

Reforming Health Care

*In a country as prosperous as Australia, it is somewhat worrying that the quality and availability of public healthcare is being compromised. 'Many Australians no longer have confidence that they can necessarily access healthcare services when and where they need them.'*¹ *Urgent reform is not only possible, but affordable and essential.*

Over two years ago, the Commonwealth Chief Medical Officer, in addressing a health conference in London, had this to say:

'The results of our care and patient experiences of the health care system are too often less than ideal....Our public healthcare systems never seem to have enough resources....Access to care, while universal, is too often delayed.'²

Such an alarming statement has not been challenged---in fact it is even more widely accepted today. Indeed, throughout wealthy countries (Organisation for Economic Cooperation and Development) we hear the same kind of systemic problems:

- many doctors are disgruntled, overworked and professionally unsatisfied;
- nurses are restless and in short supply;
- popular demands for more health spending are universal;
- payers (of healthcare) are widely unpopular;
- many patients feel vulnerable and uncared for; and
- the politics of healthcare is ugly---governments retreat into obfuscation and the difficult issues are systematically avoided.³

Australia's Healthcare Sector

Within Australia, healthcare is one of our major industries, employing 7.2% of the national work force.⁴ The latest figures available show estimated total expenditure (public and private) on health in Australia in 2001-02 was \$66.6 billion, or 9.3% of national GDP.⁵ In the 2004-05 budget, \$41 billion has been allocated to health and ageing by the Commonwealth Government alone.⁶ Peter Costello, the Federal Treasurer, recently went further, observing that 'when we look across the next forty years we find that the largest area of pressure in relation to Govern-

ment spending is going to be in the health area.'⁷ Figures just released support his projection, showing rapid growth in health expenditure over the last decade (4.6% per annum).⁸ Despite such prominence, perceptions of Australian healthcare and its workforce seem to frequently oscillate between positive predictions and dire warnings. 'Australia is not alone in this, with the United Kingdom, Canada and the United States experiencing similar cycles of variation in opinion.'⁹

Why is this so? Common sense would dictate that such an extensive and expensive sector would be underpinned by a well considered, nationally consistent policy.¹⁰ However, there is currently no comprehensive health policy to guide our governments in future planning, let alone current decision making and funding priorities.¹¹ While recent changes to Medicare may halt the pace of decline, they do little to fundamentally reform an ailing system. More money is clearly needed in some areas, but more in-

INSIDE THIS ISSUE

Reforming Health Care	1
Elder Abuse in an Ageing World	4
International Cloning and Stem Cell Policy	7
Embryos, Cloning, Stem Cell Research & Ethics	10

vestment doing the same things (inefficiently) will only delay *systemic* improvements sorely needed to effectively reform the healthcare system.¹²

Fragmentation of Healthcare

Many ascribe such problems to the fragmentation in healthcare, primarily due to the jurisdictional inefficiencies inherent in the system.¹³ Jurisdictional inefficiencies arising from the Commonwealth/State system inhibit effective integration across the continuum of healthcare services.¹⁴ Indeed, current wisdom holds these inefficiencies to be the major barrier to improving cost and effectiveness in our health system.

Australian Health Care Agreements (AHCA) are used to determine healthcare budgeting. Basically, the two parties, ie, the Commonwealth and State/Territory Governments, negotiate their contributions to the funding of health over a 5 year period. This may seem all well and good except their obligations are radically different. 'On the Commonwealth side it is to pay money, on the State and Territory side to deliver services to acceptable standards, whatever the cost. It is an arrangement guaranteed to create discord and blame-shifting, particularly in light of the fact that healthcare is becoming increasingly expensive to provide.'¹⁵

In 2002, even the Health Ministers 'acknowledged the long history of blame-shifting between the states and the Commonwealth, acknowledged that previous negotiations had focused more on health funding than on health outcomes, acknowledge the long history of buck-passing between States and the Commonwealth and agreed to a cooperative approach to the current agreement, focused on best care and health gain.'¹⁶

But can the renegotiated agreements minimise the buck-passing between the Commonwealth and States? Assuming the 2003-2008 agreement maintains the *status quo* in healthcare, it is difficult to see how cost shifting will be eliminated. Aged care provides a stark example. While the States run public hospitals, the Commonwealth Government has responsibility for residential aged care. With the current shortfall in the capability to house and care for infirm elderly people, some patients are inappropriately accommodated in public hospitals.¹⁷ This is troublesome because in many cases, the care they receive in hospitals is not adequate - better care could be provided in residential care settings built specifically for this purpose. 'Solving this problem will require a combined approach from the Commonwealth and the States, and a willingness by both to shake off an unhappy history.'¹⁸ The problematic nature of such an arrangement goes beyond efficiency issues to one of quality: 'acute hospitals do not handle people with chronic and complex conditions well.'¹⁹ Hospitals should be the last option in healthcare, not the first as it is increasingly becoming.

Lack of Research

'The AHCA are also about the shape, size and future directions of Australia's most complex, professionalised, ubiquitous and valued service industry.'²⁰ Conventional wisdom would have it that such an important and massive enterprise is driven by a lively culture of research and development informing health policy. This does not, however, appear to be the case. In October 2002, the National Health and Medical Research Council (NHMRC) announced that, commencing in 2003, it would support 406 new research projects to the tune of \$150 million. However, not one of the 406 projects directly involves health policy research and development (R&D).²¹ Furthermore, of the 16 new NHMRC program grants - larger and longer-term multidisciplinary grants funded with an additional \$118 million - only one (with funding of \$6.8 million) specifically addresses health policy.²² In short, from 2003, less than three cents of every dollar the NHMRC is investing in new research has been earmarked for policy R&D in an industry that costs the nation enormous sums of money.²³

Burdensome

Policy gridlock and a lack of complete honesty by all Governments in what the healthcare system can actually provide causes other problems. For instance, the public can develop unrealistic expectations about what level of healthcare to expect which often leads to disappointment. Because of this impasse, the community often feels there is no way forward to improve the overall situation--which is simply not true. This has led to disillusionment and even anger directed towards healthcare workers. Indeed, much of the increasing violence witnessed in healthcare facilities has been attributed to factors such as this. The public has not been openly informed of the costs involved in continuing to provide world-class healthcare through our many hospitals. Not only does this cause public resentment, but it risks stretching healthcare workers beyond the limits of safe practice.²⁴ Nearly half (47%) of medical workers now work 49 or more hours per week, far higher than any other broad health occupational group.²⁵ Naturally, greater pressure is brought to bear on the healthcare workforce, be they nurses, clinicians or hospital administrators, which may in turn lead to professional dissatisfaction and a possible exodus.²⁶

Transparency

Finally, difficulty in extracting healthcare information through freedom of information provisions raises the issue of transparency and accountability. Why shouldn't there be transparency in healthcare funding? Not only is the industry of great value to the community, but it increasingly comes at a greater cost. Accordingly, most Australians would accept that our healthcare resources are finite, and that governments have to make some un-

popular decisions about how public funds are spent. Furthermore, there is evidence showing the public wants change in healthcare, but cannot see how. Numerous community surveys on public priorities tell the same story – health is consistently seen as vitally important. Despite such decisions being unpalatable to many, more transparency in health policy, particularly because of its public importance, is not unreasonable.²⁷ Indeed, it is necessary to dispel suspicion and mistrust.

