

# How much medical care does a professional sports team need?

Dr J

**The title of this article is a question which has fascinated me ever since I moved from working as the club doctor for the Sydney Swans in the AFL nine years ago to a similar position with the Sydney Roosters in the NRL. On the outside you would have expected these two jobs to be quite alike, both clubs being fully professional organisations in the same city in different football codes. In terms of overall responsibility on paper, the jobs were similar but, in terms of hours at the coalface, I would have done 60% more work at the Swans than at the Roosters (with the difference in pay corresponding).**

It felt like one extreme to the other; attending every training session (including for hours before and afterwards) at the Swans to my (current) situation at the Roosters where I basically work on game days and as a consultant at the sports medicine clinic, rarely being asked or even encouraged to go to training. If I describe this transition to the staff I worked with at the Swans, their impression is that rugby league teams are “not professional”. On the other side of the fence, the Roosters organisation generally has a belief (observing from the outside) that the players in AFL teams are “soft”, “wrapped in cotton wool” and “over-managed”. Based on progress so far in 2006, an outsider may look at the setup at the Roosters and say we don't have the right approach, but it can't be too bad as an approach that has taken us to four NRL Grand Finals this decade.

An article from the *Courier-Mail* earlier this year by Mike Colman described an encounter he had with Brisbane Lions player Jason Akermanis, “[after a training session one day]...Aker showed me a tiny graze on the inside of his elbow. If my six-year-old son had complained of it I would have told him to stop being a sook. Aker called in the medical team

and wasn't happy until he had a giant bag of ice strapped to it. I laughed at the time but driving back to the office I had second thoughts - this bloke's body is his Formula One race car and he wasn't taking any risks.”

How can you reconcile that one professional football team expects a doctor to be watching every move the players make whereas another one adopts a philosophy that it may actually be detrimental for a doctor to spend too much time with a football team? Is the hands-off approach unprofessional or is the hands-on approach overkill? I'll try to summarise the differences between the two in this article and maybe convince you that more is not always better, and in fact the amount of medical care you need may depend on the sport you play.

Former AFL coach David Parkin was once quoted as saying that, as head coach, he was only the third most important staff member of his team's football department. His view was that the most important was the recruiting manager, followed by the club doctor. He may have seriously meant exactly what he said, but his viewpoint that almost everyone would agree with is that, if you don't have talented players in your squad or if you do but they aren't fit to play, then you don't win many games. The traditional value of the half-time vein-popping coaching address is probably as overrated as the decisions at the trading and draft tables are underrated.

A problem with recruiting (and with injuries) is that it is a far more difficult proposition to quantify key performance indicators. At the time when Michael Jordan was drafted at number 3 in the NBA draft, probably no one in the teams who passed on Jordan at picks one and two got sacked on the spot. Recruiting is a very inexact science and MJ at a young age probably looked no better or no worse than the other young guns

around him; he just happened to mature into the best basketball player of all time. It was obviously a deep draft that year as Hakeem Olajuwon was selected at number one, but whoever read out Jordan at number three probably made every coach, manager, doctor, trainer and psychologist at the Chicago Bulls look like a genius for the next 15 years.

Injuries (or lack of them) at professional football teams can turn a solid squad into a Premiership team or into a disappointing outfit that misses the finals. This is undisputed fact. What we don't know (or can't prove) is how much influence good (and by comparison 'bad') training staff and medical staff actually impact on the injury rate at a football club, if at all.

Bar room opinion is that St. Kilda has had the 'most talented' list in the AFL but it hasn't won a flag because injuries have cruelled it. (Curiously, in the NRL the 'Saints' at St. George are in the same boat). No one really knows if different management would have made St Kilda players less injury prone, but human nature would like to think so (even if it isn't necessarily true). Chris Jones used to be head of conditioning at St. Kilda and -- perhaps this is related somewhat to its results -- isn't there any more. Now he is working with the Melbourne Storm and it is flying at the top end of the NRL table. Who knows whether this is all random, more a reflection of coaching staff or player fragility, or whether somehow his training methods are miraculously better suited to rugby league players than AFL players?

Let's look at the variation in AFL medical teams at the moment and whether there is any difference between input and output. In this sense I can specifically refer to a table which was published in the Melbourne Age on 9 June this year (Table 1). This was (presumably leaked)

data about club medical expenditure for AFL teams in 2005. From what I can gather this did not include salaried payments to players who missed time because of injury. My personal breakdown on what these budgets might include is listed in Table 2. Obviously there is a huge scope in any given year for variations in these budgets – for example, if a club decides in a given year to buy an altitude chamber or hyperbaric oxygen room and include it in the medical and fitness budget, it is going to blow things out of the water.

