

POLICY AND SERVICE DELIVERY

Article 990212

Paramedics, consent and refusal – are we competent?

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Abstract

A theoretical foundation is described by summarizing currently accepted concepts of consent and refusal. These concepts are then placed in the context of the paramedic environment, which by its very nature makes decisions about consent very difficult. Three cases are briefly reviewed in light of these concepts and four areas for investigation are identified. It is argued there exists a need for the assessment of the skill and education of paramedics so that they may be better equipped to make decisions acceptable to the wider medical community.

Keywords: competence, consent, critical thinking, education, ethics, law, paramedic, refusal

Introduction

Although paramedics routinely make some life and death decisions under extreme pressure, not all decisions are of a medical nature. Clinical problem solving can be influenced by the personal and interpersonal realm of culture, law and ethics. The clinical pathway and therefore outcome of a patient can depend on a variety of factors, including whether the patient provides or withholds consent to treatment. Given the primary nature of consent in determining a clinical pathway, it is vital that the concepts of consent and refusal be understood and skilfully applied appropriately in the pre-hospital environment.

Consent

To consent means, “to give assent, permission or agreement.”¹ From the ethical perspective, consent is of fundamental importance since it flows from the universally held value of autonomy, or self-determination. To seek, obtain and acknowledge the consent of a person is to respect that person by respecting their right to exercise their will in decision making, with the concurrent acceptance of responsibility. From the legal perspective, consent is also of fundamental importance since many of our laws are formulated with consent as the central focus. Laws regarding copyright, theft and trespass, including assault and battery, cannot be constructed independently of the notion of consent.

Since paramedics are called to treat and transport patients, it is crucial that the patient’s consent be obtained. “It is a fundamental principle that to treat someone who is capable of giving consent to treatment, but has not done so, is an assault. On the other hand, the patient’s

consent to treatment converts what would otherwise be both a crime and a tort into something that is quite legal.”²

Many authors have crystallized the concept of valid or informed consent into four ‘tests’ or elements, which are necessary, but not sufficient, conditions.²⁻⁸ For consent to treatment to be valid, choices must be:

1. Informed - Sufficient disclosure of information specific to a procedure, to which a patient would attach significance, is required so that any decision made can be based on a considered judgment of relevant material.
2. Understood - A patient must receive, process and incorporate information and options into their own view of the world and values, to the point where it is reasonable to say they have understood what it is they are choosing.
3. Voluntary - The will should be expressed free of any coercion, threat or undue pressure, and in response to information disclosed, because understanding of the choices and their consequences has been achieved. When a genuine choice is made the patient takes a share of responsibility for outcomes.
4. Made by a person with legal capacity - Competence is “the ability to perform a task.”¹ In normal circumstances this element refers to an adult of sound mind who is able to pass the three tests described above. Those considered not legally competent would include young children, and those who are so physiologically or psychologically compromised that they do not demonstrate the capacity to make informed decisions. Examples of patients lacking capacity would include the unconscious and those in an altered conscious state such as the hypoglycaemic, the head injured, the demented, or drug affected.⁹ Paramedics must be able to measure capacity as one element of informed consent.

To say a person is incompetent is not to assign blame or make a criticism, but to set reasonable standards in a way that maintains the importance and significance of personal decision-making. Principles of justice do not require a person to do more than what they are capable of.

In most cases, paramedics have the consent of patients – a call for help is made and then paramedics attend. When a third party calls, cooperation implies consent.² For those unable to communicate or cooperate, such as the unconscious, the doctrine of necessity favours life, recognizing that some people need rescue and restoration.²

Pressure – the paramedic environment

Paramedics routinely operate in emergency situations, where there may be an immediate risk to life, and when a medical procedure is necessary to prevent serious injury or illness.⁵ The stakes can be high, yet at the same time their environment can be unpredictable, uncertain, hostile and even violent. The challenge for paramedics is that unlike the philosopher’s lounge or the physician’s consulting rooms, the emergency setting has the capacity to undermine prudent decision making about the elements of informed consent. Analysis of the emergency environment reveals multiple relevant differences between the context of paramedic decision-making and that encountered by non-emergency physicians. From the paramedic perspective, these include attending to patients who:

- May have an ambulance called for them, rather than initiating a call

- Will most likely be not known to paramedics
- Call for an acute problem rather than a chronic one, and
- Are more likely to be substance or injury affected.⁸

As a result, paramedics may face one or more aspects of a sixfold 'Recipe of Difficulty':