Recommendations

How do we overcome such difficulties, particularly this historic ‘silo’ approach in healthcare, with separately funded medical and hospital care and disjointed links between state and Commonwealth health responsibilities? There is almost unanimous agreement, amongst healthcare professionals and politicians alike, that there needs to be a ‘significant simplification of Commonwealth/State relations in healthcare, and an improvement in accountability for hospital services.’²⁸ Indeed, the Federal Minister for Health, Tony Abbott, recently went further, stating that ‘health is now such a dog’s breakfast of divided responsibilities that sooner or later it will have to be sorted out.’²⁹ Exactly how this will be achieved has not been spelled out, although both the Prime Minister³⁰ and Tony Abbott³¹ have recently proposed systemic improvements by unifying healthcare under federal auspices. The PM was reported to be very enthusiastic about assuming control of the nation’s entire health administration to resolve the cost-shifting, duplication and divided healthcare services.³² Bipartisan agreement could well be possible, considering that the Shadow Minister for Health, Ms Gillard, has also come out in support of a major overhaul.³³ But there needs to be a sincere and collective political will for real change to occur. Time will tell as to whether these initiatives are genuine or merely window dressing.

Even in the event that such changes are seen as too radical, a comprehensive audit of our national health system is long overdue. Considering the fact that it is one of our most expensive, extensive and vital sectors, it is quite surprising that not more is done, and on a regular basis, to carefully monitor the direction and shape of the healthcare industry. Again, numerous commentators and advisers have come out in support of such a move, despite it being a substantial undertaking.

Thirdly, discussions on national health policy reform involving key groups and individuals are also necessary. Health Ministers have already started down a pathway of significant involvement of Australia’s clinical workforce in policy discussions, with a clear public focus on fundamentally reshaping healthcare funding through the next AHCA. Indeed, they released a statement in 2002 committing both state and federal interests to reform, emphasising among other things:

- that provision of optimal care and health outcomes be independent of jurisdictional boundaries;
- that respective jurisdictions work cooperatively to improve the health and wellbeing of the community; and
- the next round of AHCA (the current one) be outcome oriented.³⁴

Australia is in need of an intergovernmental instrument which drives reform in partnership with consumers, clinicians and other health professionals. That these discussions will involve both clinicians and bureaucrats is vital to their success, and such initiatives are to be applauded.

Working towards a more streamlined, transparent and accountable system can only be good for everyone’s health. Not only would there be better provision of healthcare services, but the healthcare workforce morale would be lifted as the public regain full confidence in healthcare.

‘No society will ever be able to supply all the healthcare resources that providers believe desirable and patients believe essential. The simple fact is that each of us wants access to the best healthcare possible.’³⁵ While this may be true, it remains beholden on us all to do the best we can. While the healthcare system in Australia manages to produce good outcomes much of the time,³⁶ improvement is certainly possible and, more than ever, ethically imperative. ‘Together we must usher in a new era of collaboration and partnership between all levels of government, healthcare providers and consumers.’³⁷

ENDNOTES

¹ Australian Health Care Summit 2003 <http://www.healthsummit.org.au/> (accessed 7/06/04).

² D. Gray, ‘Top doctor slams health system.’ *The Age* April 10 2002.

³ J. Paterson, ‘Australian Health Care Agreements 2003-2008: a new Dawn?’ *Medical Journal of Australia* (MJA) 177 (2002) 313-5.

⁴ Australian Institute of Health and Welfare, *Australia’s Health 2004* <http://www.aihw.gov.au/publications/aus/ah04/ah04-c09.pdf> (accessed 23/06/04).

⁵ Australian Institute of Health and Welfare, *Australia’s Health 2004* Table 5.1.

⁶ Commonwealth Government http://www.budget.gov.au/2004-05/at_a_glance/download/budget_at_a_glance.pdf (accessed 7/06/04).

⁷ P. Costello, *Address to the National Press Club*, Canberra, 15 May 2002 www.treasurer.gov.au/tsr/content/transcripts/2002/042.asp (accessed 12/06/2004).

⁸ Australian Institute of Health and Welfare, *Australia’s Health 2004*.

⁹ www.healthworkforce.health.nsw.gov.au/amwac/amwac/imwnew.html (accessed 7/06/2004).

¹⁰ http://www.mja.com.au/public/issues/177_11_021202/van10773_fm.html (accessed 25/05/2004).

¹¹ J. Dwyer, <http://www.onlineopinion.com.au/print.asp?article=2194> (accessed 10/06/04).

¹² J. Menadue, ‘Healthcare Reform: possible ways forward.’

MJA 179 (2003) 367-9.

¹³ J. Dwyer, <http://www.onlineopinion.com.au/print.asp?article=2194> (accessed 10/06/04).

¹⁴ <http://www.healthsummit.org.au/> (accessed 7/06/04).

¹⁵ J. Deeble, 'Funding the essentials: the Australian Health Care Agreements, 2003-2008' *Australian Health Review* 25 (2002) 1-7.

¹⁶ Joint Statement from Commonwealth, State and Territory Health Ministers. *Australian Health Care Agreements (AHCA)*, 2003-2008, AIHW Publication 2002.

¹⁷ M. Reid, 'Reform of the Australian Health Care Agreements: progress or political ploy?' *MJA* 177 (2002) 310-312.

¹⁸ *ibid.*

¹⁹ J. Deeble, *Australian Health Review* 25 (2002) 1-7

²⁰ M. Cormack, 'The 2003-2008 Australian Health Care Agreements-an Industry perspective.' *Australian Health Review* 25 (2002) 27-32.

²¹ <http://www.health.gov.au/nhmrc/media/index.htm> (accessed 21/06/04).

²² Commonwealth Department of Health and Ageing. Media release, 22 August, 2002. \$118 million boost to health and medical research in Australia. <http://www.health.gov.au/mediarel/yr2002/kp/kp02083.htm> (accessed 11 November 2002).

²³ http://www.mja.com.au/public/issues/177_11_021202/van10773_fm.html (accessed 25/05/2004).

²⁴ K. Goulston, 'Health workers need help, not blame.' *Sydney Morning Herald* June 24, 2004.

²⁵ Australian Institute of Health and Welfare, 2004 <http://www.aihw.gov.au/publications/aus/ah04/ah04-c09.pdf> (accessed 23/06/04).

