 No 3.
- Browning L, Ryan C, Thomas S, Greenberg M, Rolniak S. (2007) 'Nursing specialty and burnout.' *Psychol Health Med*. 2007;12(2):148-154.
- Buchan J. (1999) 'The 'greying' of the United Kingdom nursing workforce: implications for employment policy and practice.' *J Adv Nurs*. 1999 Oct;30(4):818-26.
- Buchan J (2001) 'Nursing and Midwifery Workforce Data 2000/01. A special report'. Chamberlain Dunn Associates.
- Buchan J. (2002) Nursing and Midwifery Workforce Data – a special report 2002/03. Chamberlain Dunn Associates.
- Butler M, Collins R, Drennan J, Halligan P, O'Mathúna DP, Schultz TJ, Sheridan A, Vilis E. (2011) Hospital nurse staffing models and patient and staff-related outcomes.
- Carter M R, Tourangeau A E. (2012) 'Staying in nursing: what factors determine whether nurses intend to remain employed?' *J Adv Nurs*. 2012 Jul;68(7):1589-600. doi: 10.1111/j.1365-2648.2012.05973.x. Epub 2012 Mar 28. Pfifferling JH. Burnout Risk Appraisal. Available at http://www.cpwb.org/burnout_information.htm (accessed 13 April 2014)
- Cavanagh S J, Coffin D A, (1992). 'Staff turnover among hospital nurses.' *Journal of Advanced Nursing* 17 (11), 1369–1376.
- Chenoweth L, Jeon Y-H, Merlyn T, Brodaty H. (2010) 'A systematic review of what factors attract and retain nurses in aged and dementia care.' *J Clin Nurs*. 2010;13:156–167. doi: 10.1111/j.1365-2702.2009.02955.x.
- CFWI (2013) 'Future nursing workforce projections – starting the discussion' Available at: <http://www.cfw.org.uk/publications/future-nursing-workforce-projections-starting%20the%20discussion/@@publication-detail> (accessed 12th April 2014)

Cochrane Database of Systematic Reviews. 2011. Art. No.: CD007019.
doi:10.1002/14651858.CD007019.pub2.

Continuing Education for Healthcare Professionals. (2014) 'Burnout: Impact on Nursing'. US. Available at: <http://www.netce.com/coursecontent.php?courseid=827> (accessed 14 April 2014)

Department of Health. The NHS plan: a plan for investment, a plan for reform. Norwich: Stationery Office; 2000.

Department of Health. Milburn: we are delivering on pledge to bring in more nurses. Press release, 13 July 2001

Duffield CM, Roche MA, Blay N, Stasa H (2011) 'Nursing unit managers, staff retention and the work environment.' J Clin Nurs. 2011 Jan; 20(1-2):23-33.

Duffield C, Roche M, Blay N, Thoms D, Stasa H. (2011) 'The consequences of executive turnover.' J Res Nurs. 2011;13(6):503–514. doi: 10.1177/1744987111422419.

Finlayson B, Dixon J, Meadows S, Blair G. (2002) 'Mind the gap: the extent of the NHS nursing shortage'. BMJ. Sep 7, 2002; 325(7363): 538–541.

Flinkman M, Leino-Kilpi H, Salanterä S. Nurses' (2010) 'Intention to leave the profession: integrative review.' Journal of Advanced Nursing. 2010;66(7):1422–1434JAN5322

Gardner D L, (1992) 'Career commitment in nursing.' Journal of Professional Nursing 8 (3), 155–160.

Geiger-Brown J, Trinkoff AM, Nielsen K, et al. (2004) 'Nurses' perception of their work environment, health, and well-being: a qualitative perspective.' AAOHN J. 2004;52(1):16-22.

Gess E, Manojlovich M, Warner S. (2008) 'An evidence-based protocol for nurse retention.' J Nurs Adm. 2008;13(10):441–447.

Gray A M, Phillips V L. (1996) 'Labour turnover in the British National Health Service: a local labour market analysis.' Health Policy 36 (3), 273–289.

Hayes L J, et al. (2006) 'Nurse turnover: A literature review' International Journal of Nursing Studies 43 (2006) 237–263

Heinen M M. et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries' Available at: [http://www.journalofnursingstudies.com/article/S0020-7489\(12\)00330-6/fulltext#sec0070](http://www.journalofnursingstudies.com/article/S0020-7489(12)00330-6/fulltext#sec0070) (accessed 12th April 2014)

Hemingway M A, Smith C S. (1999) 'Organizational climate and occupational stressors as predictors of withdrawal behaviours and injuries in nurses.' *Journal of Occupational and Organizational Psychology* 72 (3), 285–299.

Hirschhorn CA, West TB, Hill KS, Cleary BL, Hewlett PO (2010) Experienced nurse retention strategies: what can be learned from top-performing organizations. *J Nurs Adm.* 2010 Nov; 40(11):463-7.

Holtom B C, O'Neill B S. (2004) 'Job embeddedness: a theoretical foundation for developing a comprehensive nurse retention plan.' *Journal of Nursing Administration* 34 (5), 216–227.

