

## Depression and physician assisted dying

Preventing depression, not physician assisted suicide, is the priority



SHARPLY-DOONE/FOTOLIA

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In the linked study (doi: 10.1136/bmj.a1682), Ganzini and colleagues report that most terminally ill patients in Oregon who receive physician assistance in dying do not have depressive disorders.<sup>1</sup> In fact, only three (17%) patients who received a lethal prescription met criteria for depression. This finding is in line with a previous study carried out in the Netherlands, where both euthanasia and physician assisted suicide are legal. A major depressive disorder was identified in only two terminally ill oncology patients (17%) at the time they explicitly requested euthanasia.<sup>2</sup> This suggests that the prevalence of major depression among patients requesting euthanasia or physician assisted dying is much lower than would be expected from studies on the relation between depression and the desire to die in areas where assisted dying is illegal.

Despite this outcome, depressed mood and an explicit request for euthanasia were associated in terminally ill patients with cancer in the Netherlands.<sup>1</sup> Although the study design does not allow conclusions about causality to be drawn, a depressed mood probably contributes to suffering at the end of life. This would increase the chance that patients find the suffering unbearable and request euthanasia or assistance in dying.

Ganzini and colleagues propose that terminally ill patients who can access legalised assistance in dying should be protected by being systematically examined for depression.<sup>1</sup> This recommendation raises three questions. Firstly, can depressive disorders be diagnosed at the end of life? Secondly, can we determine whether depression at the end of life impairs the judgment of a patient requesting assisted suicide? Thirdly, how can doctors implement systematic examination for depression to protect these patients?

In response to the first question, diagnosing depression in terminally ill patients is complex because symptoms of depression such as weight loss, insomnia, loss of energy, reduced ability to concentrate, and recurrent thoughts of death may directly result from the disease or its treatment. The hospital anxiety and depression scale is often used to screen terminally ill patients with cancer for depressive disorders because it specifically excludes references to somatic items. This scale can predict the development of major depression in patients with cancer who are terminally ill and is easy to apply.<sup>3</sup> So, despite the difficulties in diagnosing depression at the end of life, systematic screening can be implemented effectively.

Determining whether depression impairs the judgment of a patient requesting assisted suicide is more complex, because depressed patients are not necessarily

incompetent. The value of psychiatric consultation as part of the standard procedure for handling requests for euthanasia was the focus of a study in the Netherlands, which concluded that standard psychiatric consultation should not be mandatory.<sup>4</sup> Ganzini and colleagues report that only 6% of psychiatrists in Oregon were confident they could adequately determine in a single evaluation whether a psychiatric disorder impaired the judgment of a patient requesting assisted suicide.<sup>1</sup> Doctors who have known their patient for some time can often determine their patient's level of competency. In the Netherlands and Oregon, consultation with a second doctor is already standard procedure, so a psychiatrist should be consulted only when the patient's ability to make a decision is in doubt.

So, how can doctors implement systematic examination for depression to protect terminally ill patients who are depressed? In the Netherlands the most important criterion for euthanasia and physician assisted suicide is that the patient's suffering is hopeless and unbearable, and that the patient's request is voluntary and well considered. The extent to which a patient's suffering is hopeless depends on treatment options and prognostic factors. Suffering is not hopeless if realistic treatment can offer improvement within a surveyable period of time, and with an acceptable balance between the expected outcome and the suffering caused by treatment.<sup>5</sup>

In most cases of euthanasia, the patient's life is shortened by less than one month,<sup>6</sup> which is usually insufficient time to treat depression successfully. In my opinion, screening for depression must take place at an earlier stage, when active treatment to prolong life stops and the phase of symptom palliation begins. Given that a quarter of terminally ill patients with cancer have depressive disorders,<sup>7</sup> screening all terminally ill patients systematically seems advisable, rather than screening only the minority of patients seeking legalised assistance in dying.

Depression has a strong negative effect on the quality of life of terminally ill patients<sup>8</sup> and their family,<sup>9</sup> but depression could potentially be treated.<sup>10</sup> With this in mind, we should focus on trying to prevent patients from becoming depressed in the first place, rather than on protecting them from assisted suicide.