²⁶ J. Menadue, *MJA* 179 (2003) 367-9.

²⁷ M. Van Der Weyden, R. Armstrong, 'Evidence and Australian health policy.' *MJA* 2004; 180 (12): 607-608.

²⁸ S. Duckett, 'The 2003-2008 Australian Health Care Agreements: an opportunity for Reform.' *Australian Health Review* 25 (2002) 24-26.

²⁹ *The Bulletin* 24/03/04.

³⁰ *The Sydney Morning Herald* 10/03/04.

³¹ *The Financial Review* 25/02/04.

³² *The Sydney Morning Herald* 10/03/04.

³³ *The Herald Sun* 24/06/04.

³⁴ M. Reid, *MJA* 177 (2002) 310-312.

³⁵ R. Schneider, www.onlineopinion.com.au/view.asp?article=2230 (accessed 7/06/04).

³⁶ R. Heller, 'Modernisation or reform? The NHS approach.' *MJA* 180 (2004) 441-442.

³⁷ <http://www.healthsummit.org.au/> (accessed 7/06/04).

Michael Herbert



Elder Abuse in an Ageing World

Older persons are increasingly being identified as victims of abuse in both developed and developing countries.

Elder abuse is a global concern

Elder abuse is not a new phenomenon. Family dynamics have changed over the years from extended through to nuclear and now ever-increasing single-parent families. Elderly parents not only live apart from their children but are living longer than ever before, and experiencing more disabling conditions. Informal carers are under economic and psychological pressure. Relinquishing property rights, taking a dependent role in society and experiencing poverty is the reality for some older people in our society. Older people fear abuse such as neglect which includes isolation, abandonment and social exclusion, violation of human, legal and medical rights, and deprivation of choices, decisions, status, finances and respect¹

The *Toronto Declaration on the Global Prevention of Elder Abuse* declares that 'Elder abuse is a violation of Human Rights and a significant cause of injury, illness, lost productivity, isolation and despair.' The declaration calls for governments around the globe to work towards preventing elder abuse by developing the structures that will allow the provision of services (health, social, legal protection, police referral, etc) to appropriately respond and eventually prevent the problem.² The challenge awaits.

What and why of elder abuse

Defining what constitutes elderly abuse is problematic due to the different connotations people have about the nuances surrounding the term abuse.³ Elder abuse is described as a pattern of behaviour which causes physical, psychological or financial harm to an elderly person.⁴ Older people are at risk of abuse from family members, friends and acquaintances who may assault or steal from them, strangers who may victimise them, commercial organisations or 'white collar' criminals who defraud them, and carers with whom they are in a 'duty of care' relationship and who may neglect or abuse them.⁵ The degrees of unlawfulness associated with the various types of abuse vary considerably.

'Ageism', defined as prejudice against older people, persists despite laws which protect people from age-related discrimination. Papadopoulos and La Fontaine suggest, 'In spite of any positive role models we have, reaching old age brings with it an overwhelming fear of inevitable physical and mental decline, powerlessness and dependency. This stems from the way that older people are viewed, that is as a homogenous group who have few meaningful experiences to look forward to or any positive attributes to offer society.'⁶ Abuse against basic human rights is perpetrated daily and indiscriminately sanctioned

by denying some elders access to services, employment opportunities, recreation options, health-care resources, suitable accommodation, and independent decision-making.

Identification of situations of elder abuse is difficult because victims feel shame, fear retaliation or do not consider the situation as abusive. In addition they may not have the capacity to report abuse, or lack an agency to report abuse to.⁷ Cognitive impairment is a risk factor for elder abuse.⁸ Those needing informal care are also at risk especially in situations where there is a pre-care-giving history of abuse or violence.⁹ The complexity of family situations within different cultural contexts adds further perspective as do poverty, isolation, ethnicity and gender. Financial stresses, families wishing to claim estates, history of family conflict and violence, social isolation, carer stress or carers being forced to provide care, abusive behaviour of older person towards carer, and abuser dependence all contribute.¹⁰

Theoretical perspectives

Biggs and colleagues suggest that there are three levels which need to be considered to understand the phenomena of elder abuse or mistreatment. The first level is the social and historical context of mistreatment. The second level considers the interplay of social actors within their social space. The third level considers the way that the problem is conceived by the individuals involved and how they respond psychologically.¹¹ Bennet and colleagues use three typology levels to place elder abuse in context. The political level includes the social ideology current at the time of the abuse. The community context includes the reality of the situation plus the inability of the community to contain the problem. At the individual level, known risks for elder abuse predominate.¹²

The old are getting older

There is evidence that the world's elderly are getting even older. Globally, at present, one out of every ten persons is 60 years or older. By 2050 one out of five persons will be 60 years or older and by 2150 one out of three will be 60 years or older. Over the last half of the 20th century, the average lifespan increased by 20 years, bringing global life expectancy to the current level of 66 years (this average includes developing countries where life-span is considerably less than developed countries). This trend is creating what is called the *Inverse Family Pyramid*, wherein grandparents outnumber grandchildren.¹³

In Victoria, one in six people are over 60 years. Two out of three seniors are female. By 2021 one in four people will be over 60 years of age. There are more 'old' older persons living 80 years and more. Many people have the misconception that most very elderly people live in aged care facilities, but in fact, less than 5% of seniors reside

in institutional care. *Health and Community Care Services* are provided to 17% of Victorian Seniors living in their own homes.¹⁴ In Australia it is estimated that about 4.6% of older people are victims of physical, sexual or financial abuse. In Victoria, elder abuse effects 20,000 or 3% of seniors.¹⁵ These are conservative estimates.

Needing more but getting less

Resources are becoming scarcer. Potential retirees are receiving mixed messages about their future. The concept of providing pensions to seniors arose at a time in history when people were not so long-lived.¹⁶ Many older people now find themselves needing extra income at a time when less is being offered. Indeed those seeking health care in the future may compete with today's carers for that health dollar. For example, the average age of a nurse in Australia is 45 years and that of a general practitioner 55 years.¹⁷ Informal carers also age and face similar deficits. The distribution of resources is not always equal, often unjust and frequently morally questionable, though these conditions are not unique to an ageing population.

The economic or direct costs associated with prevention and intervention, providing services, criminal justice procedures, institutional care, education and research is considerable. The human costs are immeasurable and relate to reduced productivity, diminished quality of life, emotional pain and suffering, distrust, the loss of self-esteem, disability and premature death. This is a problem without borders. Prevention of elder abuse in an ageing world is a universal human right.¹⁸ The difficulty is that people have different views about what constitutes abuse. Consider the irony of using cameras to monitor nursing home care as an initiative to prevent elder abuse.¹⁹ Surely constant surveillance, is not only an invasion of privacy but a form of abuse in itself.