1. Extreme time pressure, where minutes can make a difference between life and death. The time taken to inform patients, gather information or to check for competency may actually compromise patient welfare.⁸
2. Extreme emotion by anyone at a scene, for example, at a traumatic cardiac arrest, affecting the ability to make well balanced judgements.
3. Informational deprivation, for example, being unable to determine the age or medical history of a patient, or being unable to come to an accurate diagnosis, again making *informed* choices very difficult.⁸
4. Resource limitations and demands, where excessive time spent at the scene ties up crews, increases response times and removes paramedics from the pool of resources.¹⁰
5. Conflict at scene, for example, between the patient and relatives or callers and paramedics.⁸
6. Impaired judgement on the part of the paramedic due to dangers, inexperience, stress¹¹ or fatigue from shift work.¹²

The pressure on paramedics is both scene and role dependent. As a professional who is trained to respond to emergencies, there exists a duty of care, that which is owed to the patient by virtue of the paramedic's role and training.^{5,6} This duty is to be discharged to an acceptable standard, the standard of care, that which is reasonably expected in the context given the paramedic's level of training and experience.^{5,6} A paramedic, in their official capacity, has a legal obligation (subject to other caveats such as safety) to help those who cannot help themselves, and is required to act in the patient's best interests. For the patient who lacks capacity to consent, the duty of care to act in the patient's interests remains. Given that a patient's welfare may depend on both action and omission, the failure to take decisive action may raise the spectre of negligence; when a duty was owed, this duty was breached and harm resulted from this breach.⁵ The doctrine of necessity (emergency) allows and in fact requires paramedics to help a patient in dire need if that patient cannot supply consent.² Thus from a legal perspective it may be responsible to provide treatment in the absence of consent. From the ethical perspective, the principle of Beneficence ('doing good') would act as a guide independent of any legal directive or consequence.

Refusal

The pressure on paramedics in the emergency context increases in the face of a refusal to be treated, that is, when consent is withheld. A significant number of patients refuse treatment¹³ - over 20,000 in one year in Melbourne alone.¹⁴ Patient refusals depend on criteria including age,¹⁵ cost,¹⁶ convenience,¹⁷ initial presenting condition¹⁸ and even pressure from physicians.¹⁹ Of those, some do so in the face of significant illness and some refuse then

recall for help for the same condition.¹³ Of these, Vilke et al report 32% were admitted to hospital, 19% to wards, 13% to ICU.¹⁶ It can be difficult to accept or ignore a patient's refusal in the emergency setting. No paramedic on reflection wants to think that a patient suffered because a refusal was too easily accepted.

The Medical Treatment Act 1988 (Vic) makes provision for the competent adult to refuse medical treatment, even if that refusal may place their life at risk. Further, it makes provision for a properly appointed agent to withhold consent on behalf of the patient if that surrogate believes unreasonable distress would occur if that treatment was given and this refusal is what the patient would want.²⁰ This legislative right to refuse, for which there is formal documentation, mirrors and supports the elements of informed consent. A refusal, for example, must be in relation to a current condition, a guarantee the refusal is specific and informed. It must be signed by a medical practitioner (the expert), and one other witness,²⁰ a safeguard to ensure matters are established by a formal process in a slow time frame with adequate education and in the 'cool light of the day'.

What this means is that in the face of a valid refusal, the duty of care of the paramedic is not independent of the will of the competent patient – the paramedic's duty is not absolute, but is limited by the patient's will and their understanding of what is in their overall best interests, medical and otherwise. Not all interests are medical in nature – 'best' is not just a physiological qualifier. Thus, autonomy is *always* a moral concept; beneficence is *sometimes* a medical concept. Hence paramedics attend *persons*, not just *patients*, and in Australia belong to the appropriately named *Ambulance Service*, not *Ambulance Force*, despite the fact that they may (rarely) use chemical or mechanical restraint as part of their mandate to care.

From the ethical perspective, the right to refuse is based on the principle of Autonomy,³ a precious value in our liberal democratic society. If this is a right we hold for all people equally, and something we wish for ourselves, then to be consistent we must allow the patient to withhold consent. This is precisely what real autonomy means - the freedom to disagree about treatment or transport options, the freedom to hold values different to those held by paramedics.

