Outpatient clinic numbers: a review of standards and current practice

This article explores current recommendations for the safe and efficient running of outpatient clinics, why non-adherence exists, the consequences of non-adherence, and what can be done to improve standards. It promotes adherence to recommendations by both clinical and managerial staff.

Recommendations regarding the safe and efficient running of ear, nose and throat clinics have been published (Sunkaraneni and Reddy-Kolanu, 2009; Lesser, 2015; Sharma et al, 2016). Key elements of these recommendations are ensuring there is appropriate time, equipment and staff for each consultation. Despite these recommendations, understaffed clinics are commonplace as a result of overbooking. Although this article focuses on the literature relating to ear, nose and throat surgery, the findings apply to many surgical and medical specialities.

Patient:staff ratios

Currently, a maximum number of ten patients per doctor is recommended for a standard clinic session of 4 hours (12 if a separate session is allocated in the week for the sole purposes of clinic administration)(Lesser, 2015). This maximum number is reduced to eight in sub-specialist clinics, such as advanced rhinology clinics. Core surgical trainees, GP trainees and foundation year trainees should have no patients booked but can see patients for learning purposes. Each clinician should work with a qualified nurse, and an additional nurse should also be available to ensure the smooth running of the clinic (Sunkaraneni and Reddy-Kolanu, 2009).

Two formal audits performed at two separate institutions demonstrated failure to comply with these recommendations (I Beegun, unpublished data, 2014, 2016). A general ear, nose and throat clinic at one institution had on average 16 patients booked per doctor, and a sub-specialist clinic held at a tertiary referral centre had on average 12 patients booked per doctor. Both institutions were teaching centres with trainees and medical students. In addition, neither centre had the minimum recommended numbers of nursing staff.

The authors carried out a face-to-face survey of 19 ear, nose and throat trainees (ranging from specialist trainee 3 (ST3, year 1 registrar) to fellows (post-completion of training trainees)) at a regional training day for London and Kent Surrey Sussex in 2015 (I Beegun, unpublished data, 2015). This revealed widespread non-compliance with the guidelines: trainees were from 14 different institutions and the mean number of patients seen per clinic session was 14.5 (range 10–20). The supervising consultant saw more patients per clinic than the trainee on average (mean 15.4; range 14–20). Out of the 14 institutions, 11 held clinics where core surgical trainees, GP trainees and foundation year trainees had been allocated patients to review.

Although the results of the General Medical Council (2016) national training survey of ear, nose and throat trainees (ST3–ST8) demonstrated a fall in the number of clinics not compliant with ENT UK guidelines (Lesser, 2015) over a 3-year period (*Figure 1*), one of the criticisms of the General Medical Council training survey was that supervisor patient numbers were not investigated. Furthermore the General Medical Council survey wrongly assumes that trainees should be seeing a maximum of 14 patients. Unfortunately, the General Medical Council survey did not investigate nursing staff numbers.

Why is there non-compliance with guidelines?

Demand for ear, nose and throat outpatient consultations is already high and appears to be increasing (*Figure 2*). This is on a background of a recognized shortage of ear, nose and throat consultants. ENT UK recommends a consultant workforce ratio of 1:50 000 population, but the estimated current numbers are 1:86 000 (The Royal College of Surgeons of England, 2012).

The problem is exacerbated by the challenging financial situation in the NHS. A funding gap of £30 billion is predicted by 2020/2021, with the vast majority of this expected to be resolved by 'efficiency savings' (Nuffield Trust, 2013).