Overcoming abuse

Elder abuse is problematic in that it is considered a hidden problem. Efforts to screen or predict for abuse have had little impact in protecting the health of those who have been victimised.²⁰ Health professionals are expected to balance the rights of both victims and abusers while implementing the ethical dimensions of client autonomy, beneficence and justice in case interventions.²¹ The *United Nations* 'Principles for Older Persons' have the general headings of independence, participation, care, self-fulfilment and dignity.²² The 'National Strategy for an Ageing Australia' describes four themes in its terms of reference: independence and self provision; attitude, lifestyle and community support; healthy ageing; and world class care.

There are calls for the establishment of a federal agency to which elder abuse can be reported. This agency would

have powers to respond to and investigate reports of abuse, intervene on behalf of the victim, and legally prosecute perpetrators if necessary. Some states and territories have specific advocacy services or information lines but most lack a lead agency specifically set up to respond to the problem.²³ At present there seems little attempt by agencies to collaborate on their expertise in dealing with elder abuse. Services are provided in an ad hoc fashion and victims of abuse, their advocates and care professionals in general don't know who will best assist them. In 2003 the Office of the Public Advocate in Victoria called for a whole of government approach to the prevention of abuse of senior Victorians when it became evident that many hospitals and service agencies do not have policies or management strategies to deal with cases of elder abuse.²⁴

Changing attitudes

Encouraging the community to participate in assisting older people to develop skills which will empower them to resist being abused will minimise the problem of elder abuse.²⁵ The ideal of a community working together to protect their elderly is one which many may assume already exists, yet the pervasiveness of 'ageism' stereotypes negates this. 'Respect your elders' may have been a lesson learnt by previous generations but it is largely ignored nowadays. Within some multicultural communities, such as Italian and Asian, children traditionally defer to and respect their elders, though these effects become diluted with successive generations. These changes are also occurring in their cultural homeland.²⁶ Getting older will not automatically confer wisdom, nor should aging diminish a person's right to be an equal member of society. Reduced cognitive capacity at any age may take away some individual choice, but a humane community takes care of their vulnerable members irrespective of the relative merits or not of their lives thus far.

Mandatory reporting of elder abuse is required by many states in the United States. Whilst this does not stop the abuse it provides a focus for reporting and response. Perhaps it is time for Australia to consider a similar legal requirement. An evolution in the way society views its elders seems unlikely in a world that reveres youth and beauty and seeks to deny the inevitability of ageing and even death. Despite anti-discrimination legislation and support of human right ideals, our community undervalues our long-lived fellow citizens.

ENDNOTES

¹ World Health Organization and International Network for the Prevention of Elder Abuse, 2002, *Missing Voices: Views of older persons on elder abuse*. WHO, Geneva, p. 5.

² WHO, *The Toronto Declaration on the Global Prevention of Elder Abuse*, 17 November, 2002, www.who.int/hpr/ageing accessed 23/7/04, pp. 1-4.

³ S. Koch et al, *Overcoming abuse of older people with dementia and their carers. A discussion paper*, DHS, Alzheimer's As-

sociation of Victoria, LaTrobe University, September 2000.

⁴ Australian Society for Geriatric Medicine, Position Statement No. 1 *Elder Abuse*, revised 2003.

⁵ M. James, *Understanding and responding to crime and older people*, Australian Institute of Criminology, Canberra, June 2001; and B Kingsley, 'Resident abuse. An unacceptable reality', *Geriatrics* (2001) 19(1):21-25.

⁶ A. Papadopoulos, J La Fontaine, *Elder Abuse: Therapeutic Perspectives in Practice*, (Oxon: Winslow Press Ltd, 2000) 6.

⁷ Office of Public Advocate, *Elder Abuse: The Hidden Problem*, 8th September, 2003.

⁸ S. Koch et al, 2000...

⁹ M Hughes, '“that triggers me right off”: Factors influencing abuse and violence in older people's care-giving relationships', *Australian Journal on Ageing* (1997) 16(2):53-60.

¹⁰ P. Kinnear, A. Graycar, 1999 *Abuse of Older People: Crime or Family Dynamics?*, Australian Institute of Criminology, May 1999, <http://www.aic.gov.au> accessed 15/7/04.

¹¹ S. Biggs, C. Phillipson, P. Kingston, 1995, p. 29.

¹² G. Bennett, P. Kingston, B. Penhale, *The Dimensions of Elder Abuse: Perspectives for Practitioners* (London: MacMillan, 1997) 10.

¹³ United Nations, *The Ageing of the World's Population, and New Age for All Ages* www.un.org/esa/socdev/ageing/agewpop.htm, and www.un.org/esa/socdev/ageing/ageless.htm accessed 22/7/04.

¹⁴ Office of Senior Victorians, *Population Ageing in Victoria*, June 2003, www.health.vic.gov.au.

¹⁵ P. Kinnear, A. Graycar, 1999...

¹⁶ Australia Treasury, 'Towards higher retirement incomes for Australians: A history of the Australian retirement income system since Federation', *Economic Round-up Centenary Edition* (2001):65-92.

¹⁷ Australian Institute of Health and Welfare, 2002, www.aihw.gov.au and L Smith, 2002, 'Strengthening General Practice', *Australian Division of General Practice Forum 2002*, www.adgp.com.au accessed 13/8/04.

¹⁸ 'Building a society for all ages', *Second World Assembly on Ageing*. Madrid, Spain 8-12 April, 2002. www.un.org/ageing/prkit/elderabuse.htm accessed 22/7/04.

¹⁹ M. Reutter, 29 July 2004, 'Use of cameras to monitor nursing-home care is subject of controversy', *Medical News Today*, www.medicalnewstoday.com accessed 30/7/04.

²⁰ M. Schofield, G. Mishra, 'Three year health outcomes among older women at risk of elder abuse: Women's Health Australia', *Quality of Life Research* (2004) 13: 1043-1052.

²¹ B. Kingsley, 'Elder abuse. Ethical issues in professional intervention', *Geriatrics* (2001) 19(1):5-9.

²² United Nations ...

²³ See Victorian Department of Health and Community Services, *With Respect to Age. A guide for health services and community agencies dealing with Elder Abuse*, May 1995, which names a number of agencies.

²⁴ Office of Public Advocate ...

²⁵ B. Kingsley, 'Community Empowerment: Promoting the Safety and Minimising the Abuse of Older People', *Australian Journal of Primary Health* (2002) 8(2):98-101.

²⁶ Post Graduate Medical Council of NSW, *Cultural diversity in health*, <http://www.diversityinhealth.com/regions> accessed 13/8/04; K. Sung, 'Filial Piety in modern times: Timely adaptation and practice patterns' *Australasian Journal of Ageing* (1998) 17(1 Supp):88-92.

