IN BRIEF

- Highlights the rise of clinical guidelines in dentistry.
- Explores the purpose of guidelines.
- Provides advice on how guidelines should be used.
- Gives examples of useful guidelines and where these may be found.

# A brief guide to clinical guidelines

G. J. Bateman[1] and S. Saha[2]

Guidelines in clinical dentistry are regularly growing in number. At their best, these represent succinct evidence-based recommendations that are directly applicable and improve clinical outcome and cost-effectiveness of interventions. At worst these are highly biased (eminence-based) with limited supporting evidence and questionable applicability to dental practice. This paper presents an overview of available clinical guidelines within dentistry and using examples, discusses their evaluation and how practitioners may use these.

## WHAT IS A GUIDELINE ANYWAY?

Guidelines have been defined as 'systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances'.[1] This definition is a good one for a number of reasons. Firstly it suggests that there is a structured plan involved in their development rather than a haphazard and highly personal diatribe from a self-appointed expert. It stands to reason that a good guideline will consider a well focused clinical question and how best to answer this question from all available evidence. The features of a well focused clinical question can be found in Table 1. Every practitioner should consider these when weighing up research evidence or a guideline's clinical relevance. Secondly, the guideline exists mainly to 'assist' decisions and does not supplant the clinical judgement the practitioner has taken years to hone and nurture. In the third instance, the definition suggests the involvement of both practitioner and patient; the days of patients acting as passive recipients of healthcare have now long passed. Indeed many guidelines now are developed in conjunction with laypersons. Finally, the definition mentions the idea of 'appropriate' healthcare. Thus the focus is on practical solutions to clinical problems rather than obscure interventions incurring great expense for both practitioner and patient. Thus a good guideline will aid a dental surgeon and their patient in coming to decisions about specific clinical questions. The dentist should be reassured that the evidence they are based upon is reliable and valid. In addition the guideline should not act as a tight restraint on decision making but assist considered compromise where clinical circumstance or patient expectation warrants this.

## WHERE CAN WE FIND GUIDELINES?

In Dante's epic poem 'The Divine Comedy', he is guided by the spirit of the poet Virgil through the nine circles of hell and the seven terraces of purgatory. Finding guidelines can be just as challenging. There is no one source with comprehensive coverage of relevant clinical guidelines. Most guidelines can be found in a scattering of various websites and some learned journals. Some guidelines are locally agreed policies made by trusts or practice-based groups. Interestingly, research evidence would seem to suggest that a local guideline is more likely to be followed successfully than one published nationally.[2]

A good guideline should be accessible to all and in the Internet age this often means referring to the worldwide web. Indeed, the explosion of interest in using best evidence to inform clinical care would be a damp fizzle if it were not for the ready access to information that this provides. But what sites do we need to look at to find guidelines? Sadly, more often than not, we need to know about the existence of specific guidelines before we can find them. A guideline worth its salt nowadays will have a clear strategy for dissemination so that maximum impact is achieved amongst its end-users. Table 2 presents a number of websites and selected guidelines that can be found therein. It is obviously impossible to be exhaustive in this respect.

A good clinical guideline should be accessible to all and ideally free at source. It seems a little Machiavellian to produce a guideline to encourage universal evidence-based decision making and good clinical practice and

[1*]Consultant in Restorative Dentistry, [2]Specialist in Restorative Dentistry, Restorative Dentistry, Birmingham Dental Hospital, St Chad's Queensway, Birmingham, B4 6NN
*Correspondence to: Dr Geoffrey Bateman
Email: Geoffrey.Bateman@SouthBirminghamPCT.nhs.uk

Refereed Paper
Accepted 25 July 2007
DOI: 10.1038/bdj.2007.1044

then withhold this without payment of a fee. This presupposes that guidelines should be state-funded by public interest bodies to improve clinical practice and safeguard patient interests. The majority of groups, however, are not funded in this way and producing a guideline can be time consuming and expensive. Is it therefore inappropriate for an ethically-minded organisation to apply a charge for access to its guidelines, in particular where the guideline applies to an aspect of dentistry which falls outwith the scope of NHS healthcare provision?

Clearly NHS funded guidelines eg NICE will be biased towards providing predictable, cost effective healthcare interventions. It should be noted however that many of the NICE determinations in medicine have had substantial cost implications which may or may not prove to be cost effective in the longer term. The aim of clinical guidelines should be to provide the greatest good for the greatest number.

