

Impact of Spirituality on Making Ethical Healthcare Decisions

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From persons to moral duty

Ethics is concerned with the behaviour of persons and not of animals. A moral action is one where *good* is chosen. The meaning of *good* is pivotal for ethics. The need to live ethically and moral truth arise from a person's rational nature and subjectivity where awareness of one's absolute value as a person dawns. We may ask what makes an action so good that it must be done, or bad that it should be avoided. Moral obligation or duty depends on our concept of the human person. This is so because morality is essentially related to the core of our personhood wherein rational human nature, intellect, conscience, freedom and personal dignity reside. We cannot be indifferent to what is detrimental to our personal identity, worth and self-fulfilment. The recognition that an action conflicts with the good of person(s) generates an unconditioned demand to choose to avoid it.¹

How do we determine what is morally right and wrong?

Feelings and intuitions may often be right but they cannot definitively determine what is truly good or bad. The concept of the human person is the referral point for the moral evaluation of human actions in relation to the good of person(s). In the light of a person's dignity, essential nature, integral human experience, and relationships to other persons, animals and the environment, reason is able to discern that some actions conflict with the true good of person(s) and are therefore immoral. Reason is able to judge objectively and with certitude that some kinds of actions are inherently opposed to the good of person(s) and are immoral, such as the deliberate killing of unarmed civilians in war or sexual violence, regardless of circumstances, customs or motives. The moral duty to avoid such actions is universal since it holds for all persons, situations and cultures. In much the same way reason also operates at the subjective and personal level and, when sincerely

seeking objective truth, its judgements are those of conscience, dictating what is to be done or avoided.²

But sometimes reason is unable to judge with certitude that an action is immoral. Non-objective, subjective factors in a person may subconsciously play a role in the determination of reason's judgement. Subjective factors include preferences, love or emotions. Parental love could hinder a parent from preventing a child from continuing in a potentially damaging relationship. This does not happen in a simple mathematical calculation of two plus three equals five because the evidence is too clear to allow subjective factors a determining role. It is part of human nature that subjective factors can influence reason in a genuine search for objective moral truth when the evidence is not clear. Culturally entrenched prejudice or bias may also influence the moral judgements of a nation.

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Duty of Reasonable Care and Treatment of Patients

A person's health may be understood as whatever pertains to the prevention, diagnosis, treatment and rehabilitation, for the physical, psychological, social, spiritual and personal wellbeing of the patient.³ Reasonable care of life and health traditionally meant having recourse to 'everything possible'. Modern high-tech medicine has rendered this rule of thumb an unreliable guide for doctors and patients. Doctors normally have a moral duty to provide, and patients to accept, *ordinary* or *proportionate* means of healthcare according to circumstances of persons, places, times, and culture and which do not involve any grave burden for oneself or another.⁴ Patients' prospects for recovery and the availability of medical resources enter into the complex judgement of *the duty of reasonable treatment in the circumstances*. When the withholding of treatment is morally justified, its withdrawal is also justified bearing in mind the reasonable wishes of the competent patient. However, it is psychologically more difficult to withdraw futile treatment once it has commenced than to withhold it.

Patients as Persons

Persons do not exist in the abstract without names, gender, age, family ties, a religious faith, a conscience, a nationality, a culture, or personal beliefs. Patients are persons who need to be understood from a subject-centered approach complemented by a perspective based on rational human nature which is the foundation of a person's subjectivity. Persons experience themselves in bodily activities like walking, playing sport, eating and drinking. At a far deeper level they experience themselves in rational acts of affirming the truth, of conscience, making free choices, of love and of desiring happiness. The patient's perspective is crucial and unique as it is an expression of the person as a rational subject. A person's subjectivity may be powerfully or only slightly influenced by the spirituality typical of their religious faith, be it Buddhism, Christianity, Islam, Judaism, or a system of secular beliefs and personal values.

More credit and respect is now rightly given to patients' conscientious judgements and morally responsible exercise of autonomy in their healthcare. Medical treatment is to serve patients who should not be subjected to the duress of enduring technological interventions against their wishes. It would be unethical to force feed competent patients against their reasonable wishes or to oblige them to undergo life saving treatment against their will.

Many medical treatment decisions, with the patient's informed consent, are doubtless objectively ethical, e.g. life-saving removal of a cancerous tumour. Others are unethical, such as deliberately giving a lethal dose of a drug to a patient motivated by a desire to prevent pain. Other

decisions may be in a moral grey zone, e.g. whether the surgical removal of a cancerous tumour in the bowel is warranted for an elderly and weak patient. The proportion of benefit over harm may not be evident to both the health professional and patient alike. In such grey zones the patient's subjectivity may rightly influence the decision.

Christian vision of human life

Special consideration needs to be given to the relationship of patients' conscience and autonomy to their spirituality, religious beliefs or lack thereof. I will touch on some beliefs of many Christians which could consciously or subconsciously influence their healthcare decisions.

The Christian tradition is optimistic as may be gleaned from the following biblical texts: 'God is love, and whoever remains in love remains in God and God in him'; (Jn 4:16) 'Even were I to walk in a ravine as dark as death, I should fear no danger, for you are at my side.' (Ps. 23:4) 'Peace I bequeath to you, my own peace I give you, ... this is my gift to you. Do not let your hearts be troubled or afraid.' (John 14:27)

Christ's teaching on the new life of faith and grace encourages believers to look forward to the glorious risen life that awaits them after death. St Paul wished to die to be with Christ: "I am caught in this dilemma: I want to be gone and to be with Christ, and this is by far the stronger desire --- and yet for your sake to stay alive in this body is a more urgent need."⁵ The Greek verb ἀναλύειν means to be gone, to loose from moorings, to weigh anchor, to depart and to die, as dictionaries give for this text, Phil. 1:23.