Anne Moates



International Cloning and Stem Cell Policy

No other topic is likely to produce such heated debate as that of cloning and embryonic stem (ES) cells. In the light of the upcoming UN debate on cloning, it is timely to review national policies on cloning and stem cell research. This article then examines the underlying ethics and the imperative for global governance of these powerful, emerging technologies.

Two recent technological developments, namely mammalian cloning and the isolation of human embryonic stem cells, have dramatically changed the way we view regenerative medicine and mankind's natural limits. They also challenge the boundaries of medicine and how far we should venture with therapies. Considering the potential reach of these emerging fields, it is surprising to find a lack of international dialogue, let alone consensus regarding appropriate regulation. Despite widespread condemnation of human reproductive cloning, and general uneasiness about cloning for research purposes, no treaties have been signed nor have many countries developed legal frameworks.

Cloning

Whatever the intended aim, all cloning involves the same core process, whereby nuclear material (the DNA) from a donor cell is inserted into an enucleated egg. The cellular content from this egg reprograms the donor nucleus and development can then be initiated in the cloned embryo. *Reproductive* cloning entails placing this cloned embryo back into the uterus with the intention of letting the pregnancy go to full term. In *research*, or 'therapeutic' cloning, embryonic stem cells are extracted after a few days, destroying the embryo in the process. It is also known as cell nuclear replacement, or somatic cell nuclear transfer. The process is not 'therapeutic' for the embryo--human embryos are created before being destroyed for the cells they contain.

As it is beyond the scope of this article to examine every national policy, the focus will be on policies from those nations with the scientific expertise and funds enabling extensive human embryonic research and cloning to be conducted.

Council of Europe

With the exception of Estonia, all European nations have enacted legislation prohibiting human reproductive cloning. Furthermore, the European Union expressly outlaws human reproductive cloning: *Article 1* 'Any intervention seeking to create a human being genetically identical to another human being, whether living or dead is prohibited.'¹

Individual countries differ greatly, though, on laws gov-

erning embryonic research. Austria², Germany³, Ireland⁴, Italy⁵ and Norway⁶ all prohibit experiments on embryos, regardless of intention. These states have the strictest policies throughout Europe and ban not only the derivation of ES cells, but all types of human cloning. Germany does, however, have provisions for the importation of ES cell lines for experimentation, and is currently reconsidering its policy on research cloning.⁷

The majority of countries, namely Denmark⁸, France⁹, Georgia¹⁰, Hungary¹¹, Iceland¹², Latvia¹³, Holland¹⁴, Portugal¹⁵, Russia¹⁶, Slovakia¹⁷, Switzerland¹⁸ and Spain¹⁹ have enacted legislation similar to that found in Australia. While it is illegal to undertake research cloning, the derivation of ES cell lines from 'excess' ART embryos is permissible under certain conditions. Sweden, while belonging to this group, is considering a proposal by the Swedish Research Council to permit cloning for research purposes.²⁰

Belgium²¹, the UK²² and Finland²³ are the most permissive nations on embryonic research. Not only do they allow the destruction of human embryos for the derivation of ES cells, but they permit research cloning under license. In fact, the first UK license was recently granted on August 11, 2004, amidst much furore and acclaim. The research group's license allows them to undertake research cloning using nuclei from existing stem cell lines and from skin cells donated from women undergoing gynaecological procedures. The cloned embryos must be destroyed within 14 days of their creation.²⁴

Greece²⁵ and Poland²⁶, while banning reproductive cloning, currently have no legislation in place regarding research cloning of stem cell lines.

Oceania, Africa, the US and Asia

Most other countries throughout Asia, the Americas and Oceania prohibit human reproductive cloning, although many have not passed legislation covering the practice of research cloning. New Zealand is currently drafting legislation and appropriate regulatory regimes. While prohibiting reproductive cloning, research cloning may well be permitted subject to regulatory measures. South Africa and Tunisia are the only African legislatures that have passed laws prohibiting human cloning of any kind.

Asian nations have some of the most permissive legisla-

tion regarding human cloning. While banning reproductive cloning, Singapore, Japan, South Korea and recently China²⁷ have all made provision for research cloning. Indeed, a South Korean team has this year become the first to successfully derive a ES cell line from a cloned human embryo.²⁸

American legislators remain deadlocked over the issue of research cloning. Although around half the world's biological research facilities are found in the US, no federal legislation has been enacted on the practice of either reproductive or research cloning. Senators have been at loggerheads over the scope of any such ban—effectively disagreeing over whether to ban research cloning. As a result, whilst some states have piecemeal legislation in place, there is a general legal vacuum surrounding human cloning. Federal research grants can only be awarded to those using existing stem cell lines but privately funded research basically has *carte blanche*.

International Disagreement

There has been moves in the UN for a cloning treaty for some time. However, discord has arisen over the scope of the proposed cloning ban. In essence, while some countries support a total ban others only want to ban reproductive cloning.

Supporters of a partial ban thought that opposing states would see the strategic advantage of first achieving a victory where a broad consensus was already in place, ie, to prohibit reproductive cloning, and hoped that the United States, while voicing its opposition to the treaty, might refrain from actively blocking it.

This was not to be—by early 2002, the United States had come out strongly against the original proposal, and was lobbying other UN delegations to oppose it as well. Further, a larger than anticipated number of other countries also felt that research cloning should be banned and that the treaty should address this. These included countries in Europe (Norway, Spain, Italy), South America (Venezuela, Bolivia, Chile), Africa (Uganda, Ethiopia, Nigeria), the Pacific (Australia, Fiji, Micronesia) and elsewhere. The debate ended in a deadlock, with the final decision being deferred to the General Assembly's legal committee.²⁹

Such international disharmony has led, once again, to a deferred UN vote on banning international cloning. The unbridgeable ethical gap between supporters and opponents of research cloning continues to this day, with no international treaty in sight.³⁰

A Way Forward

ES cell lines have been touted as the cell line of choice in regenerative therapies because of their intrinsic wide-

ranging potential, known as pluripotentiality. Although these cells can not form an entire embryo in a coordinated manner, they can differentiate into almost any cell type of the body, and possible therapeutic applications for a range of degenerative disorders are what excites many in the field today. But several alternative sources of stem cells with the same capabilities have also been isolated. For example, an adult pluripotent stem cell extracted from bone marrow has been shown to possess wide-ranging capacities both *in vivo* and *in vitro*.³¹ And new types of stem cells in children and adults still continue to be isolated, although their potential is not fully known. In addition to finding novel stem cell lines, more and more researchers are beginning to manipulate adult stem cells in new ways. 'It is increasingly clear that tissue-specific (adult) stem cells might not be as restricted as originally thought.'³² Although more research needs to be done in order to characterise such cell lines, adult stem cells taken from the patient, once they are coaxed down the appropriate pathway, would not have rejection problems that ES cell lines would face after transplantation. Such an approach would overcome any need to undertake ES cell research, rendering it clinically obsolete.