**Table 1 Elements of a good clinical question**

| |
|---|
| Patient – what type of patients is this guideline about eg the elderly, high caries risk |
| Intervention – what sort of treatment/screening test/preventive measure is under consideration |
| Comparison – are we comparing success of one treatment with another eg surgical vs. non-surgical RSD |
| Outcome – what is the end result the guideline aims at and is it realistic or relevant to my practice |

**Table 2 Websites and selected guidelines**

**Royal College of Surgeons of England**

**Faculty of Dental Surgery** www.rcseng.ac.uk/fds/clinical_guidelines
Restorative Dentistry
Paediatric Dentistry
Community Dentistry
Dental Public Health
Orthodontics
Oral and Maxillofacial Surgery

**Faculty of General Dental Practice** www.fgdp.org.uk/publications/
Selection Criteria for Dental Radiography
Adult Antimicrobial Prescribing
Standards in Dentistry
Guidance for the Management of Natural Rubber Latex Allergy in Dental Patients and Healthcare Workers
Clinical Examination and Record Keeping - Good Practice Guidelines

**NICE (National Institute of Health and clinical Excellence)** www.nice.org.uk
Dental Recall

**SIGN (Scottish Intercollegiate Guidelines Network)** www.sign.ac.uk/guidelines
Prevention and management of dental decay in the pre-school child
Management of unerupted and impacted third molar teeth
Preventing dental caries in children at high caries risk: Targeted prevention of dental caries in the permanent teeth of 6-16 year olds presenting for dental care

**Others**

**BSRD (British Society of Restorative Dentistry)** www.bsrd.org
Guidelines for Crown and Bridge

**British Society of Antimicrobial Chemotherapy** www.bsac.org.uk/
Guidelines for the prevention of endocarditis: report of the Working Party of the British Society for Antimicrobial Chemotherapy

**Resuscitation Council** www.resus.org.uk
Resuscitation Guidelines 2005

**BNF (British National Formulary)** http://www.bnf.org/bnf/

## IS A GUIDELINE GOOD OR BAD?

It should come as no surprise to any regular reader of the printed word that not everything that is published is accurate or relevant. In fact it has been suggested that some 99% of published research is flawed and not fit to inform our practice. The situation is similar with guidelines. Just because a guideline is in the public domain does not mean that it is has been developed according to stringent standards and is up-to-date and bears close relation to our day to day clinical practice. So how can we sift the wheat from the chaff?

The AGREE instrument is a tool that has been designed to assist in objective appraisal of clinical guidelines. This acronym stands for Appraisal of Guidelines for Research and Evaluation in Europe. The various facets of the assessment are detailed in Table 3. Clearly not all clinical guidelines will meet these relatively stringent criteria. It is important to note, however, that this does not necessarily mean it is a bad guideline.

The role of editorial control is critical in shaping clinical guidelines and improving their validity and reliability. Editors or organisations with inherent biases may knowingly or unwittingly create guidelines with similar biases. The editor and guideline development group should have clearly defined roles that are open to external scrutiny and any conflicts of interest should be noted with the guideline.

Clearly a guideline produced by a relatively specialist interest group may not have the funding or wherewithal to produce a methodologically perfect guideline. The Royal College of Surgeons of England along with Professor Bill Saunders[3] has produced, in our opinion, clear, succinct guidelines on periradicular surgery, as an example. These are eminently readable, highly informative and valuable to generalists and specialists alike. From a strictly objective perspective however, their development and the quality of evidence behind them could be criticised. We should be wary of completely dismissing guidelines for such reasons but also be aware of their limitations. It does not pay to be blinkered by 'evidence-based' snobbery where there is very little in the way of quality evidence, and funding to produce a robust guideline is sadly lacking. Indeed dentistry has suffered from a relative dearth of nationally funded guidelines in relation to our medical colleagues. Notable exceptions are the NICE guidelines on Dental Recall and the SIGN guidelines on management of third molar teeth. It is no surprise perhaps that these guidelines have significant cost-saving implications for the NHS. And yet perhaps a very appropriate purpose of clinical guidelines is cost-effectiveness in healthcare. Those of a more cynical nature might be inclined to see this as a tool of control over decision making, of

**Table 3 AGREE instrument**

| |
|---|
| **Scope and Purpose** |
| Overall objectives specifically described |
| Clear clinical questions |
| Which patients does it apply to? |
| **Stakeholder Involvement** |
| Reflects relevant groups |
| Target users are identified |
| **Rigour of Development** |
| Systematic development |
| Evidence identified systematically and appraised according to strict criteria |
| Externally reviewed |
| **Clarity and Presentation** |
| Key recommendations identifiable |
| **Applicability** |
| Cost, monitoring and audit |
| **Editorial Independence** |
| Guideline independent from funding body or conflicts of interest identified |

course. They should bear in mind, however, that a guideline is distinct from a protocol; the practitioner has to exercise their own clinical acumen. Ultimately, a practitioner should judge a guideline on the value it brings to making decisions for their own patients in their own clinical situation. It is crucial though to recognise the flaws that might exist when these are strictly assessed and to value them accordingly.

