

Priority Criteria for Access to Infertility Services – Is the Model Fair and Justified?

Wayne Gillett

Department of Women's and Children's Health, University of Otago
and

Katy Crozier

Department of Anatomy and Structural Biology, University of Otago

Clinical Priority Assessment Criteria (CPACs) have been an integral part of the New Zealand health reforms that were to ensure consistency and transparency regarding priority for publicly funded access to various services. The traditional method of prioritising patients for access to care (according to perceived need or degree of urgency) had been deemed to be unfair. For infertility services, geographical variations in access also added to the inequity. The proposed scoring systems based on the CPACs were to result in patients being booked for treatment or given certainty about access, placed on a review list, or sent back to their GPs.

The model developed for the infertility CPAC introduced criteria that are thought to, or are known to, influence 'need' and 'benefit'. But, like CPACs for other services, there are questions about its validity, consistency, fairness, and whether it will actually improve access. The aim of this commentary is to address these questions and advise on how they ought to be resolved.

Background

Infertility affects about 25 per cent of couples at some time in their reproductive lives. It is not known how many couples seek infertility services in New Zealand each year, although this has been estimated as 3500 new referrals a year (Gillett, Peek et al. 1995). Approximately 2100 will proceed to specific therapy, with 1700 seeking assisted reproductive technology (ART), high cost ovulation induction treatments or surgery (Gillett, Peek et al. 1995; Gillett and Peek 1997). ART, comprising in vitro fertilisation (IVF), and the artificial insemination techniques (donor insemination and intra-uterine insemination), has been shown to be cost-effective in dealing with the more severe forms of infer-

tility (Gillett, Peek et al. 1995). It has been estimated that 250–500 couples currently receive publicly funded treatment, although this estimate is constantly changing as funding avenues (e.g. waiting times funding) evolve.

The infertility CPAC document arose out of a two stage consultation process, commissioned by the National Health Committee, to evaluate and advise on how a nationally equitable service might be configured in New Zealand (Gillett, Peek et al. 1995; Gillett and Peek 1997). Following public submissions the criteria were accepted for implementation by the Health Funding Authority (HFA) in late 1999 to provide a rationing basis for public access for treatment for couples who are most in need but balanced by those who would benefit most from the therapy.

The Infertility CPAC

Seven separate criteria were developed for the CPAC. These included four 'objective factors' (O1–O4), (see Table), that are known to influence the probability of either a naturally conceived pregnancy or a pregnancy following therapy. The three 'social factors' (S1–S3) were derived to reflect society's views on access.

Reasons for using the four objective criteria were two fold. First, they had to identify those most at 'need' for infertility services. The question was asked: would these criteria identify couples who were less likely to conceive on their own? Although all four criteria would achieve this, only one (prognosis without treatment, based on diagnosis) can be used for this intent. The other three criteria identify couples who would be less likely to succeed with therapy and so they are included to identify the second of the criteria's aims – to identify those most likely to benefit from therapy. In other

words, the criteria would favour a diagnostic-based entry to publicly funded therapy and would be directed to those couples who would most likely succeed with therapy.

The social criteria were developed to determine how worthwhile access to public funding would be from a social perspective. These views (and their ranking/weighting) were obtained by utility analysis using the multi-attribute principle (Gillett and Peek 1997). Factors included the number of children the couple has already and the duration of infertility. It would be preferable if this step were not needed, but experience shows that demand far exceeds the present level of resources, even when only those most likely to become pregnant are eligible. Without these factors this priority criteria model, in our view, would be difficult to administer.

Are the Criteria Valid and Reliable?

The success of the CPAC model will depend on the validity of the criteria in determining an appropriate ranking device for rationed care. It will also depend on the weights used to aggregate the individual objective and social criteria into one final score. In essence, different weights may produce different rankings of patients. The intent of the draft criteria was to begin the process of prioritisation but to develop systems that enabled a review and validation of its components (Gillett and Peek 1997).