Holtom B C, Inderrieden E J .(2006) 'Integrating the unfolding model and job embeddedness model to better understand voluntary turnover.' *Journal of Management Issues* 18

HSCIC (2014) 'NHS Hospital and Community Health Service (HCHS) Workforce Statistics in England, Summary of staff in the NHS - 2003-2013, Overview' Available at:

<http://www.hscic.gov.uk/searchcatalogue?productid=14368&topics=0%2fWorkforce&sort=Relevance&size=10&page=1#top> (accessed 13 April 2014)

Hugonnet S, Chevrolet JC, Pittet D. (2007) 'The effect of workload on infection risk in critically ill patients.' *Crit Care Med.* 2007;35(1): 76-81.

Hunter E, Nicol M. (2002) 'Systematic review: evidence of the value of continuing professional development to enhance recruitment and retention of occupational therapists in mental health.' *Br J Occup Ther.* 2002;13(6):207–215.

Kane RL, Shamliyan TA, Mueller C, Duval S, Wilt TJ. (2007) 'The association of registered nurse staffing levels and patient outcomes: systematic review and meta-analysis.' *Med Care.* 2007;45(12):1195-1204.

Kings College London (2009) 'Providing preceptorship for newly qualified nurses: What are the components of success?' Available at:

<http://www.kcl.ac.uk/nursing/research/nnru/policy/Policy-Plus-Issues-by-Theme/nurseeducationtraining/PolicyIssue16.pdf> (accessed 18 April 2014)

Krausz M. et al (1995) 'Predictors of intentions to leave the ward, the hospital, and the nursing profession.' *Journal of Organizational Behavior* 16, 277–288.

Lafer G, Moss H, Kirtner R, et al. *Solving the Nursing Shortage: A Report Prepared for the United Nurses of America, AFSCME, AFL-CIO.*

Lee T W, Mitchell T R, Sablynski C J, Burton J P, Holtom B C. (2004). 'Job Embeddedness in a Culturally Diverse Environment.' *Academy of Management Journal* 47: 711–722.

Lintern S. (25 Nov 2013) 'Thousands of nurses exit the profession' Health Service Journal.

Lu K Y, Lin PL, Wu C M, Hsieh Y L, Chang Y Y. (2002) 'The relationship among turnover intentions, professional commitment, and job satisfaction of hospital nurses.' Journal of Professional Nursing 18 (4), 214–219.

Ludwick R, Silva MC. (2003) 'Errors, the nursing shortage and ethics: survey results.' Online J Issues Nursing. 2003;8(3):9.

Lyckholm L. (2001) 'Stress, burnout, and grief. In: ASCO Curriculum: Optimizing Care—The Importance of Symptom Management.' Alexandria, VA: Kendall/Hunt Publishing Co.; 2001

Maslach C, Leiter MP. (1997) 'The Truth about Burnout: How Organizations Cause Personal Stress and What to Do About it.' San Francisco, CA: Jossey-Bass; 1997.

Maslach C. (2003) 'Burnout: The Cost of Caring.' Cambridge, MA: Malor Books

Maslach Burnout Inventory. Available at:

<http://www.outcomesdatabase.org/content/maslach-burnout-inventory> (accessed 14 April 2014)

McConnell C.R. (1999). 'Staff turnover: Occasional friend, frequent foe, and continuing frustration.' Health Care Manager, 8; 1-13.

McKee MG, Ashton K. (2004) 'Stresses of daily life'. In: Lang R, Hensrud DD (eds). Clinical Preventive Medicine. 3rd ed. Chicago, IL: AMA Press; 2004: 81-91.

Mitchell T R, Holtom B C, Lee T W, Sablinski C J, Erez M. (2001). 'Why People Stay: Using Job Embeddedness to Predict Voluntary Turnover.' The Academy of Management Journal 44: 1102–1121.

Moore K A. (2001) 'Hospital restructuring: impact on nurses mediated by social support and a perception of challenge.' Journal of Health and Human Services Administration 23 (4), 490–517.

Murrells T, Robinson S, Griffiths P, (2008) 'Is satisfaction a direct predictor of nursing turnover? Modelling the relationship between satisfaction, expressed intention and behaviour in a longitudinal cohort study.' Human Resources for Health 6, 22,

NHS Staff Survey Available at: www.nhsstaffsurveys.com (accessed 14 April 2014)

NHS Employers. Flexible retirement case studies. Available at:

<http://www.nhsemployers.org/your-workforce/pay-and-reward/pensions/flexible-retirement/flexible-retirement-case-studies> (accessed 18 April 2014)

NHS Employers Staff Engagement Toolkit. Available at:
<http://www.nhsemployers.org/EmploymentPolicyAndPractice/staff-engagement/Staff-engagement-toolkit/Pages/Staff-engagement-toolkit.aspx> (accessed 14 April 2014)

NHS Executive. Recruiting and retaining nurses, midwives and health visitors in the NHS—a progress report. London: Department of Health; 2000.