The Christian faith offers hope for believers and their loved ones for the future and strength in the midst of present anxieties, fears and sufferings. Death and suffering, though tragic, are not absolute evils for Christians. Referring to people generally, Catholic teaching at the Second Vatican Council in 1965 states:

Christian faith teaches that bodily death ... will be overcome when that wholeness which they lost through their own fault will be given once again to them by the almighty and merciful Savior.⁶

The Christian vision is well expressed in the following saying: "For a Christian, the moment of death is the moment of his being finally united forever to Christ."⁷

Sadly, as Professor Francis rightly Moloney laments "the theological commitment of Christianity to a life which extends beyond the limitations of this life is seldom heard in contemporary health care discussions."⁸

Influence of Christian Beliefs and Spirituality on Decisions Making

The meaning of 'burdensome' need not be limited to what is physically painful. It can also refer to what is psychologically burdensome which draws on one's self-understanding from the present into the future. The sick themselves, not others, are the experts on how they feel and personally experience different kinds of burdens caused by their illness or treatments. People with a strong sense of a religious mission may want treatment that borders on being *extraordinary* in order to live longer and continue to fulfil a mission. Think of the heroic struggle of Pope John Paul II to live on to the very end to fulfil his mission of Shepherd of his world-wide flock -- until he felt it was time to go 'to the house of the Father'. Likewise a dying mother may wish to show her love for her teenage children by opting for continued health care at home to share more quality time with them as they mature.

Others who are impressed by life as God's gift may wish to hold on to life in this world, even by choosing to have extraordinary life-saving treatment to prolong life as long as possible. This would normally be morally permissible. Some people whose spirituality is dominated by fear of God may also wish to delay death by seeking life-saving treatments.

People who have a strong and vibrant belief in God and the Risen Christ may be less inclined to want to have extraordinary or burdensome life--saving treatment than others in view of their desire to enter heaven! Likewise sick parents and grandparents, with few prospects for a cure from a lethal disease, may, out of love of their children and grandchildren, choose to forego costly extraordinary treatment to avoid using a substantial amount of the family savings.

Others may be inspired by St Paul who was willing to embrace a natural death to join the Risen Christ in glory. Such patients may be reluctant to consent to undergoing extraordinary treatments.

Some patients may choose to moderate their use of pain killers in order to share in the sufferings of Christ.

People who enjoy pursuing an intellectual life of reading, studying and following their family members and cultural interests would find it uncomfortable to have life prolonged by medical treatments that result in their life becoming burdensome to themselves and others, by perhaps being unable to pray or talk. Pope Pius XII agreed:

A more strict obligation would be too burdensome for most men and would render the attainment of the higher, more important goods too difficult. Life, health, and all temporal activities are in fact

sub-ordinated to spiritual ends. On the other hand, one is not forbidden to take more than strictly necessary steps to preserve life and health, as long as one does not fail in some more serious duty.⁹

The use of the terms 'spiritual ends' refers to a person striving to achieve the spiritual purpose of a fully human Christian life by doing God's will through acts of faith, hope, prayer and love of God and neighbour, as well as reading, raising a family, working etc. To achieve all this presupposes persons are capable of living a rational and free self-conscious life, the preservation of which would be a priority for sick persons' treatment.

In the light of this it would be difficult to justify an operation that could prolong life but most likely leave the patient permanently unconscious.

Chaplains and pastoral care practitioners have an important spiritual role to play in helping the sick and elderly to think through their concerns, including reconciliation with family members and perhaps God. They may be able to help them resolve some conscientious conflicts as they prepare them for an eventual peaceful death. Dr Eric Cassell's research shows that there is preliminary evidence of impaired thinking in otherwise competent adults once they become very sick and hospitalized; their thinking has been found to be comparable to that of children younger than 10 years of age.¹⁰ If this is so, pastoral care for the aged, sick and dying would be all the more necessary.

Many Christians give much importance to administration of the Sacraments of Reconciliation, of Anointing and of the Eucharist through which God's love and merciful forgiveness of sins is provided at the approach of death. Catholic chaplains should give timely help to prepare the sick and elderly who wish to receive these Sacraments. Such patients would receive greater spiritual benefit if they are still conscious.

On the other hand, those who believe in matter alone to the exclusion of a spiritual soul, God and any life after death may want to live on earth as long as possible, and be willing to use any means available for sustaining life. Some may want to live as long as life is enjoyable and use their autonomy to seek a painless death by voluntary euthanasia rather than endure a slow dying process after which they believe they cease to exist.

Institutional Policies

All healthcare institutions and residential aged care facilities should observe Commonwealth and State laws, including those prohibiting the deliberate performance of direct euthanasia. They should follow their own ethical guidelines for making medical decisions towards the end of life, making sure provision is made for the needs of pa-

tients from a variety of spiritual and religious backgrounds. Catholic institutions should follow their own published Code of Ethical Standards which is in accord with official Catholic teaching. Healthcare professionals should abide by their own institution's policies, recognising that there is always scope for the exercise of professional clinical judgements.