In some cases it is reasonably clear that a *prima facie* refusal can be ignored. If, for example, a person is assessed as having a significant distortion of perception, mood, thought or memory, and is a danger to self, others or property,²¹ then the *Mental Health Act 1986* (Vic) allows paramedics with assistance to use reasonable restraint to treat and transport these patients to hospital for authoritative and expert diagnosis and protection.²¹ In these instances patients are considered to lack capacity to provide informed consent and therefore refuse. Or, for example, if a parent refuses *emergency* treatment for a child, this refusal could safely be rejected. Whilst parents have authority over the child, they are not absolute rulers,⁵ for their rule is subject to their duty to act in the child's best interests and not contrary to the law. Further, the State also is custodian over the child and has a duty to act for the child's interests. The dominion of the parent stops when abuse or neglect starts.⁸ This means that in the *emergency* setting, the paramedic can treat against the parent's will – the paramedic is effectively acting as an agent of the State, acting as co-custodian and acting in the child's interests, when others, albeit parents, can not or will not.

Since emergency physicians have difficulty recognizing a problem as ethical or legal rather than clinical,²² one would expect paramedics to also face this problem. This is of particular significance since the medical consequences for patients are sometimes dependent on first

settling a question of consent or refusal. Since consequences can be of the highest order and 'fence sitting' impossible, it is crucial both that the primary problem of consent be identified and properly resolved.

If a patient passes all the tests for informed consent, and refuses, then the paramedic feels a tension between trying to balance a respect for the patient's autonomy with a duty to protect life. Paramedics can be uncertain, given the 'Recipe of Difficulty', about whether to accept or reject a patient's refusal.

One way through this difficulty is for paramedics to refer decisions and thus responsibility to emergency physicians via consultation. Since the education of physicians in both clinical and legal matters significantly exceeds that of paramedics, it makes sense to defer to a person with greater expertise and authority, since referral is common practice in medicine. However, in a recent study this strategy was found to be inadequate in increasing the reliability of either accurately recognizing or documenting competency, or more accurately determining if the elements of informed consent had been met – the disadvantages of not being at the scene outweighed any advantages gained from expert involvement.²³ Aside from this, referring to on-line medical command does little to help gain expertise in decision making or advance the move of paramedics into professional ranks, where autonomy is one essential trait.²⁴

Case commentary

Case 1 was attended by the author, Cases 2 and 3 reported by colleagues:

Case 1

A crew has been called by a relative to an elderly emaciated woman with a history of Type 1 diabetes. She presents as lethargic, too weak to sit up in bed, cool skin and is somewhat irritable. She is resistant to a full vital signs examination and repeatedly says she does not want to go to hospital, has a GCS of 13, though at no time does she open her eyes to respond to questions. The crew decides to leave her at home as she has refused assessment. A short time later a second ambulance crew is called. They are more assertive and find the patient to be significantly hypotensive and with a blood sugar too high to be recorded. They carry her to their stretcher and find she is restless and somewhat oppositional, but quite manageable. In ED she is found to have a pH of 6.9 and a blood sugar of 60 m/mol/L. Soon after she is transferred to intensive care, critically ill with ketoacidosis.

Comment: Whilst the first crew affirmed the patient's right to refuse, it seems they did not properly check for competency. It is suggested there were enough clues (past history, *prima facie* presentation) to arouse suspicion that this patient lacked decision making capacity and did not meet the necessary criteria for a valid refusal: the patient in fact required rescue, not abandonment. Paramedics do not have a duty to transport every person to hospital, but they do have a duty, post arrival, post relationship establishment, to check for the decision making capacity of the patient to make informed choices. In the absence of this capacity, the default position should be one of treatment and transport.

Case 2

An elderly person with terminal cancer has exhausted all treatment options and is under palliative care at the home where the patient has raised a family. There is no available Advanced Health Directive. The patient deteriorates and according to ambulance guidelines meets criteria for treatment and transport. Though very weak, the patient is alert and fully

aware that his death is imminent. A distressed relative calls for an ambulance because he/she does not want the patient to die in the family home. A crew arrives to find considerable conflict. Despite phone calls to various persons, including the palliative carers, there seems no way to resolve the conflict between the desire of the patient to stay at home and the insistence with some force by the relative to transport the patient to hospital. The crew transports the patient, despite the patient's objections.