Mr I Beegun, Ear, Nose and Throat Registrar, Department of Ear, Nose and Throat Surgery, Charing Cross Hospital, Imperial College Healthcare NHS Trust, London W6 8RF

Dr L Steele, Foundation Doctor, Department of Ear, Nose and Throat Surgery, Charing Cross Hospital, Imperial College Healthcare NHS Trust, London

Mr A Hassaan, Locum Ear, Nose and Throat Consultant, West Middlesex University Hospital, Isleworth, London

Mr H Saleh, Ear, Nose and Throat Consultant, Department of Ear, Nose and Throat Surgery, Charing Cross Hospital, Imperial College Healthcare NHS Trust, London

Mr W Grant, Ear, Nose and Throat Consultant, Department of Ear, Nose and Throat Surgery, Charing Cross Hospital, Imperial College Healthcare NHS Trust, London

Correspondence to: Mr I Beegun (drbeegun@gmail.com)

With such savings needed despite increasing demand, managerial staff are left with limited options other than ignoring established guidelines and overbooking and understaffing clinics. Although seeing more patients may appear to increase productivity, this may not be the case. The number of patients seen is likely a poor measure of productivity, and its use is at least partially driven by its simplicity. Paradoxically, overbooking clinics may impair productivity when more accurate measures are used, such as competency, appropriateness of care, re-attendance to clinic, educational value and patient satisfaction (Duska et al, 2015). The points discussed are pertinent to all surgical specialties.

The consequences of overbooking clinics

Clinical outcomes

The most obvious consequence of rushed consultations is compromised clinical outcomes. Maximum numbers for clinics exist to allow sufficient time for the clinician to reach a diagnosis, communicate this to the patient, discuss treatment options, and then, together with the patient, decide on a management plan.

Reaching the correct diagnosis itself may be a lengthy process. The consultation typically begins with the patient's story, with a patient's opening statement alone taking an average of 92 seconds (Langewitz et al, 2002). After this the clinician needs to elucidate further parts of the history, and the time taken for this will vary depending on a number of factors, including the presenting complaint itself. After the history, an examination is performed. In ear, nose and throat consultations this may include procedures such as a Dix–Hallpike manoeuvre, endoscopy, and examination under a microscope.

Once a diagnosis, or at least exclusion of diagnosis, has been reached, this then needs to be carefully communicated to the patient. Computed tomography and magnetic resonance imaging scans may also need to be reviewed and explained to the patient, and any students present. Treatments may also need to be explained. In the time-pressured environment of an overbooked clinic, it is often the communication part of the clinic that is compromised, with less time afforded to explaining the patient's problems, proposing management options, discussing prevention, and providing health education (Roland et al, 1986). Compromising this is detrimental to the consultation as not only will patients often have been harbouring preconceived ideas and fears for weeks or even months which need to be addressed, but the explanation they receive significantly impacts on patient satisfaction, adherence, functional status and clinical outcomes (Cegala and Lenzmeier Broz, 2002).

Overbooking clinics therefore has the potential to significantly reduce the standard of care provided in each clinic. A higher proportion of patients may leave with a poor understanding of their diagnosis and the recommended treatment, and thus a higher risk of non-compliance. Whether as a result of a lack of understanding of their symptoms or a failure to comply with medical treatments, they may re-present.

Figure 1. Results of General Medical Council national surveys from 2012–15. 'The ear, nose and throat guidelines state that general clinics should have 12–14 patients per trainee. Do the clinics in your training post conform to these guidelines?'. From General Medical Council (2016).