Commonwealth and State Governments have a responsibility to adequately fund the healthcare needs of all Australia's citizens of any religion or none. Integral healthcare, especially of the elderly and patients near the end of life, does require the assistance of qualified pastoral care practitioners. These ought to be publicly funded and not be prevented by laws or policies from having reasonable access to patients who could benefit from their valuable spiritual or pastoral services.

ENDNOTES

¹ Ford N M, *The Prenatal Person. Ethics from Conception to Birth*. Oxford: Blackwell Publishing 2002, 19.

² *Ibid* 21-22.

³ Pontifical Council for Pastoral Assistance to Health Care

Workers, Charter for Health Care Workers, Vatican City, 1995, 9 and 62.

⁴ See Pope Pius XII, Address in French to the International Congress of Anaesthesiologists, *Acta Apostolica Sedis*, 49 (1957)1030; 'The Prolongation of Life', *The Pope Speaks* (1957-58) 395-97.

⁵ Philippians, 1: 23. *The New Jerusalem Bible*, New York: Doubleday, 1985.

⁶ 'Pastoral Constitution of the Church in the Modern World', *Vatican Council II, Constitutions, Decrees, Declarations*, New York: Costello Publishing Company, 1996, N. 18, p. 180.

⁷ Pontifical Council *Cor Unum* "Questions of Ethics Regarding the Fatally Ill and the Dying", Vatican Polyglot Press, 1981. p. 5.

⁸ Moloney F J, "Life, Healing and the Bible: A Christian Challenge", *Pacific* 8 (1995) 329-30.

⁹ Pope Pius XII, Address in French to the International Congress of Anaesthesiologists, *Acta Apostolica Sedis*, 49 (1957) 1030-31; 'The Prolongation of Life', *The Pope Speaks* (1957-58) 395-97.

¹⁰ Cassell EJ, AC Leon, and SG Kaufman, 'Preliminary evidence of impaired thinking in sick patients', *Annals of Internal Medicine*, 134/12 (2001) 1120-3.

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Ethical Responses to Drug Abuse

Better education of our youth, those working with them and even parents will be needed if we are to remedy the current situation in Australia. A broader approach taking into account some of the recommendations below might hopefully reverse the alarming trend seen in recent years. This article complements the article on Drugs in the last issue.

Re-evaluating and integrating drug policy

The World Health Organization has recently reported that while scientists have gained vital new insights into drug, alcohol, and tobacco dependence, this knowledge has not been translated effectively into public health policy. Substance dependence is determined by psychosocial, cultural, and environmental as well as biological and genetic factors. Although more is now known about this complex disorder, scientists are still unable to predict which individuals will become dependent before or after they take drugs. Society too is harmed not only by substance dependence but by experimentation and harmful use by individuals who are not dependent. For example, overdoses are usually fatal while the use of dirty needles to inject drugs can spread HIV. The UN report also found that many people who were addicted to drugs, alcohol, or tobacco had mental disorders and that health professionals should treat the conditions together. It is becoming very clear that an integrated approach is needed to tackle dependence on legal psychoactive substances, such as tobacco and alcohol, as well as illegal ones.¹

The WHO report called on governments not to always treat dependence on tobacco, alcohol, and drugs simply

as a failure of will or strength of character, but more as a neurological or psychiatric disorder that may not be curable but can be treated effectively. It advised governments not to stigmatise those with such problems and emphasised that effective treatments existed, such as the prescription of substitute drugs and psychosocial therapy aimed at changing patients' behaviour and reintegrating them into society.²

There are clear signs that amphetamine use is increasing in Australia and internationally, yet there are few services that offer amphetamine-specific interventions. Although some drug treatment services are excellent, these are thin on the ground--most services are poorly organised, offer only limited treatments, and are understaffed. Many have such long waiting lists that more than half the clients booked in never show up, and because after-treatment support is poor in many areas, clients are often never heard of again. The literature is very limited in the number of well-conducted, controlled studies, but the evidence available suggests that cognitive-behavioural therapy, conducted by psychiatrists or psychologists, appears to be current best practice. Motivational interviewing has been recommended as a strategy to assist those ambivalent to treatment. There is also some evidence that contingency plans are effective while clients are in treatment. The effectiveness of other types of in-

tervention is not well supported.³ Regardless, there is a strong and growing case for rigorous evaluation of substitution therapies combined with tailored psychosocial interventions to achieve improved outcomes for amphetamine users.⁴ This is where government policy could be much more proactive and, in doing so, make more effective use of funds. For every dollar invested in drug treatment, seven dollars are saved in health and social costs.⁵

Effective clinical response

While there remains an insufficient foundation for optimally effective, evidence-based management of comorbidity in clinical practice, there are strong suggestions about both what is and is not likely to be effective. Basic issues such as lack of detection, lack of treatment, and inadequately integrated treatment repeatedly emerge as issues in clinical practice. Despite often being the people to whom drug misusers turn first, many GPs are reluctant to take on the care of these patients, as a survey found.⁶ We know an increasing amount about the aetiology of drug abuse. Aspects such as correlates of co-morbidity, probable rates and preferred substances, and the often complex relationships between substance use and symptoms are better understood. Despite some inconsistencies in results, the treatment literature also gives some hope for positive outcomes—but *only* if an effort is made to address these needs.⁷ It is of concern that more policy initiatives are not acting upon these advances in our knowledge.

