Clinical Practice Guidelines in Nephrology

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ABSTRACT

Clinical Practice Guidelines (CPGs) in Nephrology have been introduced widely over the last decade, and in timely re-evaluation of their role, value and future is occurring. The connectors values of clinical applicability, evidence based, authoritative accessible and implementable all have inherent risks. The discipline of constructing CPGs is being improved, and bodies such as KDOQI and the ISN are striving to make them consistent yet modifiable to individual patient or socioeconomic realities.

INTRODUCTION

The last decade has seen a torrent of clinical practice guidelines (CPGs) in nephrology. These are an outcome of a consensus that, where possible, medicine should be evidence based, in an attempt to reinforce the scientific side of the science versus art debate that has been ongoing for centuries. One of the greatest physicians of his age, the Frenchman Armand Trousseau, encapsulated this in his famous "Lectures on Clinical Medicine" (1869) by commenting "In early times, medicine was an art .... today they try to make a science of it". Of course, CPGs are not meant to replace the "art" in medicine. Critical observation, good judgement and skilled communication are only a few of the less scientific skills of the good clinician. However, when good scientific evidence is available, few would argue that [illegible] would be put to good use for the benefit of [illegible]

[illegible] this essay, I will define CPGs [illegible] developed, evidence-based [illegible] that aim to help clinicians and patients to achieve best health outcomes. Influential (English-speaking) CPGs in nephrology include those of the National Kidney Foundation Kidney Disease Outcomes Quality Initiative (KDOQI), European Best Practice Guidelines (EBPG), Canadian Society of Nephrology Guidelines, UK Guidelines and Australian and New Zealand Caring for Australians with Renal Insufficiency (CARI) Guidelines. These can all be accessed through the website set up by Kidney Disease Improving Global Outcomes (KDIGO) at www.kdigo.org where an attempt is made to keep an up-to-date comparison of this group of guidelines, with attached references and rationale if applicable.

Strengths of Guidelines

There are a set of qualities most of us would seek in CPGs (Table 1).

In a recent meeting of mainly European nephrologists, I asked whether they felt these were both important and true in most cases of CPGs. Of about 100 nephrologists, 99% agreed that available CPGs are clinically applicable, 84% that they are based on good scientific evidence, around 60% felt they were authorative, accessible and implementable.

Weaknesses of Guidelines

The general agreement with the philosophies underpinning CPGs is [illegible], however when we look at recent literature we are seeing serious questions being [illegible] CPGs [1,2]. A vigorous debate has been [illegible] in the Clinical Journal of

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the American Society of Nephrology [3, 4]. One commentary even went so far as to indicate, "The damage potential of guidelines exceeds their theoretical benefit. They should be abandoned" [5].

Table 1: Ideal characteristics of guidelines

1.	Clinically applicable	- useful in clinical practice
2.	Evidence based	- supported by good evidence - not just opinion
3.	Authoritative	- prepared by experts in the field
4.	Accessible	- easy to access - easy to read - easy to understand
5.	Implementable	- can and will be implemented - implementation can be audited

We shall look at the weaknesses, juxtaposed against the strengths (Figure 1).

Clinically Applicable

One perceived weakness of CPGs is that they may not be clinically applicable in a particular environment (cost, access) or in a particular patient (co-morbidities). Indeed, this is why they are Guidelines, not Rules or Laws.

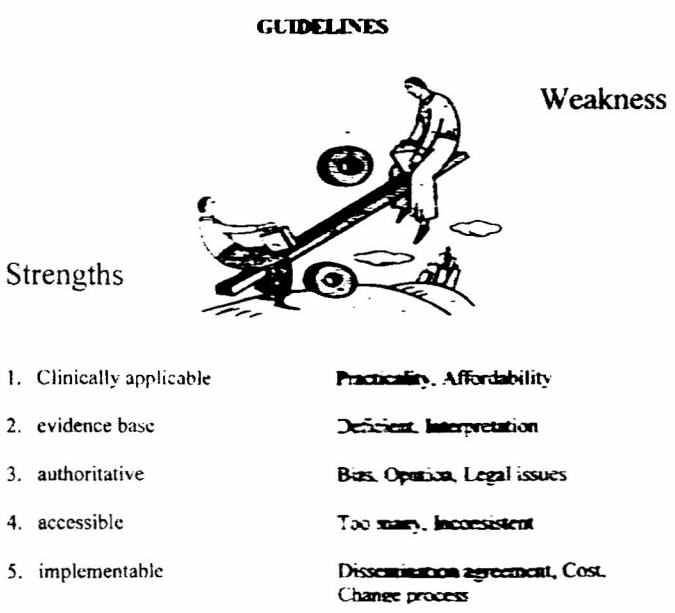

Fig. 1:

Each of us has to decide how we can apply the CPGs in our patients; the scientifically based goals may be aspirational rather than practical, and we as physicians can only do our best to sort these. Allied to this is the common problem of guideline priorities, where one goal (e.g. phosphate control) may conflict with another (e.g. calcium level, or nutritional status). Here, the art of judgement comes to the forefront.