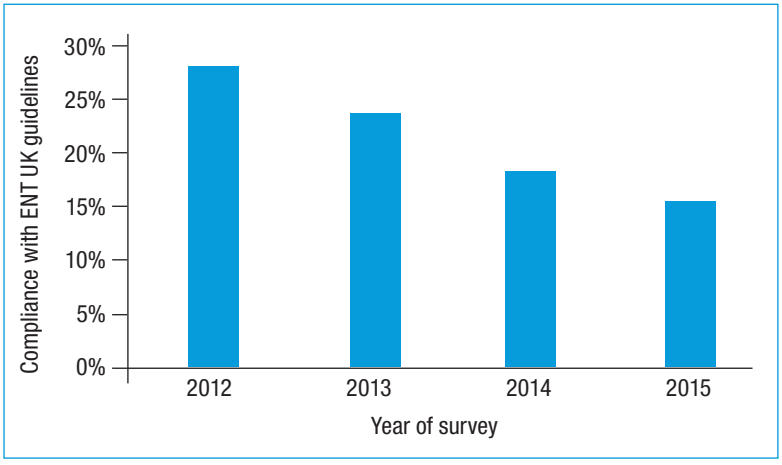
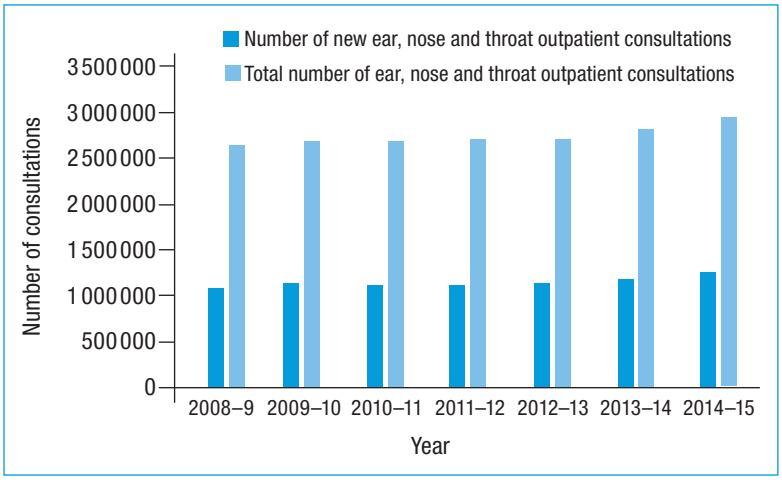


Figure 2. The total number of ear, nose and throat consultations in England and new referrals for 2008–15 (Department of Health, 2016).



Waiting times

The provision of adequate medical care in an overbooked clinic will often require longer consultation times than the time allotted. Many clinicians will thus choose to try and avoid compromising clinical outcomes by working beyond the allocated clinic time, so that each patient has a longer and more appropriate consultation time (Sellu, 1998). However, this leads to a clinic running late as patients cannot be seen at their scheduled appointment time. Not only is a service in which patients are waiting longer deemed to be poorly planned, but there are a multitude of consequences. First it risks breaching care standards. The NHS Patient's Charter sets a maximum wait time of 30 minutes for patients attending an outpatient consultation. Second, it introduces an unnecessary strain on the doctor–patient relationship. Third, there is evidence that it affects clinical outcomes. A long waiting time negatively impacts upon patient satisfaction, including the likelihood to recommend the service and the overall satisfaction with the experience (Bleustein et al, 2014). Finally it affects patients' perceptions

of information and instructions, and the overall treatment provided (Bleustein et al, 2014).

In addition to the above, the psychological effects of running late should not be underestimated. In the classic psychological experiment by Darley and Batson (1973) (the good samaritan), the authors were able to demonstrate reduced altruistic behaviour among subjects placed under time constraints. The good samaritan effect in surgery and outpatient consultations has not been established, nor would it be ethical to attempt such a study in a genuine outpatient setting. What is clear is that when under time pressure humans behave differently, less favourable and less altruistic behaviours are more likely to occur when pressurised by running late.

Medicolegal implications and consent

Although long waiting times may be a necessity as the clinician attempts to provide appropriate care, there is only so much room for compensation. Unfortunately, despite the noble intentions of most clinicians, the law is unlikely to look favourably upon a clinician who makes an error while practising in an overbooked clinic. Compromised care appears to be more likely in an overbooked clinic, with one study finding that the length of the physician's consultation was an independent inverse predictor of the physician's malpractice claim status (Dugdale et al, 1999).

The consequences of poor communication as a result of time pressures can be particularly significant in the case of consent – a necessity in surgical clinics. There are a number of good reasons why consent should be obtained in clinic and not on the day of surgery. First, patients are not accustomed to the hospital environment and the whole process of being admitted for surgery and starved is stressful. Second, a patient may have been waiting for his/her surgery for some time and on the day is unlikely to postpone his/her operation in order to consider the risks of surgery. Finally, General Medical Council (2008) guidance effectively mandates outpatient consenting, stating that patients should be allowed sufficient time to reflect before and after making a decision.