Much more research into the adverse effects of ecstasy is also needed. Considering its rising popularity and the mounting evidence supporting the concept of brain damage associated with its use, controlled epidemiological studies to establish the prevalence of harms, and to quantify the risks of ecstasy use are highly desirable. The question of whether ecstasy does produce dependence also remains unanswered.⁸

Societal responses

Societal responses to the existence of substance misuse fluctuate between harm minimisation and prohibition. Both approaches are predominantly downstream reactions to substance misuse that focus on the supply of harmful substances and the containment of misuse through treatment, rehabilitation or punishment. What exactly, though, is the driving force behind the problem of drug abuse? Until recently, little attention has been paid to the upstream individual, family, relationship, community or societal antecedents of substance misuse that have operated during earlier life. These factors often overlap with those for other adverse life outcomes, such as unemployment, antisocial personality disorder and mental health problems. Risk minimisation embedded in family and social systems are the essential building blocks of a set of early intervention strategies that really ought to continue

through the developing years of childhood, adolescence and young adult life. Strong family networks have been shown to be effective in improving many outcomes in development, health and well-being. It is well established that family functioning and parental supervision are important predictors of drug use and other problematic youth outcomes. Efforts are now beginning to be directed towards the development and implementation of family-based drug prevention programmes. Such interventions have shown real promise and warrant further investigation.

There are good reasons to look further into the whole problem from this perspective. There are societal factors that influence family functioning, such as increases in participation of parents in the workforce, in stress associated with longer working hours, less secure employment and in the number of sole-parent families which continue to be overwhelmingly socio-economically disadvantaged relative to two-parent families. The government and their policy advisors can no longer assume that all children have two parents, one at work and one at home, to raise them. It is no longer realistic to expect all families to raise children on their own, with so many parents practically forced to be in the work-force and/or being sole parents. The cost of living in real terms has risen sharply and our societal infrastructure needs to accommodate the resulting changes in family structure.

There is an increasing body of research demonstrating the value of youth and community development programmes for drug and crime prevention.⁹ However, there are no mechanisms to allow such programmes to be put in place as a normal part of community infrastructure. For example, funding a series of youth programmes is not sufficient. As a society, we need to ensure that child and youth development is universally promoted. Personal integrity and self discipline are undervalued in today's world. Personal values and belief systems, theological or otherwise, have too often been discarded as virtues in the Western sphere without much thought. The resulting vacuum has left many without any intrinsic meaning in their life. This causes real vulnerability and individuals can become susceptible to negative or destructive influences. If we as a society can remedy this parlous state of affairs, we can be less concerned with drug prevention, bullying prevention, suicide prevention, crime prevention and other destructive behaviour.¹⁰

Indeed, there is a strong body of policy research that shows countries that invest in supporting children and families achieve better outcomes in terms of child health, well-being and social functioning than countries with systems dominated by notions of individual responsibility and the policy philosophy of user-pays. In other words, good drug prevention is not just about preventing drug misuse—it is also about developing individual strengths, in addition to family and community support. It has been

argued that modern neoliberal values, particularly those relating to individual responsibility, are a substantial barrier to such changes.¹¹ Social cohesion through the development of youth groups, sports clubs, religious centres and other community associations all help to give young people meaning and context within society. Encouraging participation in such groups, in addition to structural interventions, might be necessary to influence the social determinants of health. Societal structures that have the most impact include government policies, service systems (eg, welfare, education, health, justice), laws and workplace policies.

Conclusion

In the areas of public health and crime prevention, there has been an increased understanding of the aetiology of drug use and other problem behaviours. Models of healthcare and prevention need to consider the interplay of the individual and the environment across the course of human life. Much remains to be done to enable the promise of effective universal and targeted early intervention to be translated into policies, programs and practices. 'Realistic, timely investment, influenced by the best scientific evidence indicating what works, for whom, under what circumstances, and an increased degree of collaboration within and between governments and their agencies are essential.'¹² Furthermore, greater investments in multidisciplinary program evaluation will enable evidence-informed and effective policy in this vexed area of public health to be improved. Finally, and perhaps most importantly, the family needs to be recognised as the piv-

otal link in better understanding psychosocial problems such as substance abuse.¹³

ENDNOTES

- ¹ WHO Report 'Neuroscience of Psychoactive Substance Use and Dependence' www.who.int/substance_abuse/publications/en/ (accessed November, 2005).
- ² *ibid.*
- ³ Baker A and N Lee, 'A Review of psychosocial interventions for amphetamine use.' *Drug and Alcohol Review* 22 (2003) 323-35.
- ⁴ Shearer J, 'Substitution therapy for amphetamine users.' *Drug and Alcohol Review* 21 (2002) 179 – 85.
- ⁵ WHO Report http://www.who.int/substance_abuse/publications/en/ (accessed November, 2005).
- ⁶ Kmietowicz Z, 'GPs asked to do more for drug misusers.' *British Medical Journal* 324 (2002) 501.
- ⁷ Kavanagh D, 'Co-morbidity of mental disorders and substance misuse.' *Drug and Alcohol Review* 23 (2004) 405-06.
- ⁸ Gowing L et al, 'The health effects of ecstasy: a literature review.' *Drug and Alcohol Review* 21(2002)53- 63.
- ⁹ Nadar C, 'Some using Heroin at 12.' *The Age* 23/11/2005 <http://www.theage.com.au/news/national/when-kids-light-up/2005/11/23/1132703255109.html?page=fullpage#contentSwap2> (accessed November, 2005).
- ¹⁰ *ibid.*
- ¹¹ Spooner C, 'Structural determinants of drug use—a plea for broadening our thinking.' *Drug and Alcohol Review* 24 (2005) 89 – 92.
- ¹² Mooney G, 'Addictions and social compassion.' *Drug and Alcohol Review* 24 (2005) 137–41.
- ¹³ Vimpani G and C Spooner, 'Minimizing substance misuse by strategies to strengthen families.' *Drug and Alcohol Review* 22(2003)251-4.