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## Availability of inpatient beds for psychiatric admissions in the NHS

Is decreasing, and care is expensive, unpopular, and often unsatisfactory



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How we commission, deliver, and regulate mental health care has changed dramatically in the past 14 years, but much of what Thornicroft and Strathee wrote in their 1994 *BMJ* editorial, “How many psychiatric beds?” still rings true.<sup>1</sup> We are asking the same question today, because inpatient care still accounts for two thirds of the budget of NHS mental health services.<sup>2</sup> Despite a phenomenal revolution in mental health services,<sup>3</sup> the answer lies outside inpatient units rather than within them.<sup>2,6</sup>

In the linked study, Keown and colleagues (doi:10.1136/bmj.a1837) perform a retrospective analysis of voluntary and involuntary psychiatric admissions in England between 1996 and 2006.<sup>7</sup> They find that the total number of involuntary admissions (detentions under the Mental Health Act) each year increased by 20%, with a threefold increase in the likelihood of admission to a private facility. People who had been admitted involuntarily occupied 23% of NHS psychiatric beds in 1996 but 36% in 2006. When measured against population size, there was a reduction from 96 to 66 beds per 100 000 population (or about 31%) between 1996 and 2006. This should be seen against an overall fall in bed numbers of 80% since the 1950s. Although the rate of reduction may have slowed it shows no signs of stopping.<sup>2</sup>

The number of beds for psychiatric patients has been reduced in all other developed economies, but to varying degrees.<sup>8</sup> In 2001, estimated beds per 100 000 population ranged from just five in Italy to 135 in the Netherlands.<sup>8</sup> The United States has witnessed a 95% reduction in publicly funded beds for psychiatric patients since the 1950s,<sup>9</sup> resulting in a national average of 17 beds per 100 000 population—far below the 50 that experts in that country have judged to be the safe minimum.<sup>9</sup> Furthermore, reports from the US of neglect, vagrancy, crime, and incarceration seem far removed from the well developed<sup>10</sup>—if imperfect<sup>5</sup>—community mental services available in most western European countries.<sup>9</sup>

Keown and colleagues' findings provide further evidence of the rising number of involuntary admissions and the changing, more morbid, composition of inpatient populations.<sup>2</sup> They also suggest that the previous “inverse pyramid” of forensic mental health services (more high than medium secure beds)<sup>1</sup> has been corrected, albeit largely through huge growth in private sector provision.

These results also suggest that forensic admissions are made up mainly of patients already known to mental health services rather than patients who have been diverted from the criminal justice system. And although these data capture the shift away from care in large asylums they overlook simultaneous expansions in short stay community based residential facilities, which many service users prefer to hospital wards,<sup>4,9</sup> and long stay supported accommodation.

What else do the numbers not tell us? Absolute bed numbers inevitably obscure important variations. Although much attention has been given to services for adults of working age, less has been given to services for more marginalised groups—older people, those with learning disabilities, and young people.<sup>5</sup> Global bed numbers, like average rates of bed occupancy,<sup>3,5</sup> length of stay,<sup>11</sup> and needs adjusted spending<sup>12</sup> conceal substantial—and poorly understood—differences between places and service users.<sup>5</sup>

These numbers say nothing about the quality of service or the experiences of users, carers, and staff. The recent national review of inpatient services by the Healthcare Commission, in which 59% of trusts were rated as fair or weak, does little to allay concerns about lack of care and planning and impoverished physical environments.<sup>2,6</sup> Where things are bad, they are very bad,<sup>2</sup> and these are the places where the needs of the most excluded, vulnerable, and disaffected (including those from black and minority communities) are least adequately met.

Several unavoidable truths persist—there will always be a need for sanctuary at times of crisis; inpatient units are expensive and will probably always be unpopular among service users; and those in the greatest need will always be cared for in settings where care is most difficult to deliver because of self-perpetuating cycles of deprivation within and between generations.