If things go wrong and the outcome of surgery has been unfavourable, the patient's experience on the day of surgery and the feeling of insufficient time to reflect on and discuss his/her surgery can encourage legal action to be taken. There have been a number of medicolegal cases in which judgement has been in favour of the patient when it has been argued that insufficient time has been provided for adequate digestion and reflection of the proposed surgical treatment. The case of Chester *vs* Afshar is often used to highlight this issue (House of Lords, 2004).

Education

Overbooking clinics not only compromises clinical outcomes and patient satisfaction, it also compromises education. Outpatient clinics need to be recognized as an important resource in improving current standards of teaching. They are of immense educational value, affording both undergraduate and postgraduate trainees the opportunity to develop both theoretical knowledge and practical skills under the tutelage of an experienced clinician.

Facilitating teaching and active learning in clinics requires time, which inevitably lengthens appointments. If the supervising consultant's clinical workload is not appropriately reduced, his/her time will be consumed by seeing patients, with less time available for consultation and discussion with the trainee.

Specific ear, nose and throat findings

Both students and clinicians have raised concerns about the provision of undergraduate ear, nose and throat education for over 30 years (Neil, 1979), and it continues to be a problem today. Although ear, nose and throat conditions represent up to 25% of adult and 50% of paediatric presentations in primary care, a 2012 survey of all UK medical schools demonstrated that 10 of the 26 did not offer an ear, nose and throat attachment, and for those that did, the mean length was a mere 8 days (Khan and Saeed, 2012). Unsurprisingly, there appears to be a lack of confidence among final year medical students and junior doctors in dealing with common ear, nose and throat problems. One study reported that 72% of a cohort of UK medical students did not feel adequately prepared to handle common, routine ear, nose and throat complaints (Chawdhary et al, 2009).

As mentioned earlier, appropriately facilitating teaching and active learning in clinics requires time, which inevitably lengthens appointments. These factors are recognized and taken into account in the ENT UK guidelines, which advise that the number of patients booked for the supervising consultant to see is reduced by 25% when trainees are present (Lesser, 2015). If the supervising consultant's clinical workload is not appropriately reduced, his/her time will be consumed by seeing patients, with less time available for consultation and discussion with the trainee or medical student. Senior review is also often required to confirm the trainee's diagnosis and agree a management plan, which not only ensures high standards of care and safety, but reduces unnecessary follow ups (Lo et al, 2004). If overbooked, the role of the ear, nose and throat outpatient clinic as an educational resource is underused.

In the USA the issues are similar. In one study the number of institutions with a compulsory ear, nose and throat rotation was only 33.6% (Haddad et al, 2003), and whereas some surgical specialties in the USA have developed a core curriculum for medical students, no curriculum exists for ear, nose and throat. There are consequently concerns regarding medical students graduating with poor physical examination skills and improper management philosophies in ear, nose and throat (Haddad et al, 2003).

Increasing efficiency

The evidence produced here suggests that overbooking clinics should not be seen as the solution to the increasing demands on the UK health-care service. Worryingly,

these concerns have been voiced for years (Sellu, 1998). Therefore, in addition to recognizing the problem, workable solutions need to be identified.

Studies suggest that it is not the actual time spent with the physician that affects outcome, but rather what happens during that time (Dugdale et al, 1999). In 2002, one study reported that only 59% of clinic time was spent with the patient (4.8 minutes), with the remainder spent on administration (17%), disturbances (15%) and finding results (9%) (Patel et al, 2002). The advent of computerised notes is likely to decrease this further, with administration times found to be as high as 57% when these are used (Kachrilas et al, 2011). Although the electronic health record has advantages, such as no longer needing to manage paper records, there are new inefficiencies and a total dependence on functioning hardware, software and a working network to be able to use the system.