The only criteria that strictly defines 'need', the prognostic criterion, is based on a diagnostic model presented in the CPAC document. But both the diagnostic model and the prognostic criterion are based on less than ideal evidence. They are based on 'clinical sense' and are theoretical models only.

Because the diagnostic model has never been validated, one approach would be not to make a diagnosis at all, that a couple presented with infertility would be a diagnosis in itself. In that case the infertility CPAC would be best limited to other valid criteria. On first consideration this approach is an attractive one, since the cost of securing a diagnosis is a significant and time-consuming one. But we believe this approach suffers significant flaws. First, the model could only function providing all couples received the same treatment, and that the treatment was effective for all causes of infertility. The only treatment meeting this criterion would be IVF. This is not attractive because some people would benefit from cheaper and simpler treatments, and those most likely to have a reasonable chance of conceiving naturally might not be identified. Furthermore, although we acknowledge the importance of assisted reproduction, to give couples the opportunity to conceive naturally should be encouraged – a diagnosis is essential to identify the good prognosis groups. Finally, the wish to know ‘why?’ is not only important from the couple’s perspective (to allow a full understanding of their condition and to plan for the future) but also for the clinical and research perspective in the quest to understand infertility (including its prevention).

The success of the CPAC model will also depend on how reliable each of the criteria can be measured by a diverse group of clinicians with varying experience. Clearly the reliability of diagnosis will be key to the success and fairness of the CPAC model. The other six criteria should be reliable since they do not require interpretation. However, the duration of infertility and smoking will require honesty on the part of the infertile couple.

Are the Criteria Fair?

Each of the objective criteria were selected because they represented a measure of either need or benefit. Only one, the age of the female partner, has caused considerable disquiet in the public submissions. Briefly, the point allocation correlates with the probability of conceiving with treatment. As women pass thirty-seven years of age, their fertility declines, as do the chances of successful treatment.

Limiting access for older women would remove their (already) slim

Table 1: Calculation of Points for the Infertility CPAC.

Criteria symbol	Points awarded	Criteria and their categories	Points available	
O1	<input type="checkbox"/>	Chance of pregnancy without treatment	1 yr probability preg ≤ 0.05	1.0
			1 yr probability preg $> 0.05 \leq 0.2$	0.7
			1 yr probability preg $> 0.2 \leq 0.5$	0.4
			1 yr probability preg > 0.5	0.2
O2	<input type="checkbox"/>	Woman's age	≤ 37 years	1.0
			38-39	0.8
			40-41	0.5
			42+	0.1
O3	<input type="checkbox"/>	Basal FSH, day 2-5 cycle, with respect to reference range	always within	1.0
			sometimes above	0.8
			mostly/always above	0.2
O4	<input type="checkbox"/>	Woman's smoking	non smoker	1.0
			smoker	0.6
S1	<input type="checkbox"/>	Duration of infertility	< 1 year	5.0
			1-3 years	20
			3-5 years	40
			≥ 5 years	50
S2	<input type="checkbox"/>	Number of children	None	30
			1 by current relationship	10
			> 1 by current relationship	5.0
			≥ 1 child by prev relationship	8.0
S3	<input type="checkbox"/>	Sterilisation reference range	neither partner sterilised	20
			death of child	20
			one partner sterilised	10
To calculate Priority Score:				
First multiply O1 x O2 x O3 x O4 = OC (points from objective criteria)			OC	
Next sum S1 + S2 + S3 = SC (points from social criteria)			SC	
Then multiply OC x SC = Priority Score (PS)			PS	

chances of conceiving. In situations where funding levels were high this issue would be less of a problem, since older women would access treatment. But with limited resources, should the older less successful cases gain priority? Our view is they should not, for at least two compelling reasons.

First, if resources were directed to the older women, there would need to be a concomitant reduction of resources to the younger women, with the net effect being that younger women would need to wait longer. The overall success (cost-effectiveness) would become less satisfactory, and if this economic measure were to dictate public spending then infertility treatment would come under jeopardy. Second, older women have, by choice, delayed their child bearing.