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Chronic Pain - The Ethics of Care, Belief and Coping

After defining the context for chronic pain, attention will be given to some of the key issues impacting those who carry the burden of chronic pain, as well as the issues impacting the therapeutic relationship between patients and practitioners.

Chronic Pain

Many difficulties abridge ethical dilemmas regarding the management of chronic pain. With unquestionable subjectivity, only the sufferer of pain can truly know what is felt. A chronic pain condition of similar disease severity elicits different responses from different people. Significantly, the ability to functionally adapt to pain and cope psychologically also varies within the same person at different times.

Arthritis and long term musculoskeletal conditions including, but not limited to, osteoarthritis, rheumatoid arthritis and osteoporosis affects approximately 6.1 million Australians.¹ Varying in the degree of pain they cause, they have recently become an Australian National Health Priority Area.²

The International Association for the Study of Pain, regards pain as 'an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.'³ Chronic pain is defined as 'pain that continues or recurs over a prolonged period, caused by various diseases or abnormal conditions such as rheumatoid arthritis.'⁴

The constraints of pain

Miles et al writes 'the constraint on leading a normal life was identified as the main problem of chronic pain...'⁵ It is not unusual for people with chronic pain to experience sleeplessness, fatigue and poor concentration. There can be increased stress in trying to meet the demands of a work schedule in spite of chronic pain and the risk of

needing to manage financially on decreased earnings. The pursuit of enjoyable leisure and recreational activities may be restricted or jeopardised. The constant distraction and burden of pain may precipitate a range of difficulties that impact on many areas of life, including maintaining social relationships.

For some, chronic pain with movement restrictions may also be associated with losses of independence, impacting the usual activities of daily living such as dressing, showering, cooking and shopping. The 2003 Survey of Disability, Ageing and Carers (SDAC) found '...of those with a disability associated with arthritis or related disorders, 168,800 had a severe or profound core activity restriction.'⁶ The core activity restrictions cited were limitations in mobility and self care, including dressing, showering and bathing.⁷ Chronic pain may, or may not, precipitate any combination of these difficulties in varying degrees.

The therapeutic relationship

Chronic pain can be difficult to endure. Because fear, anxiety and a sense of helplessness are legitimate responses to chronic pain, the establishment of a therapeutic relationship between the patient and medical/health practitioner is important.

As people in chronic pain seek to enter a therapeutic relationship, medical and health care practitioners should:

- Create a therapeutic relationship so as to properly facilitate healing, or at least create an environment where a meaningful problem solving approach to chronic pain can take place;
- Foster trust and empathy so as to maximise insight and understanding of the ways in which the individual person is affected by the pain; and
- Believe the patients self reported pain.

The dynamics of the patient-practitioner therapeutic relationship are complex and highly situational. The sensitivity that flows from a deep respect for the patients' condition and their life experience, lays the foundation for such a relationship. It enables the practitioner to more comfortably approach the patient. Such empathy is more likely to empower the patient to reveal over time how life stressors impact their pain, or even trigger it. Sensitive attention to these dynamics of patient care is of critical importance. Eccleston says 'Improvement in pain management can often be brought about by very simple, if subtle, changes in clinical practice. Although simple, these changes can have significant effects in the experience of pain, distress and the use of health care resources.'⁸

The duty of care to believe the patient's self reported pain is supported by The Australian and New Zealand College of Anaesthetists.⁹ Yet the high level of subjectivity re-

garding the experience of pain contributes to the management of pain being a field of patient care where misunderstanding and miscommunication are common. Misunderstanding between patients and medical/health practitioners can be distressing to the patient, potentially destabilising the unequal power relationship between practitioner and patient. Practitioners should be mindful of Miles et al insight that the 'absence of objective indices to validate and confirm people's subjective experience presents sufferers with a crisis of legitimisation.'¹⁰ Many reputable authors refer to patient demoralisation in response to practitioners disbelief of reported pain. Miles et al quotes Osbourne and Smith's finding that 'people often use social withdrawal as a way of coping with disability in the absence of a recognised illness.'¹¹

Insights into the physiology of pain

Understanding the physiology of pain assists to establish the credibility of particular pain management techniques and also explains why people are affected differently by pain.

The pioneering work of Melzack and Wall (1965) established evidence that the sensation of pain results from the integrated work of sensory (physiological) and perceptual (psychological) mechanisms.^{12,13} In the gate control theory, the dorsal horn of the spinal cord acts as a gateway to the efferent and afferent pain signals.¹⁴ The significance of the gate control theory of pain is that 'efferent nerve impulses are affected by an enormous variety of psychological factors known to influence the brain.'¹⁵ Emotional states such as anxiety and fear of pain can open the gateway, eliciting or increasing the sensation of pain, and positive, relaxed and calm emotional states can close the gateway so that no pain is felt, or the pain decreases.^{16,17}

Skevington suggests there is widespread support for Melzack and Wall's theory which underpins the idea that injury and pain are not necessarily synonymous.¹⁸ The theory also legitimises McCaffrey's suggestion that sometimes pain is not felt during an absorbing distraction such as pleasant music.¹⁹ This is a robust departure from the alternative view that the level of pain experienced should be proportional to the level of tissue damage, injury or painful stimulus.