Comment: A right claimed is not a right owned. There is a distinction to be held between rights enforceable at law, for example, confidentiality, and those not enforceable, for example, the right to a second opinion.⁵ Relatives have no right to determine medical treatment against the wishes of a patient with legal capacity, anymore than they can dictate how they cast a vote, but are consulted both because it is polite and because they can help paint an accurate picture, especially if the patient cannot.⁵ In this case, it is the patient's wishes that are the priority, assuming all conditions for informed consent have been met. Given the context of the patient's condition, there is no duty to provide futile treatment,²⁵ though there would be a duty to attend to treatable and reversible conditions. Indeed, one of the main purposes of the Medical Treatment Act 1986 (Vic) is to speak into this very context and to formally make provision for the chronic and terminally ill to decline treatment.²⁰ Unfortunately there seems to be a clash of values between patient and relative. The interpersonal resolution of values conflict is not really the paramedic's domain, however here neutrality is impossible, so a choice must be made between competing values. In any case it would appear that the patient is merely being removed, not helped, and, therefore, arguably, harmed, contrary to the ethical principle of Non-Maleficence ('do no harm').³ It is suggested the crew should have explored options to serve the patient, not the relative, and that it is in fact the paramedic crew who have their own right to refuse to serve a third person, rather than their patient. Their primary duty is to their patient.

Case 3

A student paramedic and colleague are called to a young man with no medical history who feels short of breath, but is otherwise quite well. On examination the patient is assessed to be in supra-ventricular tachycardia. Despite some time spent by the student paramedic communicating the problematic nature of the rhythm, the patient refuses to go to hospital. Feeling a sense that he is responsible for any significant medical consequence, the paramedic calls the police and the patient, under duress, goes to hospital.

Comment: The patient has effectively been assaulted, or at least, deprived of liberty. Experienced clinicians are more likely to respect a refusal, since they have greater sensitivity in judging whether a situation is a genuine emergency or not. It is most unlikely there will be any significant or imminent problem for the patient, and that this is therefore not an emergency. Anecdotally, inexperienced paramedics are highly conscientious and cautious in managing patients, as they should be. But the consequence of this is that they are less comfortable in accepting a refusal, and may in fact be informing the patient within the constraints of their own limited understanding. It is accepted that the greater the risk to the patient the more stringent the process for meeting the tests for informed consent.^{3,8} However, even if the patient is at risk, the patient has the freedom to be wrong, whatever 'wrong' means.

Discussion

These cases indicate that just as paramedics are required to be clinical competent, so too must they be ethically and legally competent, for clinical competence includes ethical and legal competence. When the real world inevitably throws up a new and unpredictable case with an ethical or legal complication, paramedics need to be equipped and confident to apply accepted principles in a way that stands up under scrutiny in the cool light of reflection. This is no different in the ethical or legal realm any more than it is in the medical realm.

A recent study of desirable attributes in pre-hospital emergency practitioners included an “underpinning knowledge of law and ethics.”²⁶ How well do we foster this attribute?

In multiple teaching sessions over many years, paramedics have reported to the author that they are ill equipped to tease out the intricacies and subtleties of questions of consent and refusal. They also have reported that these cases can be both common and amongst the hardest ever attended, more difficult to solve than many acute clinical presentations. There is often much more to these cases than they realize. They express a need, for example, to be formally trained in how to systematically, yet quickly, assess a patient’s level of competence, rather than just relying on intuition. In the absence of this, some paramedics opt out with the ‘take them to hospital’ approach, seeking recourse in the absence of case law of suit for battery for rescuers attempting to save a life.⁵ They report it is better to face the accusation of assault or battery (albeit minor), than any clinical audit, charge of negligence, or perception of negligence from peers.

Four areas require investigation:

1. Understanding. Do paramedics adequately understand the legislative context in which they act, for example, the provision in an emergency of a ‘responsible’ person (surrogate decision maker) in the presence of an incompetent patient?²⁷ Further, how competent are paramedics to separate out questions of law and ethics from the clinical presentation of their patients? Can they distinguish questions of fact from value?
2. Methodology. Do current educational strategies meet the needs of paramedics? It is suggested that paramedics be more than just lectured, rather, they need to be trained, and coached, and mentored. Moral and legal education can consist in lectures, which by themselves do not produce capable decision makers, for knowledge is neither skill nor wisdom. Multiple case analyses can promote pattern recognition,²⁸ and multiple teaching strategies, (such as case studies, hypotheticals, debates²⁹ and journal reflection), can enable understanding and insight to flourish. Compulsory assessment in this area, for example, the use of vignettes with structured assessment guides,³⁰ can motivate paramedics to rise to the level of competence required to manage a world which by their admission is sometimes medical, but always moral.
3. Time. Is sufficient time devoted to educate or professionally develop paramedics? Whilst the move to degree level qualifications in Victoria has given course facilitators the time to broaden and deepen the knowledge and skill base of paramedic students, the overwhelming majority of practitioners in Victoria are associate diploma or diploma qualified, not degree qualified,¹² having had at best a few hours of lectures in

law and ethics pre qualificationⁱ There exists the potential to use professional development or further education programs to update the skills and understanding of practitioners who may have forgotten material touched on, in some cases, decades ago.