The Japanese automobile manufacturer Toyota devised a system to eliminate inefficiency which focuses on identifying and eliminating 'muda' (the Japanese word for waste or non-valued activities). This 'lean methodology' has also been used in surgical clinics, and a consistent outcome of these studies has been maximizing the time the clinician spends with the patient. This can be through clinic design, which can reduce the distance travelled by patients and doctors in the clinic and the time spent searching for equipment, and through the effective use of support staff (Waldhausen et al, 2010; Skeldon et al, 2014).

Support staff appears to be an area which could be improved. The vast majority of clinicians run their clinic without a dedicated nurse (Sunkaraneni and Reddy-Kolanu, 2009). However, nurses are pivotal to the safe and efficient running of ear, nose and throat clinics, and their role should not be underestimated. Their typical activities include: skin prick testing, assistance during procedures, patient education, reinforcing management plans, and chaperoning during consultations. Experienced nursing staff are also a valuable educational resource for trainees and can help those on rotation to navigate through the local administrative nuances.

Support staff may be especially useful in improving the efficiency of procedures in ear, nose and throat clinic. Procedures occur in 70% of ear, nose and throat outpatient clinic appointments, and are of great importance both diagnostically and therapeutically (Kinshuck et al, 2010). The most common are endoscopic examinations (31%), including both laryngoscopy and rigid nasoendoscopy, pure tone audiograms (22%), and aural microscopy (10%)(Kinshuck et al, 2010). These procedures are time-consuming: the patient needs an explanation of what to expect, access needs to be gained to the equipment and facilities, and topical anaesthetic may need to be applied. The used equipment also then requires appropriate disposal, cleaning and tracking. Sufficient nursing staff, appropriate positioning of equipment, and efficient disposal pathways may improve the efficiency of already stretched ear, nose and throat clinics.

The authors suggest minimizing the time the physician spends dealing with non-clinical issues associated with procedures as one way of reducing the burden on the ear, nose and throat clinic. Other efficiency measures include the use of educational materials – such as leaflets and internet resources which can be found on the ENT UK website. This will allow patients to browse appropriate and approved clinical material at their leisure.

Further research

In the USA there is a growing recognition that the volume of patients seen does not reflect the productivity of a department (Duska et al, 2015). They have moved towards a hospital value-based purchasing model, introduced by the Centers for Medicare and Medicaid Services in 2011, which rewards or penalizes hospitals based on their performance on multiple domains of care, including clinical processes, clinical outcomes (e.g. 30-day mortality for pneumonia), patient experience and, more recently, cost efficiency (Figueroa et al, 2016). It would be wise to compare how an overbooked, understaffed clinic scored for markers such as competency and appropriateness of care, reattendance to clinic, educational value and patient satisfaction when compared to a non-overbooked, appropriately staffed clinic.

For those centres where outpatient clinics are perennially overbooked and minimum nursing levels are not present, the authors would encourage a review of the work by Sharma et al (2016) and the introduction of an outpatient safety checklist to ensure safety standards are met. This checklist covered ENT UK patient-to-staff ratios, numbers of support staff, and essential equipment standards, as well as other factors. The World Health Organization's Surgical Safety Checklist has already shown the potential impact of a checklist in surgery, and it would be interesting to know the impact of the outpatient safety checklist developed by Sharma et al (2016) on a larger scale.

More work is also recommended into safe staffing levels for clinic. The importance of staffing levels in relation to patient safety is well recognized with recommendations made for acute medicine and maternity services. Although NHS England (2015) has plans for further work on safe staffing levels covering multiple domains including community services and mental health services, outpatient clinics are not included in their domain. The authors believe that involving outpatient clinics in this work would be wise.

Research into average times for routine ear, nose and throat outpatient procedures also needs to be established to help correctly inform the recommendations for the minimum time assigned for an ear, nose and throat consultation. This work is needed as although guidance is available which clearly outlines outpatient minimum staffing levels, the basis for arriving at these figures is unclear. It could be argued that the guidance is not based on a substantive body of evidence and for this reason these guidelines are overlooked by management and the executives of the hospital.

