Keeping the score

To the Editor:

In a recent editorial, *"The Recovery Room… a safe haven, or a disaster waiting to happen?"* (SAJAA 2009, Volume 15, Number 2, April/May), the topic of ensuring a safe and satisfactory recovery period for our patients was revisited. In 2003, research from a group in Vancouver relating to discharge readiness after outpatient anaesthesia was published in SAJAA.[1]

The Post-Anesthetic Recovery Score (PARS), first introduced by Aldrete in 1970, represents an extension of the observations made by Dr Virginia Apgar in her universally accepted guide to scoring the vital systems of the newborn (**A**ctivity, **P**ulse, **G**rimace, **A**ppearance, **R**espiration).[2] Two significant changes in the practice of anaesthesia merited modifications, in 1995, to the original PARS. "*Color*" as one of the original clinical signs was replaced by "*O_2 saturation*". This despite "color" as clinical sign at the time being described as "*an objective sign relatively easy to judge*".[2] The second change related to the provision of criteria for discharge from the Post Anaesthesia Care Unit (PACU) following ambulatory surgery.

From 5 – 9 of April 2010, yet another FCA (SA) Part II Clinical Course and mock exam was held at the two main teaching hospitals (Kalafong and Steve Biko) of the Department of Anaesthesiology of the University of Pretoria. This annual event is aimed at those preparing for the upcoming FCA Part II examinations, although some candidates indicated their intention of only taking the examination later. The course was attended by some 34 registrars from most academic departments of anaesthesiology in South Africa. It was quite disturbing (if not embarrassing) that no candidate (from a random selection) who was questioned on criteria for the safe discharge of patients from the anaesthetic recovery room to the ward was able to recall all five criteria set out by Aldrete. In addition, none could recall the numerical value attached to each clinical sign. In this regard it is interesting to note that it was recognised at the time of the publication of the original article that, to be practical, a method of evaluating patients in the immediate post-operative period had to be simple and "*easy to memorize*". This certainly is not reflected in our experience.

For a number of years now, in our recovery room at Kalafong Hospital, we have used a modification of the modified Aldrete score. This is in the form of a large

Recovery room discharge criteria: Kalafong Hospital

	Score
Airway	
$Sp0_2$ > 92% breathing room air	2
$Sp0_2$ > 90% with supplemental 0_2	1
$Sp0_2$ < 90% with supplemental 0_2	0
Activity**	
Moving all limbs voluntarily or on command	2
Moving two limbs voluntarily or on command	1
Unable to move extremities voluntarily or on command	0
Breathing	
Able to breath deeply and cough freely	2
Dyspnoea, shallow breathing	1
Apnoea	0
Blood pressure	
± 20% from preoperative systolic	2
20-50% from preoperative systolic	1
± 50% from preoperative systolic	0
Consciousness	
Fully awake	2
Arousable on calling	1
No response	0
	Total*

* Absolute minimum required for discharge = 9
** Keep in mind effects of regional techniques

Adapted from: Aldrete JA: the Post-Anesthesia Recovery Score Revisited. J Clin Anesth 1995:7:89

poster in the recovery room, prominently displayed where all involved in postoperative care can easily see it. The day after the clinical course in question, I asked some of the recovery room nursing staff similar questions on recovery room criteria, and found their knowledge relating specifically to the Aldrete score to be equal to, or exceeding that, of some of our future anaesthesiologists. Our hospital's modification – which in no way alters the clinical signs utilised, nor the numerical value attached to the signs – is aimed *only* at **improving retention of memory** and involves a simple rearrangement of the sequence of the five signs in an "ABC" type format. Since the activity observed and scored is the act of breathing (and not O_2 utilisation at cellular level), "respiration" has been substituted with "breathing", and since the vital sign measured and scored is blood pressure (and not cardiac output), "circulation" was replaced with "blood pressure".

Numbers attached to specific clinical signs (as opposed to the bigger picture) must never be the sole or final determinant of ward-readiness, but the PARS (even with its limitations) is a guide that all anaesthetists should be familiar with. And of course, the data contained in this guide should be easy to

retain. Our modification to the modified Aldrete score evidently provides just that.

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References

1. Vaghadia H, Cheung K. A quantification of discharge readiness after outpatient anaesthesia: patients` vs. nurses` assessment. S Afr J Anaesthesiol Analg. 2003;9(4):5–9.
2. Aldrete AJ, Kroulik D. A postanesthetic recovery score. Anesth Analg. 1970;49(6):924–933.