Developments in other types of stem cell research also offer clinical promise. For instance, pluripotent stem cells from umbilical and placental blood are proving to be much more powerful than previously thought.³³ Such a finding could have great clinical significance as this cellular source is not only ethically uncontentious but abundant and routinely discarded. For some time embryonic germ cells from fetuses have also been shown to possess broad capabilities that may well prove useful in therapies.³⁴ If these cells are obtained ethically, ie, from an ectopic fetus and with the couple's informed consent, cells derived from them may well be suitable for transplantation in certain degenerative diseases.³⁵ If therapies could be developed from these cell sources, great benefits would result with no harm being done. Admittedly, further research is needed, but this ought to be a matter of great urgency, considering that any one of these options would circumvent the need to destroy embryos for cell therapies.

Whatever eventuates in the field of ES cell research, the lack of open dialogue and increased international hostility on the subject of cloning, whether for reproductive or research purposes, is disturbing. What is to be made of such transnational disparity? Many commentators are rightly concerned that while international confusion reigns, 'cloning cowboys' could well engineer the first cloned child, despite grave health and safety issues for the mother and child. Indeed, mavericks such as Zavos have recently claimed to have successfully cloned, although the embryos were apparently destroyed and he has yet to provide a shred of evidence.³⁶ He claims to have successfully inserted nuclei taken from cells of deceased people into enucleated cow eggs. Embryonic de-

velopment was then initiated artificially.

The very idea of animal-human hybrids strikes many as abhorrent, even outrageous. What Zavos was intending was a proof of principle study, showing the feasibility of human reproductive cloning. But this example clearly illustrates the precarious situation we find ourselves in today, and how current technological progress can be misused. Such experiments are immoral because they are a blatant attack on human dignity, an affront to our uniqueness and identity which is integral to everyone. Even for those who have no qualms about such indignity, it remains beyond doubt that reproductive cloning is unethical: it is medically unsafe for mother and child, scientifically unsound, and socially unacceptable. Scientists around the world, even proponents of ES cells and research cloning, concur on these points.³⁷ With this in mind it seems a tragedy that there is such international disharmony, despite almost every government unequivocally condemning the practice. Surely it would be better to follow the French-German proposal and universally ban reproductive cloning under any circumstances. Once such a treaty has been ratified, and no country has yet in principle rejected such a proposal, the vexed question of research cloning could be better dealt with.

That is not to say we can't go further. The stance taken by countries such as the US, Australia and Costa Rica are to be applauded as research cloning not only destroys embryos deliberately created for such an end, but its clinical application is highly questionable for a number of reasons. Firstly, such individual treatments would be prohibitively expensive. And apart from dubious ethics and its illegality in many countries, practical difficulties also abound. For example, where are all the human eggs going to be sourced from? The only group to obtain an ES cell line from a cloned egg required 242 eggs for a single cell line to be established.³⁸ So each patient, in tailoring a suitable cell line for transplantation, would need many eggs to be donated for such treatment. Using eggs in this fashion would undoubtedly commodify human gametes intended for reproduction. Furthermore, justifying the destruction of embryos because of their therapeutic potential is unethical. The ends never justifies the means - for all these reasons, research cloning will remain unethical to pursue. This is why individual nations would do well to ban research cloning if the UN lacks sufficient collective will. Nevertheless, regardless of a nation's stance on destructive embryonic research or research cloning, the international community should act, in concert and soon, to outlaw the practice of reproductive cloning.

ENDNOTES

¹ *Additional Protocol (Explanatory Report) to the Convention on Human Rights and Biomedicine*, 12 January 1998 <http://conventions.coe.int/Treaty/en/Treaties/Html/168.htm> (accessed 25/08/04).

² Federal Law (Serial 275) *Regulating Medically Assisted Pro-*

creation (The Reproductive Medicine Law. 1992) and Amending the General Civil Code (The Marriage Law and the Rules of Jurisdiction. 1993).

³ *Federal Embryo Protection Law* (1990) in http://www.bundestag.de/htdocs_e/index.html.

⁴ Constitution of Ireland <http://193.178.1.117/upload/publications/297.pdf>.

⁵ *Assisted Medical Procreation Law* (10/02/04).

⁶ *Law No. 56 on the Medical Use of Biotechnology* (1995) s46 (1).

⁷ FAZ Weekly <http://www.faz.com/IN/INtemplates/eFAZ/archive.asp?rub={B1311FCC-FBFB-11D2-B228-00105A9CAF88}&doc={916C4AE4-2CE9-4395-A9EB-21A90FEC391B}> (accessed 15/09/04).

⁸ Act No. 460 Medically Assisted Procreation (1997 and amended September 1 2003).

⁹ The bioethics legislation and its amendments (*Law No. 94-653 and Law No. 94-654*).

¹⁰ *Rights of the Patients (05/05/2000) and Health Care* (10/12/1997) s142.

¹¹ *Law No. 154* (15/12/1997) on Public Health.

¹² <http://brunnur.stjr.is/interpro/htr/htr.nsf/pages/lawsandregs>

¹³ *Sexual and Reproductive Health Law* (July 2002).

¹⁴ *The Embryos Act* (July 2002) <http://www.minvws.nl/documents/IBE/wetstekst/eng-embryowettekst.pdf>.

¹⁵ Statement from the National Council of Ethics for the Life Sciences (1/04/2004).

¹⁶ Law on temporary prohibition of human reproductive cloning (April 2002).

¹⁷ *The Health Care Law*, (1994).

¹⁸ Federal Order of December 1998 on the revision of the Federal Constitution.

¹⁹ <http://www.geocities.com/Eureka/9068/SANIDAD/reproduc.html>.

²⁰ <http://www.vr.se/filesserver/index.asp?fil=LCK7HDEK3U6H> (accessed 25/08/04).

²¹ Law concerning research on embryos in vitro (11 May 2003) <http://www.senate.be> and <http://www.lachambre.be>.

²² *Human Reproductive Cloning Act* 2001, c23 &1.

²³ http://www.oecd.org/dsti/sti/s_t/biotech/prod/gt_finland.htm (accessed 25/08/04).

²⁴ S. Pincock www.biomedcentral.com/news/20040812/04.

²⁵ Law No. 3089 on *Medically Assisted Reproduction* (2002)

²⁶ Poland Government, '*Law of January 1993*'.

²⁷ www.hindustantimes.com/news/181_957177,00040006.htm (accessed 24/08/04).

²⁸ W-S Hwang *et al.*, 'Evidence of a pluripotent ES cell line derived from a cloned blastocyst.' *Science* 303 (2004) 1669-74

²⁹ <http://www.isscr.org/scientists/iapstatement.htm> (accessed 24/08/04).

³⁰ *New Scientist* <http://www.the-scientist.com/homepage.htm> (accessed 25/10/04).