Pain management

The quality of life of chronic pain patients can differ significantly depending on whether passive or active coping strategies for managing pain are employed.²⁰ The ability to function in spite of persistent pain is important. This warrants critical attention and underlies the effectiveness of cognitive behavioural therapy, which encourages the development of active coping strategies. Turk suggests 'coping strategies may alter the perception of pain intensity and promote the ability to manage or tolerate pain

and to continue every day activities.’²¹ This contrasts the outcomes obtained through passive coping strategies, which Turk suggests are characterised by ‘depending on others for help in pain control and restricting one’s activities.’²² Sole reliance on passive coping mechanisms can hasten further deterioration.

Whilst Cognitive behavioural therapy treatment programs differ from provider to provider, they all aim to assist people to construct a better quality of life through the application of active coping strategies. The success of such a program depends on its effectiveness in helping patients to increase their level of physical functioning in spite of persistent pain. The success of individualised treatment goals depend on the patient’s motivation to learn to adapt to their condition. Within such programs, emphasis is usually given to developing an awareness of the ways in which thoughts and beliefs, feelings, behaviours and responses to pain, affect the perception and interpretation of the chronic pain experience.²³ Keefe illustrates:

99 older adults (mean age=64 years) with persistent OA knee pain were randomly assigned to the 10-session pain coping skills protocol, a 10-session arthritis information/education protocol, or standard care. Patients who received pain coping skills training showed significant improvements in pain and psychological disability compared to those receiving the arthritis information/education protocol or standard care.²⁴

It’s worth noting that Williams²⁵ and Keefe both provide comprehensive information regarding the content of particular multidisciplinary pain management programs.

Self-efficacy is also an important dimension influencing the extent to which people can tolerate and cope with pain. Ozer and Bandura give it this definition: ‘Perceived self-efficacy is concerned with people’s belief in their capabilities to mobilise the motivation, cognitive resources, and courses of action needed to exercise control over given events.’²⁶ In a study of ‘30 chronic back pain patients and 40 rheumatoid arthritis patients’, Flor and Turk, cited in Jensen et al found people who employed ‘coping-related beliefs associated negatively with pain severity and intensity, interference with life activities, and physician visits.’²⁷

Chronic pain can be distressing, and in a society that is driven by action and immediate results it is not always easy to muster a sense of purpose and commitment to succeed in vocation in the midst of such pain. The reality is that in adverse circumstances, or in the absence of familial and social support and inclusion, we can be quick to lose our focus and faith in *who we are*. It was once said (to me) that ‘*it’s not what happens to you that’s important, but how you deal with it that really matters.*’ On reflection it’s apparent that the very belief system on

which we anchor our lives and which elicits our deepest and most personal values and desires, can become a turning point, a source of personal strength, through which we are positively enabled to proceed in spite of chronic and persistent pain. What this means for individuals is highly variable and personal. But it is worth considering. It is well established that anxiety, fear of pain and feelings of helplessness can worsen and prolong the experience of chronic pain. Many research studies confirm this. Boston et al in a study of ‘90 chronic pain patients’, cited in Jensen et al found that patients who had a sense of ‘hopelessness associated positively with pain intensity, pain distress, behavioural disruption, and anxiety...’²⁸

Conclusion

Substantial evidence suggests that strategies can be put in place to assist chronic pain patients to endure some of the effects of long term pain. But this is only part of the story. The physiology of pain and the range of personal factors that influence pain are complex. A pain management strategy that works for one person may not be effective for another. The commitment of time and effort to search for an effective pain management strategy that is personally appropriate is important. The evidence suggests that *giving up*, and *giving into pain* can have disastrous consequences.

ENDNOTES

¹ The Australian Institute of Health and Welfare (AIHW), ‘Burden of arthritis and musculoskeletal conditions’, *Arthritis and musculoskeletal conditions in Australia 2005, with a focus on osteoarthritis, rheumatoid arthritis and osteoporosis*, Canberra, October 2005, 8.

² *ibid*, 1

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Aspartame: an Artificial Sweetener Under Review

Artificial sweeteners are found in a wide variety of foods which are mostly advertised as being diet or sugar free. Despite their benefits various groups and individuals remain sceptical of their safety.

Artificial Sweeteners

Artificial sweeteners unlike table sugar do not contribute to blood sugar levels. Due to their intense sweetness, some are 300 times sweeter than sugar, are only required in small amounts and therefore make a negligible contribution to caloric value of a food or drink.¹ For these reasons they are useful for those looking to consume sweet foods without the worry of weight gain but also for diabetics who wish to enjoy sweetened food without any effect on their blood glucose levels. Artificial sweeteners are more commonly known as 'Equal', 'NutraSweet', 'Splenda' or 'Sweet'n'Low'. They are used in foods such as jams, soft drinks, cordials, confectionary, gum, flavoured yoghurts and mousses, canned fruit, jellies and toppings² By far the most often consumed of these products are carbonated soft-drinks.³ Products containing artificial sweeteners must list them in the product ingredients. For example the artificial sweetener aspartame ('Equal' or 'NutraSweet') is denoted by the number 951. Considering the high prevalence of the use of artificial sweeteners in the population the safety of artificial sweeteners needs to be carefully examined.