What of the next 10 (or even 14) years? Is a further 30% reduction in bed numbers desirable or achievable? Thornicroft and Strathee were right—the need for psychiatric beds is inversely related to the quality of community mental health services.<sup>1</sup> That service users welcome further reductions in bed numbers<sup>4</sup> speaks volumes not only for the reprehensible state of many inpatient units,<sup>5</sup> but also for users' confidence in community services.<sup>3</sup>

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The Royal College of Psychiatrists' Fair Deal campaign highlights these problems and suggests solutions.<sup>5</sup> Numbers will always matter, but the greater need is for improvements in the quality of services. This will only happen if users' and carers' voices are heard and acted on.<sup>4</sup> In our 21st century NHS, the necessary quantum leap is likely to depend less on the views of mental health professionals than on the actions of commissioners, and on their willingness to engage in meaningful partnerships with users, carers, and service providers.

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## Tackling global shortages in health workers

Initial success of UK government strategies in Malawi must be sustained



GIACOMO PIROZZI/PANOS

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The global movement of doctors and other health professionals in pursuit of work is a vast interconnected web. A recent review of Nigerian state medical graduates found that a third migrated to the United States, United Kingdom, or Canada within 10 years.<sup>1</sup>

Every health professional has a right to seek work wherever they wish for professional reasons, such as better working conditions and better prospects for further training and career advancement, or for personal reasons, such as better remuneration or living conditions for their family. But the movement of doctors from the health system where they were trained or where they are currently working can cause unpredictability or shortages in the workforce. These effects are exacerbated when they occur in health systems already under strain from an insufficient workforce or from the burden of HIV.

The importance of the global migration of health professionals has been recognised for some time. The search for solutions led the World Health Organization to establish a Global Health Workforce Alliance and a working group on health worker migration policy, cochaired by former Irish president and UN high commissioner for human rights, Mary Robinson.<sup>2</sup> A three week online global dialogue was convened in April this year and included contributions from policy makers about their national strategies and from migrant health workers.

Focusing on evidence from individuals and single countries might not appeal in an age of global initiatives, but because almost four years have passed since the original joint learning initiative report that highlighted the true scale of this problem,<sup>3</sup> practical workable solutions are needed. What might such solutions be? Should national workforce strategies in one country consider their potential effect on another country? How can the rights of individual doctors be balanced with the needs of patients?

The former chief executive of the NHS, Sir Nigel Crisp, has followed up his earlier report on global health<sup>4</sup> by recently canvassing views on how the UK can support health workers in Africa through education and training. Sir Nigel's consultation was informal, on a small scale, and rapid, but it was practically focused and involved direct questions to key UK and African health leaders about what they are doing and what should be done. In its response, the BMA highlighted ways that doctors in the UK can directly support colleagues in developing countries through education and training activities, as well as calling for better pay, working conditions, and prospects in their own countries.<sup>5</sup>

One of Sir Nigel's preliminary findings is that it is important to identify priorities—either specific countries or areas of training—on which to concentrate efforts. Yet the UK Department for International Development (DFID) is currently missing opportunities to build on successful projects such as one supporting health workers in Malawi.

Staffing is a key bottleneck to delivering health services in this country, where 930 000 people (14% of the population) have HIV and one of the main causes of mortality is preventable diarrhoeal disease.<sup>6</sup> The country's progress towards Millennium Development Goal 4 of reducing child mortality is also slowing down.<sup>6</sup> A World Bank assessment of the Malawian health sector concluded that "the exodus of health workers out of [Malawi's] civil service . . . was precipitated largely by the erosion of salaries."<sup>7</sup> The number of doctors is significantly below the average for the African region, with a density of 0.02% compared with the regional average of 0.217%.<sup>6</sup>