³¹ Y. Jiang *et al.*, 'Pluripotency of mesenchymal stem cells derived from adult marrow.' *Nature* 418 (2002) 41 - 49.

³² A. Hermann *et al.*, 'Efficient generation of neural stem cell-like cells from adult human bone marrow stromal cells.' *Journal of Cell Science* 117 (2004) 4411-22.

³³ G. Kogler *et al.*, 'A new Human Somatic Stem cell from Placental cord blood with intrinsic Pluripotent Differentiation Potential.' *Journal of Experimental Medicine* 200/2 (2004) 123-35.

³⁴ M. Shamblott *et al.*, 'Derivation of pluripotent stem cells from cultured human primordial germ cells.' *Proceedings of the National Academy of Science* 95 (1998) 13726-31

³⁵ N. Ford, 'Using pluripotent germ cells in regenerative medicine- an ethical alternative.' *National Catholic Bioethics Quarterly* 3/4 (2003) 704-5.

³⁶ *The Guardian*, 'Cloning experiment condemned' 1/09/04.

Embryos, Cloning, Stem Cell Research and Ethics

This article is a modified version of a talk given at an International Conference on Coning and Stem Cell Research: Ethics, Law and Public Policy at the Walter and Eliza Hall Institute, Melbourne on 8 November 2004. It discusses the meaning of the term human embryo, the respect due to the embryo, the ethics of therapeutic cloning for research, and finally alternative ethical sources of pluripotent stem cells without embryo destruction.

Embryos, Cloning, Stem Cell Research And Ethics

This article is a modified version of a talk given at an International Conference on Coning and Stem Cell Research: Ethics, Law and Public Policy at the Walter and Eliza Hall Institute, Melbourne on 8 November 2004. It discusses the meaning of the term human embryo, the respect due to the embryo, the ethics of therapeutic cloning for research, and finally alternative ethical sources of pluripotent stem cells without embryo destruction.

What Is An Embryo?

Before addressing the ethics of research on ES cells, it is worth attempting to understand what is, and what is not, an embryo. A fertilised egg or a single cell from a four-cell embryo is totipotent, ie, each has the inherent actual potential to form the entire offspring, including placental tissue, given a favourable uterine environment. Philosophically, a human embryo may be defined as a totipotent cell or a group of cells or a multicellular organism, which, due to its genome, has the inherent actual potential to continue organised human development in a suitable environment. Clearly a living six day blastocyst is an embryo.¹

A frozen embryo is still alive even though it is in suspended animation. It is a true embryo because it still has the inherent potential to continue development after it has been successfully thawed. The result of a process of fertilisation that arrests and ceases to continue development would not be an embryo. Once cells are removed from the inner cell mass of a blastocyst and placed in culture they are called pluripotent embryonic stem (ES) cells. They do not develop further, but continue to multiply. They are pluripotent because they can perhaps contribute to all cell lines in the human body but they cannot form a placenta or a coordinated body plan. These ES cells are not embryos.

Respect Due To A Human Embryo

Secular philosophers and many others think human embryos could not have any interests or intrinsic value beyond sentience - the seeking of pleasure and avoiding pain.² Many others see embryos in a different light that dates back thousands of years to the Hebrew Scriptures. These portray God as the source and giver of all life, but supremely of human life. Biblical texts speak of God forming the human being in the womb.

The Psalmist wrote:

"You created my inmost self

knit me together in my mother's womb. ...

Your eyes could see my embryo,..."(Ps 139: 13-16)

Likewise Jeremiah said: " Before I formed you in the womb I knew you..."(Jr 1:4)

From the earliest Christian times it has been held that it was immoral to destroy a life that had been conceived because it belonged to God in whose image it was made. Catholic bishops of the world at the Second Vatican Council in 1965 confirmed this uninterrupted tradition on the moral inviolability of the basic good of human life from the formation of the human embryo --: "Life once conceived must be protected with the utmost care."³ This theological insight expresses a widely shared respect for human life in the community, regardless of religious considerations. Human embryos should not be reduced to the status of genetic products, devoid of moral significance and intrinsic value.⁴

Furthermore there are credible grounds to believe that the human embryo is already a human being, a person. Pope John Paul II's practical advice in 1995 is right: 'The human being is to be respected and treated as a person from the moment of conception.'⁵ This position finds an echo in a minority expression of dissent in the 1984 U.K. Warnock Report: "the embryo has a special status because of its potential for development to a stage at which everyone would accord it the status of a person. It is in our view wrong to create something with the potential for becoming a human person and then to deliberately destroy it. ...It must therefore be given special protection so

that this potential can normally be fulfilled."⁶ An Australian Senate Select Committee also supported the moral inviolability of the human embryo: "It is in its orientation to the future that the Committee finds the feature of the embryo which commands such a degree of respect as to prohibit destructive non-therapeutic experimentation."⁷

People who hold that the human embryo should be given absolute respect cannot approve of any realistic utilitarian compromise. Utilitarianism has its place in ethics and making decisions, but it cannot be accepted as the fundamental criterion of morality, which is reason judging what is for good for person(s). In the light of persons' essential nature, relationships and integral human experience, practical reason is able to discern that some acts conflict with the true good of persons and judges them to be bad. What is immoral in itself cannot be justified by good consequences: the end does not justify the means. Human embryos, should not be created in order to be destroyed for any reason.

Objection

It has been objected that if excess frozen IVF embryos are allowed to die, it would be morally permissible to use them to obtain ES cells for therapies for others. In the first case, frozen embryos are ethically allowed to die by withdrawing them from the freezer which may be compared to extraordinary means of life-support. In the second case, frozen embryos are thawed and, while still alive, their inner cell mass is removed from them to derive ES cells for research. Clearly, this is unethical: it involves destroying live embryos.

Therapeutic Cloning

Cloned embryos are formed by somatic cell nuclear transfer to enucleated eggs in order to obtain ES cells. If the donor nuclei come from a patient the ES cells would in principle not be rejected by an immune reaction. However the moral problem does not change. The cloning of embryos for the treatment of diseases or degenerated neural tissue would be subject to the same ethical objections as destructive research on normal IVF embryos. Australia did well to ban all forms of human cloning.

Collusion in the Destruction of Human Embryos

Any therapeutic use of ES cells obtained by the destruction of human embryos would imply tacit approval of, or collusion with, their destruction. Such use would create a demand for ES cells obtained from destroyed human embryos. Clearly this would be unethical.⁸ Legislation that permits destructive research on human embryos would thereby implicitly approve their destruction.