4. Resourcing. Is there an adequate publication base specifically for paramedics? Whilst in recent years there has been an increased awareness and commitment to developing critical thinking in pre-hospital emergency care and education,^{28,31,32} it is fair to say that the most energy has been directed at applying critical thinking to the clinical realm rather than the moral. It is also fair to say that the most work done on critical thinking in ethics, reflected in publications, is applied to the hospital or palliative care environment, not the pre-hospital environment.⁸ Ironically, nurses receive significant education in ethics and law,ⁱⁱ and it is easy to find specific texts and journal articles in their domain, despite the fact that nurses by and large operate in conjunction with medical practitioners, most of whom operate in controlled environments.

These questions could be addressed by further research, but if resolved, could guide educators so that the curriculum is refined to meet the needs of the practitioner, (and therefore patients) not vice versa.²⁶

Given the 'Recipe of Difficulty' faced by paramedics in their environment, we are the very group that most needs training in this area. According to the universally accepted triage principle of 'each according to their need', one could argue that those who operate in the *worst* environment for making decisions about consent and refusal should receive the *best* education and most thorough training, especially when the stakes are so high. It is the author's view, based on experience, that stressors affecting decision making ability can be greatly diminished in the presence of adequate knowledge and understanding. Educators can do little to change the stressors, for this is the paramedic environment, but they can ascertain the current understanding of paramedics and respond accordingly.

Conclusion

There is sufficient evidence to warrant investigation into the competence and education of paramedics in the ethical and legal domains, especially given the paucity of relevant published material and the contextual difficulties of paramedic decision making. The argument of this paper is found in one of the very few sources which steps outside of the boundaries within which most ethical research and teaching is conducted. "These cases illustrate dilemmas that pre-hospital emergency care providers often face between conflicting obligations in a high-pressured environment. It is important that emergency medical technicians (EMT's) be trained to understand basic ethical concepts so that such dilemmas are recognized. EMT's must be able to reason under crisis conditions and make decisions that are ethically appropriate."⁸

ⁱ Ambulance paramedics who have completed a Diploma at Monash University have attended approximately 3 hours of lecture/discussions in ethics and 6 hours in law over a three-year training period, with no compulsory assessment. Degree qualified paramedics at Monash have completed a semester unit of 33 hours lecture/tutorial on law with two compulsory assignments and one two hour examination, as well as approximately 12 hours of formal ethics classes with one compulsory assignment.

ⁱⁱ Monash University, Peninsula nursing degree students share the semester law unit with paramedic students, but also complete 27 hours of lectures and discussion on ethics with two compulsory assignments.