Aspartame

Aspartame is approximately 200 times sweeter than table sugar and consists of the amino acids phenylalanine and aspartic acid joined via a methyl ester.⁴ It was approved by the US Food and Drug Administration in 1981 for use in beverages and later in 1996 for use in all types of food-stuffs.⁵ Aspartame, due to its phenylalanine component, can be toxic to individuals with the rare inherited genetic disease phenylketonuria (PKU), which results in the inability to metabolise phenylalanine. PKU is tested for

two to three days after birth in Australia and is rare, affecting one in 15,000 people in Australia and New Zealand.⁶ To enable phenylketonurians to regulate the levels of phenylalanine they consume, all products containing aspartame must carry a label notifying the consumer that the product contains phenylalanine.⁷ Also the U.S government's Food and Drug Administration (FDA) advises pregnant women with high levels of blood phenylalanine may have difficulties digesting aspartame.⁸

Industry monitors

In Australia, the *Food Standards Code* outlines the acceptable use of food additives.⁹ This code is enforced by State and Territory food laws. Food Standards Australia and New Zealand are responsible for evaluating the safety of a food additive. They undertake scientific evaluations of the available data from studies carried out on the food additive and also assess if products containing the additive will be adequately labelled. If necessary, FSANZ may then recommend a change to the Food Standards Code which will be assessed by a Ministerial Council consisting of State, Territory, Commonwealth and New Zealand Ministers. FSANZ is also responsible for assessing the acceptable daily intake (ADI) of a particular food additive. The ADI is the amount of a substance that can be consumed daily over a lifetime without any risk to an individual's health.¹⁰

Early investigations on the safety of aspartame

Several studies testing the safety of aspartame were conducted before aspartame was approved by the FDA in 1981.¹¹ One of the long-term concerns regarding the

safety of artificial sweeteners was their ability to cause cancer. Three long term feeding studies were conducted by the then manufacturer of aspartame, Searle & Co to examine if aspartame had any carcinogenic potential.¹² These studies all concluded that aspartame was safe. An additional long-term aspartame consumption study concluded aspartame was safe and cemented the FDA decision to approve aspartame. It is now being argued that these studies did not fit the present criteria for good scientific practice. The main concerns being raised with respect to the aspartame safety tests are the low number of mice that were used in the study and the short length of time that aspartame was fed to the mice.

Recent study questions aspartame's safety

A recently published seven-year \$1 million dollar study conducted by Dr. M. Soffritti at the independently funded European Ramazzini Foundation (ERF) tested whether aspartame causes cancer in rats.¹³ In this study groups of 100-150 rats were given feed supplemented with increasing amounts of aspartame - 1,800 rats were used in total.¹⁴ Aspartame was administered in the rats' feed at different concentrations ranging from 4 mg/kg to 5,000 mg/kg body weight per day calculated for an average sized rat of 400g. The rats were given this diet from 8 weeks of age until natural death. In their conclusion the authors state "Our study shows that APM (aspartame) is a multi-potential carcinogenic compound whose carcinogenic effects are evident even at a daily dose of 20 mg/kg, much less than the current ADI for humans in Europe (40 mg/kg) and in the United States (50 mg/kg)." In Australia and New Zealand FSANZ has set an ADI of 40 mg/kg for aspartame consumption.¹⁵

Dr. Soffritti reported results including a significant trend of increasing lymphoma and leukaemia incidence in female rats fed aspartame with a significant increase in the number of female rats affected at dosages of 20 mg/kg per day and upwards (from an 11.3% increase at 20 mg/kg to a 16.3% increase at 5,000 mg/kg body weight per day).¹⁶ There was a statistically significant trend in precancerous lesions and carcinomas of the renal pelvis and ureter in those female rats that were fed from 20-5,000 mg/kg of aspartame a day, with an increase of 4.7% in the number of females affected at a dose of 20 mg/kg and 13.7% at 5,000 mg/kg per day. It was found that male rats had a significant positive trend of increasing malignant tumours of the peripheral nerves with increasing aspartame levels.

Critics of Dr. Soffritti's study including the Calorie Control Council (a not for profit representative of the reduced fat and low-calorie food and beverage industry), have argued that allowing the rats to live out their natural lives did not follow the U.S. government's National Toxicology Program (NTP) standards.¹⁷ However, John R. Bucher the deputy director of environmental toxicology

at the NTP, found the Soffritti study to be "impressive" and "thorough" and does not believe that allowing the rats to live out their natural lives affected the results.¹⁸ In fact some argue that lifetime studies are ideal but often not carried out simply due to cost.

Risks of aspartame questioned

The results of Soffritti's (2006) study with all of the data generated were submitted to the European Food Safety Authority (EFSA) for review.¹⁹ The EFSA requested that it's Scientific Panel on Food Additives, Flavourings, Processing Aids and Materials in Contact with Food (AFC) to review the study. This review was released on the 5th of May 2006. The AFC review argues that there was not enough evidence to conclude that aspartame causes an increased incidence of lymphomas and leukaemias. They argue that in the female rats the difference in incidence of lymphomas/leukaemias between the group with the lowest significant increase and the groups administered the highest dose of aspartame is not significant. The AFC argue that since there was only a five percent increase in incidence over 250 fold range of aspartame dosage there wasn't a dose related response. They argue that the incidence of lymphoma/leukaemia in both the males and females falls within the historical range in rats over time at the ERF. They also did not agree with Dr. Soffritti's statistical analyses and argued that combining the incidences of lymphomas and leukaemias is not justified. Additionally it argued that the increase in the number of rats affected with lymphomas and leukaemias could be due to chronic respiratory infections of the rats used in the study. In an ERF press release Dr. Soffritti contests that the "occurrence of chronic pulmonary inflammation is common in the natural dying process. Moreover, inflammation was observed in both animals who were treated with aspartame as well as in the control group."²⁰ However it is argued by the AFC that the organisms causing the lung infection can also cause cancer.²¹ If this were the case then it could not be concluded whether the occurrence of lymphomas /leukaemias is caused by aspartame or the infection and further studies need to be carried out.

