Countering the difficult aspects of ageing

Even though people in many parts of the world are living longer than ever before, growing old can be fraught with difficulties: loss of family, friends, and social connections, impoverishment, involuntary relocation, cognitive decline, frailty, and physical illness. These events, especially those connected with physical illness, often get more attention than another common aspect of ageing—depression. This week’s *Lancet* Seminar by George Alexopoulos on depression in the elderly highlights the prevalence of major and minor depression, together with bipolar and dysthymic disorders, as well as the often underappreciated links between late-life depression, medical conditions, neurological disorders, and functional disability.

These connections are not trivial. Depression adversely affects quality of life and the ability to undertake activities of daily living. Further, as Alexopoulos points out, the suicide rate among the elderly is double that of the population at large. The good news is that treatment with antidepressants is as effective in older people as it is in younger adults; the addition of non-drug therapies works well in certain circumstances, and collaborative models of treatment improve outcomes. The bad news is that depression in the elderly is underdiagnosed and often inappropriately treated. And, in the USA and perhaps elsewhere, provision of mental-health services for older people may be inadequate or non-existent. One estimate is that some two-thirds of older Americans with mental illness do not receive needed care.

A bill recently introduced in the US Congress aims to address these deficits. “The Positive Aging Act of 2005” promotes collaborative models of care that would be integrated into primary-care services, with special emphasis on populations likely to be neglected, such as older people living in rural areas. In addition, the bill would provide funding for mental-health screening and treatment for elderly individuals who do not have access to such care. Passing this piece of legislation would be a positive act indeed, not only for older persons, but for society as a whole.

Stem cell research: hope and hype

The future for stem cell research outlined at the Facial Surgery Research Foundation’s meeting *Stem cell research: hope or hype*, held last week in London, was a heralded with a sober prediction: no safe and effective stem cell therapy will be widely available for at least a decade, and possibly longer. And the hype? Take a look at any one of the numerous sensationalist headlines that greeted the report 2 weeks ago by South Korean scientists who had created embryonic clones and you will get the general idea.

The message from the meeting was that hype, and its stark contrast with reality, should not disguise the technological strides that are being made in stem cell research. The difficulties are unique, involving major practical and ethical issues. Adult stem cells are hard to grow in large enough numbers; embryonic stem cells are more amenable to culture but come from supernumerary (after in-vitro fertilisation) or experimentally created embryos. Harvesting, culture, purification, and administration need much more research before clinical trials become widespread. The use of embryos as a source of stem cells creates immediate ethical dilemmas, as does the creation of clones by somatic-cell nuclear transfer. Evidence of the strong feelings aroused by such debates came last Friday, when the US House of Representatives voted to raise federal funding for embryonic stem cell research to allow the use of supernumerary embryos, which is currently banned. President Bush immediately threatened to veto the bill.

Collaborations in cardiovascular medicine, as John Martin outlines in an online Comment, may provide more hope for the future. Stem cell research holds much promise: in-vitro work will provide insights into disease mechanisms, and one day there will be new treatments for intractable congenital and chronic diseases. 4 years ago, we said that cloning to obtain stem cells was a step too far (because there were sufficient supernumerary embryos available), but the research community is now beyond that step. Consensus about the use of embryonic stem cells will probably remain fluid, as the science evolves and as the public and patients join the debate with scientists, ethicists, and politicians in response.