References

1. Wilkes GA, Krebs WA, editors. Collins Concise Dictionary. 3rd ed. Sydney: Harper Collins; 1995.
2. Eburn M. Emergency law: Rights, liabilities and duties of emergency workers and volunteers. 2nd ed. Leichardt, NSW: The Federation Press; 2005.
3. Mitchell KR, Kerridge IH, Lovat TJ. Bioethics and Clinical Ethics for Health Care Professionals. 2nd ed. Wentworth Falls: Social Science Press; 1996.
4. Johnstone MJ. Bioethics: a nursing perspective. 4th ed. Sydney: Churchill Livingstone; 2004.
5. Wallace M. Health Care and the Law. 3rd ed. Pymont, NSW: The Law Book Company; 2001.
6. Forrester K, Griffiths D. Essentials of Law for Health Professionals. Sydney: Harcourt; 2001.
7. Beauchamp TL, Childress JF. Principles of Biomedical Ethics. 5th ed. New York: O.U.P; 2001.
8. Iserson KV, Sanders AB, Mathieu D, editors. Ethics in Emergency Medicine. 2nd ed. Tucson: Galen Press; 1995.
9. Biegler P, Stewart C. Assessing competence to refuse medical treatment. MJA 2001;174(10):522-525.
10. Deschamp C. Scene Times: What is reasonable for paramedic-level Prehospital care? EMS Sept 2000:96-7.
11. Hammond KR. Judgments Under Stress. Ch 11 Appendix:Literature Review – Stressors. New York: OUP; 2000.
12. Robinson R. Follow up study of health and stress in Ambulance Services of Victoria, Australia 2002. Victorian Ambulance Crisis Counselling Unit. Melbourne, Australia. Page 12 - 75% of paramedics report difficulty sleeping.
13. Sukov A, Verdile VP, Garetson D, Paris PM. The outcome of patients refusing prehospital transportation. Prehospital and Disaster Medicine Oct/Dec 1992;7(4):365-371.
14. Metropolitan Ambulance Service Annual Report 2004-5. p. 98-9. (With further personal correspondence M Miller 22/9/06.)
15. Moss ST, Chan TC, Buchanan J, Dunford JV, Vilke GM. Outcome study of prehospital patients signed out against medical advice by field paramedics. Annals of Emergency Medicine Feb 1998;31(2):247-250.
16. Vilke GM, Sardar W, Fisher R, Dunford JD, Chan TC. Follow-up of elderly patients who refuse transport after accessing 911. Prehospital Emergency Care Oct/Dec 2002;6(4):391-395.
17. Marsan RJ Jr, Shofer FS, Hollander JE, Dickinson ET, Mechem CC. Outcomes of travelers who refuse transport after emergency medical services evaluation at an international airport. Pre-hospital Emergency Care Oct-Dec 2005;9(4):434-8.
18. Brockaw J, Olsen L, Fullerton L, Tandberg D, Sklar D. Repeated ambulance use by patients with acute alcohol intoxication, seizure disorder, and respiratory illness. Am J Emerg Med 1998;16(2):141-144.
19. Burstein JL, Hollander JE, Delagi R, Gold M, Henry MC, Alicandro JM. Refusal of out-of-hospital medical care: effect of medical-control physician assertiveness on transport rate. Acad Emerg Med 1998;5(1):4-8.
20. Medical Treatment Act 1988. Part 2, Section 5 and 7. Available from: <http://www.dms.dpc.vic.gov.au>
21. Mental Health Act 1986. Part 3 Division 2, Sections 8-10. Available from: <http://www.dms.dpc.vic.gov.au>

22. Palmer RB, Iserson KV. The critical patient who refuses treatment: an ethical dilemma. *The Journal of Emergency Medicine* 1997;15(5):729-733.
23. Stuhlmiller DFE, Cudnik MT, Sundheim SM, Threlkeld MS, Collins TE Jr. Adequacy of online medical command communication and emergency medical services documentation of informed refusals. *Acad Emerg Med* 2005;12(10):970-977.
24. Wyatt A. Towards professionalism – an analysis of ambulance practice. *Australasian Journal of Emergency Care* March 1998;5(1):16-20.
25. Australian Medical Association Code of Ethics. Section 1.4 ‘The Dying Patient.’ Available from: <http://www.ama.com.au>
26. Kilner T. Desirable attributes of the ambulance technician, paramedic, and clinical supervisor: findings from a Delphi study. *Emerg Med J* 2004;21:374-378.
27. Guardianship and Administration Act 1999. Part 4A Division 1 and 2. Available from: <http://www.dms.dpc.vic.gov.au>
28. Janing J. Assessment of a scenario-based approach to facilitating critical thinking among paramedic students. *Prehospital and Disaster Medicine* 1997;12(3):216-221.
29. Candela L, Michael SR, Mitchell S. Ethical debates. Enhancing critical thinking in nursing students. *Nurse Educator* Jan-Feb 2003;28(1):37-9.
30. Savulescu J, Crisp R, Fulford KWM, Hope T. Evaluating ethics competence in medical education. *Journal of Medical Ethics* 1999;25(5):367-374.
31. Dalton AL. Enhancing critical thinking in paramedic continuing education. *Prehospital and Disaster Medicine* Oct-Dec 1996;11(4):246-253.
32. Janing J. Critical thinking: Incorporation into the paramedic curriculum. *Prehospital and Disaster Medicine* Oct-Dec 1994;9(4):238-242.

Acknowledgements

The author would like to thank Bill Lord, Kirsty Enders and Ben Piper for their advice and support.

This Article was peer reviewed for the *Journal of Emergency Primary Health Care* Vol.5, Issue 1, 2007