Safety Issues in Future Clinical Practice

It is known that transplanted ES cells from cloned embryos may harbour faulty reprogramming due to the disruption of genomic imprinting during the cloning process. This could lead to both lethal and non-lethal abnormalities and the formation of tumours. It needs to be remembered that Dolly the sheep was only born alive after some 276 cloning attempts. There would be risks of uncontrolled proliferation of cells leading to the formation of tumours if ES cells themselves are transplanted instead of their specialised derivatives. The onus would be on scientists to provide evidence to prove that the use of pluripotent ES cells from cloned embryos would be safe for use in clinical practice.

Alternative Ethical Possibilities

Scientists may one day be able to reprogram a patient's own somatic stem cells from one type into another, ie, transdifferentiation.⁹ The recent discovery of the protein nanog which, along with other markers, has been shown to maintain cellular pluripotency, may enable tailor-made treatments by directly reprogramming a patient's cells into the required pluripotent stem cells, without the risk of immune rejection.¹⁰

Recently, Gesine Kögler and her colleagues claimed to have identified adult somatic stem cells obtained from placental cord blood with intrinsic pluripotent differentiation potential.¹¹ This would be very significant if it can be verified. These cells resemble ES cells in that they are pluripotent. They may be able to provide the same valuable therapies sought by researchers using ES cells. Pluripotent cord blood cells could be obtained from cord blood banks to make a sufficiently close match to the tissue of patients in need of a transplant to repair cardiac muscle or nerve tissue, thus avoiding a significant risk of immune rejection. This is already done to match organ transplants. An added benefit is that the immune status of pluripotent cord blood cells could be low and less likely to pose a risk of graft-versus-host-disease and rejection. These promising ethical therapies might be further improved by the success of Monash University scientists' research project recently published in the Melbourne Herald-Sun newspaper. The aim of the researchers is to regenerate patients' thymic function prior to transplanting pluripotent stem cells or their derivatives so that their immune tolerance would be improved.

Pluripotent embryonic germ cells (EG cells) can also be ethically derived from ectopic fetuses five to nine weeks after fertilisation. Some of these pluripotent EG cell lines would most likely be suitable for regenerative medicine because their imprinted gene expression would be substantially intact.¹² With the informed consent of the parents, these pluripotent EG stem cell lines could also be ethically used in regenerative medicine.¹³

Above I have given some examples of ethical alternatives to embryo destructive research - ie there are multiple possibilities for finding or developing stem cells of wide potentiality without involving embryo destruction.

If some or all of these ethical alternatives are proven to be successful, then ES cell technology involving the destruction of embryos may, hopefully, become medically and scientifically redundant. There is a need to continue research to develop therapies using adult stem cells, and, hopefully, ethically obtained pluripotent stem cells.

Conclusion

It would be hard to ethically justify allowing research using ES cells if pluripotent stem cells can be ethically obtained from alternative sources without destroying human embryos.

There is no ethical justification for making laws to authorise the destruction of IVF embryos or cloned human embryos to obtain ES cells for medical research. It would be worse to permit the creation of IVF or cloned human embryos for destructive research.

Public funds should be provided for research on adult stem cells and possibly pluripotent stem cells that are not obtained by the destruction of human embryos. This is the way towards a consensus on stem cell research. This ethical approach would be less divisive and socially advantageous to the community as a whole.

Furthermore Governments should seek independent critical evaluation of scientific evidence presented in support of stem cell research.

ENDNOTES

¹ N.M.Ford , and M.Herbert, *Stem Cells. Science, Medicine, Law and Ethics*. Strathfield, NSW: St Paul Publications

2003,73- 74.

² H. Kuhse , and P. Singer, 'Individuals, humans and persons: the issue of moral status'. In: P. Singer *et al.*, *Embryo Experimentation*. Cambridge: University Press; 1990, 73; see also N. M. Ford, *The Prenatal Person. Ethics from Conception to Birth*. Oxford: Blackwell Publishing; 2002, 69.

³ 'Pastoral Constitution of the Church in the Modern World.' *Vatican II. The Conciliar and Post Conciliar Documents*. Flannery A (ed). Dublin: Dominican Publications; 1975. n. 51.

⁴ Ford, *The Prenatal Person*, 68.

⁵ John Paul II. *Gospel of Life* 1995. n.60.

⁶ *Report of the Committee of Inquiry into Human Fertilisation and Embryology*, Chairman, Dame Mary Warnock, Department of Health and Social Security, (London: Her Majesty's Stationery Office, 1984), Expression of Dissent B. Use of Human Embryos in Research, 90-91.

⁷ *Human Embryo Experimentation in Australia: Senate Select Committee on the Human Embryo Experimentation Bill 1985*, Australian Government Publishing Service, Canberra, 1986, 25 at 3,6.

⁸ Ford, *The Prenatal Person*, 72.

⁹ Deborah Joeseffson, 'Adult stem cells may be redefinable', *British Medical Journal* 318 (1999) 282; Anne-Mari Hakelien *et al.*, 'Reprogramming fibroblasts to express T-cell functions using cell extracts', *Nature Biotechnology* 20 (5) (2002) 460-66; Sylvia J. Westpal, Transformers, *New Scientist* 176/12 October (2002) 39-41.

¹⁰ Karou Mitsui *et al.*, 'The Homeoprotein Nanog Is Required for Maintenance of Pluripotency in Mouse Epiblast and ES cells', *Cell* 113 (2003) 631-42.

¹¹ Gesine Kögler, 'A new human somatic stem cell from placental cord blood with intrinsic pluripotent differential potential.' *Journal of Experimental Medicine*, 200/2 (2004) 123--35; see also Norman M. Ford, 'Using Pluripotent Germ Cells in Regenerative Medicine: An Ethical Alternative', *National Catholic Bioethics Quarterly*, 3/4 (2003) 697-705.

¹² Carmen Sapienza, 'Imprinted gene expression, transplantation medicine, and the "other" human embryonic stem cell', *Proceedings of the National Academy of Science (US)* 99/16 (2002) 10243-45.

¹³ N. Ford *The National Catholic Bioethics Quarterly* 3/4 (Winter 2003) 697-705.

Norman Ford SDB



Caroline Chisholm Centre for Health Ethics

7th fl., 166 Gipps Street East Melbourne Vic 3002

Tel (03) 9270 2681 Fax (03) 9270 2682 email: ccche@mercy.com.au

www.chisholm.healthethics.com.au

Copyright © Caroline Chisholm Centre for Health Ethics Inc. 2004

Subscription fees: Single \$25.00 + GST; Overseas [single] AUD\$35.00

Director/Editor:

Rev. Norman Ford SDB STL PhD, Adjunct Professor, Australian Catholic University; Lecturer, Catholic Theological College / Melbourne College of Divinity; Senior Honorary Research Fellow, Monash University.

Research Officers:

*Michael Herbert BSc(Hons)
Anne Moates B. App. Sc (Nursing); Grad Dip Adv Nurs; MPH*

Administrative Assistant/Layout/Sub-editor: *Alice Stinear BEcon*