Page A (ed). (2004) 'Keeping Patients Safe: Transforming the Work Environment of Nurses.' Washington, DC: The National Academies Press; 2004.

Poncet MC, Toullic P, Papazian L, et al. (2007) 'Burnout syndrome in critical care nursing staff.' *Am J Respir Crit Care Med.* 2007;175(7):698-704.

Price J L, Mueller C W, (1981). 'A causal model of turnover for nurses.' *Academy of Management Journal* 24 (3),543–565

Quattrin R, Zanini A, Nascig E, Annunziata M, Calligaris L, Brusaferrero S.(2006) 'Level of burnout among nurses working in oncology in an Italian region.' *Oncol Nurs Forum.* 2006;33(4):815-820.

RCN (2000). Making up the difference: A review of the UK nursing labour market in 2000. London: RCN; 2000.

RCN (2003) 'More nurses, working differently – A review of the UK nursing labour market in 2002'. RCN

Reitz O Ed. Anderson M A. (2011). 'An Overview of Job Embeddedness'. *Journal of Professional Nursing* 27 (5): 320–327. doi:10.1016/j.profnurs.2011.04.004. ISSN 8755-7223. Retrieved 2012-09-17.

Rhéaume A, Clément L, LeBel N. (2011) 'Understanding intention to leave amongst new graduate Canadian nurses: a repeated cross sectional survey'. *Int J Nurs Stud.* 2011;13(4):490–500. doi: 10.1016/j.ijnurstu.2010.08.005.

Scott H, (1996) 'Nurse shortages: why are nurses leaving the NHS?' *British Journal of Nursing*, Vol. 5, Iss. 18, 12 Oct 1996, pp 1098. Available at:
https://www.internurse.com/cgi-bin/go.pl/library/article.cgi?uid=17056;article=BJN_5_18_1098;format=pdf (accessed 13 April 2014)

Shader K, Broome M, Broome C D, West M, Nash M. (2001) 'Factors influencing satisfaction and anticipated turnover for nurses in an academic medical center.' *Journal of Nursing Administration* 31 (4), 210–216.

Shields M A, Ward M, (2001) 'Improving nurse retention in the National Health Service in England: the impact of job satisfaction on intentions to quit.' *Journal of Health Economics* 20 (5), 677–701

Smith G, Seccombe I. Changing times: a survey of registered nurses in 1998. Brighton: Institute for Employment Studies; 1998.

Spinetta JJ, Jankovic M, Ben Arush MW, et al. (2000) 'Guidelines for the recognition, prevention, and remediation of burnout in health care professionals participating in the care of children with cancer: report of the SIOP Working Committee on Psychosocial Issues in Pediatric Oncology.' *Med Pediatr Oncol.* 2000;35(2):122-125.

Stone PW, Mooney-Kane C, Larson EL, et al. (2007) 'Nurse working conditions and patient safety outcomes.' *Med Care.* 2007;45(6): 571-578.

Strachota E, Normandin P, O'Brien N, Clary M, Krukow B. (2003) 'Reasons registered nurses leave or change employment status.' *Journal of Nursing Administration* 33 (2), 111–117.

Tai T W C, Bame S I, Robinson C D. (1998) 'Review of nursing turnover research, 1977–1996.' *Social Science and Medicine* 47 (12), 1905–1924.

Tummers L G, Groeneveld S M, Lankhaar M. J (2013) 'Why do nurses intend to leave their organization? A large-scale analysis in long-term care.' *Adv Nurs.* 2013 Dec;69(12):2826-38. doi: 10.1111/jan.12249. Epub 2013 Sep 9. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/24016210> (accessed 12th April 2014)

Vahey DC, Aiken LH, Sloane DM, Clarke SP, Vargas D. (2004) 'Nurse burnout and patient satisfaction.' *Med Care.* 2004;42(2 Suppl): II57-II66.

Van den Heede K. et al (2013) 'Effective strategies for nurse retention in acute hospitals: A mixed method study' *International Journal of Nursing Studies.* Volume 50, Issue 2 , Pages 185-194, February 2013.

VHA Inc. (2002). The business case for workforce stability.

Whitehead B, et al (2013) 'Supporting newly qualified nurses in the UK: A systematic literature review' *Nurse Education Today* Volume 33, Issue 4 , Pages 370-377, April 2013. Available at: [http://www.nurseeducationtoday.com/article/S0260-6917\(13\)00010-5/abstract](http://www.nurseeducationtoday.com/article/S0260-6917(13)00010-5/abstract) (accessed 14 April 2014)

Yin J T, Yang K A. (2002) 'Nursing turnover in Taiwan: a meta-analysis of related factors.' *International Journal of Nursing Studies* 39 (6), 573–581.

Zimmerman S, Gruber-Baldini AL, Hebel JR, Sloane PD, Magaziner J. (2002) 'Nursing home facility risk factors for infection and hospitalization: importance of registered nurse turnover, administration, and social factors.' *J Am Geriatr Soc.* 2002;13(12):1987–1995. doi: 10.1046/j.1532-5415.2002.50610.x.