Is There Sufficient Funding to Resource the New CPAC Model?

A study was undertaken by KC (MSc thesis) to determine the distribution of CPAC scores for couples actually seeking IVF treatment in two IVF units. These were compared to a theoretical model of newly diagnosed couples eligible for IVF, assuming that there was no waiting list for IVF. In both groups an estimate was made of the total number of couples who would be eligible for publicly funded IVF in New Zealand each year.

It was estimated that of the 3500 new couples that are referred each year in NZ, 500 would be specifically 'eligible' for IVF. The current allocation of public funds would enable 110 of these to have up to three cycles of treatment. In this steady state situation (i.e. no waiting list) it was estimated that a priority score of 65 points would be sufficient for this number of couples. Analysis of actual cases, however, estimated that 840 couples are currently eligible for IVF using the same threshold score of 65 points. In reality, the number of couples eligible is swelled by the additional demand, brought about by a back-log of patients entering a new funding era as well as the increase in requests for new treatments (e.g. intracytoplasmic sperm injection). In Otago no couple can currently access IVF unless they score the maximum 100 points.

We believe the appropriate clinical threshold for IVF should be at least 65 points, and probably 55. But it is clear that IVF services in NZ are currently

severely under resourced. For this reason the system that was designed to generate fairness in the allocation of public funds may be unfair for treatments like IVF.

CPACs and the Booking System

The evolution of the booking system set up by the Health Funding Agency has given another focus on how these points would be used – to facilitate the booking of surgery within a maximum of six months for public treatments. The definitive objective is, then, not only to define priority for access for conditions requiring surgery, but for this access to be within a defined time frame.

The booking system applies to non-urgent surgery, medical treatments and diagnostic procedures. Infertility treatments use all three of these, with the 'high cost' assisted reproductive procedures requiring invasive 'semi' surgical techniques. Patients who satisfy the criteria would be offered a date for their treatment; patients who do not would be referred back to their general practitioner for review.

Although the HFA plans to have the booking system up and running within the next year, it seems that this general objective of fairer access to a service cannot be applied to those suffering from infertility – simply because of lack of funding and the inability for current public funding to cope with the demand. This is due to two main reasons. The first is an historical one: that when the purchaser and provider model of provision of health care was introduced it dealt largely with services that were already in existence. So infertility services that were part of the old system are still funded by the new model, whereas new and evolving services have not been, even when they have been shown to be more efficient or cost-effective.

And second, the availability of funds for infertility have been slow because of the belief that the provision of infertility services was not a 'core' service. This belief has come principally from the administrators within the system. It is pleasing that these views are less evident now.

But the predicament is not helped either by the likelihood of couples' allocation of points actually falling as they grow older. Access will eventually be denied because of increasing

age, despite the fact that their infertility is 'worse'. This compares to most (progressive) disease states that will eventually attract public funding through the nature of progressive illness. For example, a person with osteoarthritis of the hip will, given time, become so disabled that that individual will soon gain sufficient points to access an operation. This example applies to many health states – unless the health state is mild or reversible. So the infertile have a double set-back – not only is access limited at the beginning, but in many situations access will eventually be denied because of increasing age.

Where do we go with the CPAC Model and its Problems?

Introduction of the infertility CPAC was considered to be only the start, and since it is based on theoretical models only there is the urgent need to know if it does work and identifies the people it set out to identify. There is an urgent need for a validation and reliability study. Principle to this is the diagnostic process that makes up the prognostic score (O1). It is the untreated prognostic assessment that is critical for the success of appropriately directing couples towards therapy. If it were able to be validated it would facilitate the purpose of investigation. If it could not be validated then it would be a significant weakness to the intent of the CPAC. A validation project will also give an important insight as to the size of the infertility problem in New Zealand. Until now all of the information we have had has been based on estimates.

The New Zealand health system has already established a unique position from the international perspective – should the CPAC principle be shown to be valid and reliable, it will have a major impact on the way healthcare is delivered around the world. We owe it to ourselves and the public to ensure it is valid and reliable.

References

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