At first glance, the top three teams on the medical and fitness expenditure ladder have won all of the 2001 to 2005 premierships between them, so it is tempting to say that the more you spend on medical and fitness in the AFL, the better your team will perform. That may possibly be true (ie, that there is a cause and effect relationship between the two) but in science we know about the phenomenon of confounding. Brisbane and Sydney may have also been getting better on-field results than the rest of the competition over the last five years because they get to spend more on players (due to salary cap concessions), and the extra expenditure on medical may be incidental.

Suppose for a minute that the ‘average’ medical team *should* comprise doctors on a combined salary of \$150 K and physios who together also get a similar amount. But the reality is that most AFL teams pay less than this. If you are on the Lions, Power or Swans medical staff, you walk into the CEO’s office just after your team has won the competition and you get granted the pay rise you have passionately argued that you deserve. If you are in a Melbourne-based team that keeps missing out on the top eight, you get told that the club can’t afford the extra money and you must either quit or stay on for the same paltry amount next year.

Speaking of Melbourne versus non-Melbourne teams, we have good evidence from the AFL injury survey that the northern teams have a consistently higher average injury rate than the Victorian teams (in fact every single year from 1988 to 2005 inclusive this has been the case). My personal view is that variations in ground conditions (especially

grass type and density) are most likely to be responsible for this discrepancy, although not everyone agrees with me.

From Table 1, you can see that the average medical and fitness expenditure is higher in the non-Melbourne teams. This suggests that either the money isn’t delivering the results, or perhaps more accurately that the extra injuries require more spending on things like radiology and surgery. It is also fair that, if your team travels interstate 11 times per season, you are working greater hours than if your team travels interstate five times per season, and hence you deserve a greater salary.

**Table 1 – club spending on medical and fitness in season 2005, reproduced from *The Age* newspaper**

Brisbane	\$1343 K
Sydney	\$888 K
Port Adelaide	\$806 K
St Kilda	\$755 K
Collingwood	\$740 K
Adelaide	\$731 K
Essendon	\$728 K
Geelong	\$672 K
Hawthorn	\$623 K
Carlton	\$587 K
Melbourne	\$569 K
Western Bulldogs	\$545 K
Richmond	\$475 K
Fremantle	\$472 K
West Coast	\$456 K
Kangaroos	\$453 K

**Table 2 – rough club medical and fitness budget**

Salary for 0.75 doctors	\$60-150 K
Salary for 1-2 physios	\$80-180 K
Salary for 1.5-2 conditioners	\$90-200 K
Surgical payments	\$20-50 K
Radiology payments	\$30-70 K
Tape/braces/consumables	\$30-70 K
Pharmaceuticals/supplements	\$20-50 K
Training staff/masseurs	\$30-120 K
Other expenses incl. capital	\$50-500 K

There is one team down the bottom of the medical and fitness expenditure table (the Kangaroos) that runs a tight budget in this area as it does in every other area (because of lack of income). It has also tended to have below-average missed games through injury over the past decade. However, I have heard that it doesn’t tend to skimp on salaries to medical staff, believing this to be an important area to put money into. Superficially it appears to be an accountant’s dream, getting comparatively good outcomes with low expenditure. In the real football world it would probably be the last team that other clubs are trying to emulate. Cost seems to be less important to football clubs than position on the ladder (which seems to be the *only* item of importance!). For those of us that think that club doctors, physios, fitness and training staff are underpaid, Table 1 is ‘Happy Days’ as club CEOs will be looking to do what the Swans and Power and Lions have been doing. Collectively these teams do *not* appear to have had fewer injuries than the rest of the AFL competition, but they *spend more* on medical and fitness and have won *more* premierships, so this is going to be the way of the future!

Back to rugby league vs. AFL. The Roosters are representative of most NRL teams in that it doesn’t see the necessity of having a doctor at training (and as part of a substantial minority it also doesn’t require a physiotherapist at most training sessions). Its logic may partially revolve around saving money but, even if it cost it nothing extra, it may even still prefer to keep medical staff away from training. The mentality works as follows:

- (1) Rugby league is a tough game where almost every player is injured and where good players must be able to play and train with injury.
- (2) Despite (1), many rugby league players are intrinsically lazy at both training and in general life.
- (3) NRL players work for their club for 3-4 hours a day, so they have plenty of time to make appointments to see their doctor and physiotherapist at the clinic if they have a significant injury and know that they really need to miss training.