KEY POINTS

- Overbooked and understaffed clinics are a common occurrence in the UK.
- A maximum number of patients for a clinic exists to preserve clinical standards.
- Overbooking clinics may impair productivity when measured according to competency and appropriateness of care, re-attendance to clinic, patient satisfaction and educational value.
- The efficiency of surgical clinics can be improved by applying lean methodology. Common sources of improvement include the use of support staff and modification of clinic design to increase patient–clinician face times.

Conclusions

Running behind in a busy outpatient clinic is never a pleasant experience for any party involved and is a source of stress for patients, doctors, nurses and auxiliary staff. The reception staff and those based in the waiting area absorb the bulk of patients' frustrations. Patients have plans based around their expected review time, and further stress is added with issues surrounding car parking. When patients are delayed they deserve an apology and an explanation, but unfortunately this adds to the consultation time and worsens the delays for those still waiting. As a speciality ear, nose and throat clinicians should aim to generate robust guidelines which requires research into practices commonly carried out in the outpatient setting. As a profession we are obliged to practice with General Medical Council standards in mind and manage our patients' expectations, and this requires the appropriate allocation of time and staff. **BJHM**

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Bleustein C, Rothschild DB, Valen A, Valatis E, Schweitzer L, Jones R (2014) Wait times, patient satisfaction scores, and the perception of care. *Am J Manag Care* **20**(5): 393–400.

Cegala DJ, Lenzmeier Broz S (2002) Physician communication skills training: a review of theoretical backgrounds, objectives and skills. *Med Educ* **36**(11): 1004–1016. https://doi.org/10.1046/j.1365-2923.2002.01331.x

Chawdhary G, Ho EC, Minhas SS (2009) Undergraduate ENT education: what students want. *Clin Otolaryngol* **34**(6): 584–585. https://doi.org/10.1111/j.1749-4486.2009.02027.x

Darley JM, Batson CD (1973) From Jerusalem to Jericho: A study of situational and dispositional variables in helping behavior. *J Pers Soc Psychol* **27**(1): 100–108. https://doi.org/10.1037/h0034449

Department of Health (2016) Hospital Episode Statistics. http://content.digital.nhs.uk/article/2021/Website-Search?q=title%3a+%22hospital+outpatient+activity%22&sort=Most+recent&size=10&page=1&area=both (accessed 21 December 2016)

Dugdale DC, Epstein R, Pantilat SZ (1999) Time and the patient-physician relationship. *J Gen Intern Med* **14**(S1) Suppl 1: S34–S40. https://doi.org/10.1046/j.1525-1497.1999.00263.x

Duska LR, Mueller J, Lothamer H, Pelkofski EB, Novicoff WM (2015) Lean methodology improves efficiency in outpatient academic Gynecologic Oncology clinics. *Gynecol Oncol* **138**(3): 707–711. https://doi.org/10.1016/j.ygyno.2015.07.001

Figueroa JF, Tsugawa Y, Zheng J, Orav EJ, Jha AK (2016) Association between the Value-Based Purchasing pay for performance program and patient mortality in US hospitals: observational study. *BMJ* **353**: i2214. https://doi.org/10.1136/bmj.i2214

General Medical Council (2008) Consent: patients and doctors making decisions together. www.gmc-uk.org/guidance/ethical_guidance/consent_guidance_index.asp (accessed 21 December 2016)

General Medical Council (2016) General Medical Council National Trainee Survey Reports. www.gmc-uk.org/education/national_summary_reports.asp (accessed 21 December 2016)

Haddad J Jr, Shah J, Takoudes TG (2003) A survey of US medical education in otolaryngology. *Arch Otolaryngol Head Neck Surg* **129**(11): 1166–1169. https://doi.org/10.1001/archotol.129.11.1166