Evidence Based

Here, the "Evidence Base" movement is exposed. The usual grading of "Evidence" puts the highest value on well designed and conducted prospective randomised clinical trials (RCTs). However, it is likely that most of modern medicine is not based on such trials. Instead as new treatments evolved it was clear that they offered such enormous advantage over previous treatments that they were introduced and never subjected to RCT in comparison with previous or no treatment [6]. This particularly applies in surgery, where RCTs are rare, and practically almost impossible to perform. In nephrology, maintenance dialysis versus no dialysis is a RCT that has never, and will never, be performed. Additionally often advice is given, as a guideline, or as a suggestion of some sort, based upon evidence which is weak, or even only an opinion. Perhaps this is better than no advice at all, but it can hardly be regarded as supportive of "Evidence Based Medicine". Unfortunately it is also true that in many areas of practice where RCTs are eminently practicable, we Nephrologists have not performed them, and compared with disciplines such as cardiology we have not been sufficiently active [7]. As part of the process of designing CPGs these deficits are highlighted, and research opportunities in clinical nephrology now usually form part of the Guideline manuscript to encourage useful RCTs to address areas where evidence is weak.

Authoritative

This is a contentious area. Generally we would think experts should be involved in preparing CPGs. However experts are the most likely to have "conflicts of interest". The most highlighted is when they have ties to commercial interests, and this should be manageable by open display of such ties [4]. Less obvious, but just as difficult, is the issue of scientific bias. Likely, if experts have spent a large part of their careers reading, experimenting and publishing on the treatment of a given disease, they are biased toward their previously expressed opinions, and less open to new or contrary information. In all cases, construction of a group in which experts cover many disciplines including analysis of evidence, and where vigorous debate is encouraged, is our main protection from unreasonable bias. Many CPG groups also invite widespread consultations with interested stakeholders. In the case of KDIGO for instance, over 1000 individuals and organisations are part of the review process of any CPGs.

Accessible

Many now feel that there are too many CPGs, that assessing them is difficult, and that many are too verbose. In an attempt to provide easy and commercial access to some high profile CPGs, the KDIGO group has a web page at www.kdoqi.org under the link to "Compare Guidelines". This has done much to improve global access to these reliable resources, but has quickly highlighted the lack of consistency between the CPGs [8]. A core goal of KDIGO is now to create an environment in which these inconsistencies can be either resolved or explained.

Implementable

As soon as CPGs became available, questions arose as to how well they would be implemented, and how to audit this process. Very quickly, audit of outcomes showed that Guideline goals were often not met. This was most obvious with the KDIGO Bone guidelines where many were not able to show that the goals were commonly reached [9, 10]. Putting aside such obvious barriers to implementation as access to effective therapies and cost of therapies [11], the lack of compliance (non-adherence) by both clinicians and patients has now become obvious.

Change management, which is what is required when a CPG sets new goals, is well known to be a difficult industry. Human beings generally resist change. There are processes of consultation, education, dissemination and audit that have been shown to improve compliance [12]. We can expect

a new literature, as various groups are able to indicate how they improved adherence to CPGs, or prepared other systematic approaches to improve quality of care in complex patients [13].

Where to Now?

The science and art of waiting CPGs in Nephrology is only just over 10 years old. Now in its teenage years, like humans it will rapidly settle into a more adult and complete phase, though development of the process will occur for decades to come and discomfort is likely on the way.

With each interaction, CPGs improve, as critism and rethinking of previous CPGs occurs, and as better evidence accumulates. As mentioned, CPGs contribute to the process of stimulating the gathering of such evidence. The sifting of evidence, and its presentation in a clear manner is being improved. The Cochrane Collaboration has set up a Cochrane Renal Group (www.cochrane-renal.org) which is successfully indexing all past therapeutic trials in renal medicine, and working towards establishing an evidence-base for diagnosis.

KDIGO (www.kdigo.org) is an independently governed, non-profit foundation governed by an International Board of 50 members which has the stated mission to: "Improve the care and outcome of kidney disease patients worldwide by promoting co-ordination, collaboration, and integration of initiatives to develop and implement clinical practice guidelines". It has published a series of position statements on grading evidence and recommendation for CPGs in nephrology [14], a classification of renal osteodystrophy [15] and on harmonisation of CPGs worldwide [8]. In the future KDIGO will continue to drive efforts to improve CPGs worldwide, to encourage consistency between CPGs, and in selected cases to commission CPGs for relevant diseases – the KDIGO CPG for Hepatitis-C in renal patients is in late preparation.

Finally the ISN has established an ISN CPG Committee, whose role will be to take a global view and, when invited, to comment upon important CPGs, endorsing them if suitable, and publishing a commentary to indicate likely regional differences in the application of these CPGs.

For the working clinicians these resources should be able to give advice which is useful in patient care and not tainted with bias and opinion. The accessibility through websites will enable best treatment of each patient according to evidence, priority, individual needs and the socio-economic environment.

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