- (4) If a doctor and physio are available at training then many players will take the option to declare minor injuries on the spot and the medical staff will tend to err on the side of caution and recommend that the player only do limited training.
- (5) Therefore, some of your squad will drop off their fitness levels because of the presence of medical staff at training, leading to a more conservative training load.

Obviously one potential flaw in the logic of argument (1)-(5) is that there may be some players who can't be bothered to see the doctor and physio during their hours off, are too tough for their own good and train with an injury that really should be rested, thereby worsening the injury. This is where the differences in demands and injury profiles of the football codes are probably relevant.

In the AFL, hamstring and groin injuries are two of the 'top' injury categories and both are injuries where it may often be best practice to hold players back from both training and playing matches whilst carrying injury. Hence, in a sport where these injuries are rife, it makes sense to have the doctor and physio overseeing training loads and return to play decisions. In the NRL, injuries such as shoulder instability, rib injuries and knee medial injuries are relatively far more common than hamstring and groin strains. The 'contact' nature of the NRL injury profile may be better suited to players 'toughing it out' in both training and in matches. It might be better for a doctor or physio who has just tested a player's hamstring strength and found it to be very low to say he isn't fit to play AFL football. But who is better placed to say if someone is fit to return from a rib cartilage injury – the player who has to feel the pain or the doctor prodding on the rib? Rugby league has long had a culture of "if you are fit to train you are fit to play" and it may indeed be generally the best practice of determining return to play decisions *in that sport*. In the AFL it is far more likely that you can do a full week on the training track coming back from a hamstring strain, but in the extra intensity of a match you can break down (1).

Extending the AFL vs NRL analogy, I have visited the medical teams of NFL franchises in the United States and professional soccer organisations in Europe.

Although things may have changed in recent years, my recollection is that most NFL medical teams are fairly low key and many training sessions take place without a doctor being present. The athletic trainer supervises everything during the week with a team of doctors (who are often all sub-specialists) on call if the player or trainer requires an expert opinion. As you would know, NFL teams aren't short of money but they do have a contact-oriented injury profile like rugby league. In professional soccer, where there is a more non-contact overuse injury profile, doctors and physios (both plural) tend to be present at every session and check every single niggle within seconds of the player's pain receptors going off. Admittedly there are many players of Latin and Mediterranean descent in soccer, with a penchant for theatrics, but the need for on-site medical assessment may come down to the prevalence of hamstring and groin pain in soccer, which like the AFL is very high.

One very relevant factor with respect to the high demands on AFL medical staff is managing the work-life balance. I'm not sure whether it is true or myth, but there is a perception out there that medical staff working closely with professional sport teams have a higher rate of relationship breakdown than would otherwise be expected. This makes some sense, as the time you would normally spend with your partner on the weekend is often eaten up by work at the football. A doctor or physio who then does a full week at the football club plus clinic during the week and also suffers from the job insecurity of everyone who works in the professional football industry, may not be the best person to live with during the winter months. Because doctors and physios are getting more aware of this, some are insisting on apparently radical job sharing arrangements in order not to suffer from long-term burnout. There are doctors and physios who work one week on-one week off, others who split half the season, and others who primarily work alternate seasons. This sort of structure

may become the norm in the future as clubs want to hold on to successful experienced medical staff but those same staff want to hold on to their marriages.

I'll finish with a diversion to talk about a different sport, involving Australia's most successful national team of recent years, that being cricket. It is the world's number one, it has a very good medical director (Trefor James) yet it not only trains without the doctor present, it plays most of its *games* without him there. There is always a local doctor at the matches, but not the *team* doctor who knows the history of the players. It has been a pretty successful set up, but it is one that may need to change now that an Australian player can be suspended for two years if the doctor completing a WADA form doesn't put down the correct details after giving a player an asthma puffer or cortisone injection. You would think that Trefor would be the best person for the job if the Australian cricket team started to travel with a doctor, but would he (or for that matter anyone else suitably qualified) want to do it, given the amount of time away from home and the clinic? I was once treating Daniel Vettori (who being a professional cricketer was away from home without his team doctor being present) and tried to explain to him why the national cricket boards didn't tend to appoint travelling team doctors. I said something along the lines of "the administrators probably don't want to pay a big wage for someone who is going to do 2-3 hours of important work a week and then spend the rest of the time sitting around watching a cricket game or in a hotel room". Daniel replied, "...and how would that be any different from most of the players?!"

1. Orchard J, Best TM, Verrall GM. Return to play following muscle strains. *Clin J Sport Med* 2005; 15: 436-441. Available at: <http://www.injuryupdate.com.au/images/research/CJSMRTPmusclestrains.pdf>