It is agreed by the AFC that the incidence of neoplasias (abnormal growths) of the renal pelvis and ureter seen at significant levels in females and at low levels in males was probably due to aspartame.²² However it is argued that this occurs via a mechanism that is not applicable to humans and is probably caused by urinary calcification. Previous studies have shown that urinary calcification occurs in rats in response to multiple compounds including vitamin C if given to the rats at high levels.²³ This calcification has been shown to increase the incidence of cancer; however it was found that this mainly occurred in male rats. Soffritti's study also found that female rats had a much higher incidence of urinary calcification with a 31% increase of occurrence in female rats fed 5000 mg/

kg bw of aspartame compared to the controls.²⁴ No renal calcification along with non-significant levels of tumour incidences were observed in males giving added weight to the AFC's argument. However, this doesn't explain why female rats fed aspartame at 4 mg/kg bw per day showed a high level of urinary calcification (29%) with a non-significant level of cancerous lesions. Additionally, the EFSA review also concluded that the incidence of malignant tumours of the peripheral nerves did not increase proportionally with increasing levels of aspartame and that the tumours were difficult to diagnose.²⁵ They also make criticisms of the statistical analyses.

The AFC review concluded that aspartame is safe and there is no need to adjust any of the aspartame regulations.²⁶ As part of its review the EFSA cites previous long term studies and two recent studies asserting aspartame's safety. While the majority of the early studies cited have been heavily criticised, the recent studies have also drawn some criticism. In an ERF press release Dr. Soffritti explains "we have planned and are conducting additional research, not only on aspartame, but also on other widely diffused artificial sweeteners and blends used in thousands of foods, beverages and pharmaceutical products."²⁷

Why might Aspartame be carcinogenic?

Unlike the other artificial sweeteners being manufactured aspartame is broken down into its components: phenylalanine and aspartic acid (amino acids which occur naturally) and methanol (wood alcohol).²⁸ The methanol component of aspartame is metabolised to formaldehyde. Several studies conducted at the Ramazzini institute have shown formaldehyde to be a carcinogen that results in an increased incidence of lymphomas and leukaemias in female rats.²⁹ A meeting of 26 scientists from 10 different countries was held in 2004 for the purposes of reviewing the literature on formaldehyde and two other suspected carcinogens.³⁰ It was concluded that formaldehyde is a carcinogen and that there is strong but insufficient evidence that it causes leukaemia. This suggests that further studies need to be conducted on the link between formaldehyde and leukaemia. Other studies examining the carcinogenicity of aspartic acid have shown that it can cause cancer of the renal pelvis of female rats.³¹ Dr. Soffritti et al obtained supporting results.³² However it is unclear whether this process is likely to occur in humans and probably results from renal calcification as previously explained.

Dr. Soffritti et al. suggest that lifetime studies need to be conducted on aspartic acid and phenylalanine to determine if in fact they are carcinogens.³³ But, it seems unlikely that aspartame's constituents would be responsible for any carcinogenic effect as much higher levels of these compounds are obtained from regular foods such as fruit juices and vegetables.³⁴ For example the Aspartame

Information Center explains that a serve of tomato juice gives 6 times more methanol than an equal quantity of an aspartame sweetened diet soft-drink and a serving of no-fat milk provides 6 times more phenylalanine and 13 times more aspartic acid.³⁵

Ethical considerations on the use of aspartame

The initial approval of aspartame took into consideration studies that had been conducted by the same company that intended to market it.³⁶ While the studies would have been closely reviewed by the FDA the very fact that the groups conducting the studies may have had a conflict of interest could have resulted in a tendency of bias in the methods, recording, data interpretation and overall conclusions. While having a manufacturer conduct or fund a study potentially creates a conflict of interest that may lead to biased results, it is unreasonable to expect independent groups to spend resources testing these compounds. When reporting research it is required that funding sources must always be disclosed and any known conflicts of interest be stated. However, if an independent body, funded by the public or by a not for profit organization, were to oversee the conduct of industry funded/conducted research it would lead to greater consumer confidence in the conclusions.

The EFSA is a credible agency and has thoroughly evaluated Dr. Soffritti's study. They concluded that "on the basis of all the evidence currently available from the ERF study, other recent studies and previous evaluations, that there is no reason to revise the previously established ADI for aspartame of 40 mg/kg bw."³⁷ For those who still have concerns about the safety of aspartame, they can easily avoid consuming it by checking the ingredients of products labelled 'diet', 'low-joule' or 'sugar free' for aspartame or the code number '951'. Whilst Dr. Soffritti and the AFC disagree on the interpretation of the relevant data, it is worthwhile for Dr. Soffritti to continue his investigations into the safety of the consumption of aspartame and other artificial sweeteners. Above all, it is important that the public have confidence in the safety of the products they are consuming. Further research can only clarify the truth of aspartame's safety for the good of the community.

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