## WHERE DO I STAND MEDICOLEGALLY?

It is important to consider two facets to this broad question. 'If a guideline exists and I don't follow it could this be construed as negligence if something goes wrong?' The corollary of this of course is 'I've followed the guideline, surely I'm not liable?'

In analysing the use of guidelines in court Hurwitz summarised this very elegantly:[4]

*'Guidelines could be introduced to a court by an expert witness as evidence of accepted and customary standards of care, but they cannot be introduced as a substitute for expert testimony. Courts are unlikely to adopt standards of care advocated in clinical guidelines as legal 'gold standards' because the mere fact that a guideline exists does not of itself establish that compliance with it is reasonable in the circumstances, or that non-compliance is negligent. Also, clinical guidelines cannot offer thought-proof mechanisms for improving medical care. However well linked to evidence, clinical guidelines need so be interpreted sensibly and applied with discretion.'*

The guideline therefore is neither a panacea nor a caveat; the practitioner should at all time exercise best clinical judgement. With this point firmly in mind however, in our increasingly litigious society, there is probably a significant place for 'defensive dentistry': that driven by guidelines. It will most often be easier to follow available clinical guidelines than to veer from their path. If guidelines are not followed, reasons must be recorded and there is all the more reason to obtain informed consent.

## CONFLICTING GUIDELINES

It is not unknown for individuals or groups of people to disagree and the setting of guidelines is no different. A well constructed guideline development group will canvas opinion and advice from all stakeholders, and through a process of systematic enquiry and validation will come to agree on the guidelines final form. This is of particular topical interest. The British Society of Antimicrobial Chemotherapy recently published guidelines on antibiotic prophylaxis[5] that revolutionised the designation and management of 'at-risk' patients in dental practice. These guidelines seemed eminently sensible, cost-effective and rationalised what had previously been a significant clinical challenge. Contradictory guidance however from the British Cardiac Society meant that it was very difficult to know which guideline was appropriate to use. Currently in most NHS dental hospitals, the guidance in use therefore is the old BSAC advice published in the current adult BNF. Interestingly the paediatric BNF has published the new BSAC guidelines. This leaves a confusing situation where three different guidelines exist and any is clinically acceptable as the judgement of a properly constituted expert body. The matter has been referred to NICE to make a definitive judgement. This will involve all stakeholders and work to a methodologically robust process. With the new BSAC guidelines offering potential for significantly more cost-effective patient management however, these authors would be surprised to see a radical departure. The publication of these is anticipated in March 2008.

## THE FUTURE OF GUIDELINES

It is evident that guidelines will play a more significant part in clinical dental practice in years to come. A major driver is the agenda of quality that dominates the current health service culture. This is only for the good. Tools that aid decision making for the dentist and potentially improve standards of practice are to be warmly welcomed. Cost-effective interventions will ensure that the money we invest in healthcare is being used in the most appropriate manner. It behoves the practitioner to be aware, however, that not all guidelines are created equal and should be critically appraised before adoption in practice. A significant aim of a guideline may be to provide cost effective care and not necessarily the 'gold-standard'; it is important to view any guideline in this context. Crucially, there will never be a substitute for the practitioner's clinical judgement and their intimate understanding of their patients' circumstances and needs. Thus slavish devotion to any guideline, however robust, would be short sighted and naïve. It is impossible to turn clinical dental management into a checklist or decision tree. Practitioners may gain assistance from high quality guidelines but should also accept their limitations.


1. Institute of Medicine. *Guidelines for clinical practice: from development to use*. London: The Institute, 1992.
2. Grimshaw J M, Russell I T. Effect of clinical guidelines on medical practice: a systematic review of rigorous evaluations. *Lancet* 1993; **342:** 1317-1322.
3. Saunders W P. *Guidelines for surgical endodontics*. London: Royal College of Surgeons of England, Faculty of Dental Surgery, 2001.
4. Hurwitz B. Legal and political considerations of clinical practice guidelines. *Br Med J* 1999; **318:** 661-664.
5. Gould F K, Elliott T S, Foweraker J *et al*. Guidelines for the prevention of endocarditis: report of the Working Party of the British Society for Antimicrobial Chemotherapy. *J Antimicrob Chemother* 2006; **57:** 1035-1042.