House of Lords (2004) Judgements - Chester (Respondent) v. Afshar (Appellant). www.publications.parliament.uk/pa/ld200304/ldjudgmt/jd041014/cheste-1.htm (accessed 21 December 2016)

Kachrilas S, Bach C, Kumar P, Zaman F, Dickens N, Masood J, Buchholz N (2011) The impact of a computerized care records service (CRS) on doctors work patterns in urological outpatient clinics. *Health* **03**(11): 703–707. https://doi.org/10.4236/health.2011.311118

Kinshuck A, Derbyshire S, Wickham M, Lesser T (2010) Current demand for ENT outpatient services in the UK. http://www.priory.com/family_medicine/ENT_services.htm (accessed 21 December 2016)

Khan MM, Saeed SR (2012) Provision of undergraduate otorhinolaryngology teaching within General Medical Council approved UK medical schools: what is current practice? *J Laryngol Otol* **126**(04): 340–344. https://doi.org/10.1017/S0022215111003379

Langewitz W, Denz M, Keller A, Kiss A, Rüttimann S, Wössmer B (2002) Spontaneous talking time at start of consultation in outpatient clinic: cohort study. *BMJ* **325**(7366): 682–683. https://doi.org/10.1136/bmj.325.7366.682

Lesser T (2015) Recommended safe numbers in ENT clinics. https://entuk.org/guidelines (accessed 21 December 2016)

Lo S, Fergie N, Walker C, Narula AA (2004) What is the impact of consultant supervision on outpatient follow-up rate? *Clin Otolaryngol Allied Sci* **29**(2): 119–123. https://doi.org/10.1111/j.1365-2273.2004.00794.x

Neil JF (1979) Otolaryngology in the curriculum. *J R Soc Med* **72**(8): 551–552.

NHS England (2015) Safe staffing. www.england.nhs.uk/ourwork/safe-staffing/ (accessed 21 December 2016)

Nuffield Trust (2013) The state of NHS finances and the £22bn efficiency challenge. www.nuffieldtrust.org.uk/our-work/projects/state-nhs-finances-and-%C2%A322bn-efficiency-challenge (accessed 21 December 2016)

Patel HRH, Luxman CN, Bailey TS et al (2002) Outpatient clinic: where is the delay? *JRSM* **95**(12): 604–605. https://doi.org/10.1258/jrsm.95.12.604

Roland MO, Bartholomew J, Courtenay MJ, Morris RW, Morrell DC (1986) The five minute consultation: effect of time constraint on verbal communication. *BMJ* **292**(6524): 874–876. https://doi.org/10.1136/bmj.292.6524.874

Sellu D (1998) Have we reached crisis management in outpatient clinics? *BMJ* **316**(7131): 635. https://doi.org/10.1136/bmj.316.7131.635a

Sharma SD, Stimpson P, Papesch M (2016) Introduction of an outpatient clinic safety checklist: our experience. *Clin Otolaryngol* https://doi.org/10.1111/coa.12709

Skeldon SC, Simmons A, Hersey K, Finelli A, Jewett MA, Zlotta AR, Fleshner NE (2014) Lean methodology improves efficiency in outpatient academic uro-oncology clinics. *Urology* **83**(5): 992–998. https://doi.org/10.1016/j.urology.2013.11.048

Sunkaraneni VS, Reddy-Kolanu GR (2009) A survey of ENT out-patient department facilities in district general hospitals across England. *Clin Otolaryngol* **34**(4): 398–400. https://doi.org/10.1111/j.1749-4486.2009.01961.x

The Royal College of Surgeons of England (2012) Surgical Workforce Report 2011. www.rcseng.ac.uk/library-and-publications/college-publications/docs/surgical-workforce-report-2011/ (accessed 21 December 2016)

Waldhausen JHT, Avansino JR, Libby A, Sawin RS (2010) Application of lean methods improves surgical clinic experience. *J Pediatr Surg* **45**(7): 1420–1425. https://doi.org/10.1016/j.jpedsurg.2009.10.049