In 2004, DFID and other donors responded with budget support to help the government of Malawi deal with the urgent human resource problems. The six year Emergency Human Resources Programme,

which includes DFID funding of \$110m (£62m; €79m), aims to improve salaries, benefits, and working conditions. This is a unique national initiative that has overcome the International Monetary Fund's opposition to increasing public sector salaries. The initial goal was to scale up staffing by 2010 to a more "realistic" level—although still below WHO minimum standards—through a combination of strategies with immediate effect, such as salary top ups, and ones that will take time to be realised, such as expanding training capacity by 50% to triple the number of doctors and double the number of nurses in training.<sup>8</sup>

Malawi now has 40% more doctors than in 2003, and enrolment in basic clinical courses is two and a half times higher.<sup>8</sup> Applications to medical school have also increased—perhaps because of the increase in earning potential through the increased salaries—and a WHO review concluded that educational quality is being maintained.<sup>8</sup>

Sustained commitment is needed to achieve lasting change, particularly in light of slow progress on infrastructure and vacancy rates remaining high.<sup>9</sup> But the UK government is failing to maximise the benefit from this important initiative. DFID recently confirmed that it has "no plans to extend Malawi's solution to other countries" and stated that it was "too early for discussions about extending support,"<sup>10</sup> despite the project's long term objectives.

This decision is despite evidence that health initiatives can bring about substantial change only with proper monitoring and evaluation and the incorporation of these results into sustained programmes. A recent review of innovative health worker policies stated that "it is imperative that policymakers, donors and governments work together to create an environment where HRH [human resources for health] promising practices are encouraged and supported. It is their responsibility to nurture promising practices."<sup>11</sup> Where initiatives are piloted and then terminated, their potential is unrecognised and the

energy of those implementing them is wasted. In these circumstances, health professionals will legitimately continue to seek better opportunities for themselves and their families outside their home country.

Continuing DFID's budget support for the Emergency Human Resources programme is a small price to pay for the benefits that come from a well resourced health system whose health professionals are fairly rewarded. The UK government has made its global health commitments clear; it is vital that no opportunities to fulfil them are wasted.

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## New MRC guidance on evaluating complex interventions

Clarifying what interventions work by researching how and why they are effective

It is eight years since the publication of the Medical Research Council's original report on methods for developing and evaluating randomised controlled trials for complex interventions.<sup>1</sup> Although presented as a "discussion document," the MRC framework and its companion paper have often been cited as authoritative guidance on methods. Other people, however, have found the definition of the complexity of interventions narrow and misconceived,<sup>2</sup> and the suggested phases for developing and evaluating complex interventions as unhelpfully similar to commercial drug evaluation. However, the report can probably be credited with stimulating much of the ongoing debate about appropriate methods and concepts in healthcare evaluation—particularly when

the intervention of interest is hard to define, hard to evaluate (using conventional experimental methods), or just hard to explain.

The MRC has now updated its original report ([www.mrc.ac.uk/complexinterventionsguidance](http://www.mrc.ac.uk/complexinterventionsguidance)) to reflect recent developments in methods and lessons learnt in applying them. The guidance is summarised in the linked article by Craig and colleagues (doi:10.1136/bmj.a1655).<sup>3</sup> It has a broader scope than the original version—it covers observational methods as well as randomised controlled trials and implementation as well as the development and evaluation of interventions; it also has a broader definition of complex interventions beyond the core dimension of having multiple components.

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RESEARCH METHODS AND REPORTING, p 979

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Nevertheless, some people will think that some recent developments in the methodology of evaluation have not been reflected in the new guidance. Firstly, some believe that an approach based on the science of complex systems better explains many behavioural, community, or population level health programmes than conventional evaluation approaches.<sup>4,5</sup> This approach is advocated where the processes that the intervention attempts to change, or the interactions between people and resources within an intervention, can be likened to a complex system; there may be feedback loops and other interactions which mean that system level properties emerge (for example, community empowerment or health inequalities), but also that the system may abruptly “jump” from one state to another. Crucially, outcomes cannot be easily predicted from the particular combination of components in the intervention.<sup>6</sup>

Secondly, an arguably more conspicuous omission from the new guidance is the lack of explicit acknowledgment of the potential of theory driven evaluation approaches. Interest in these evaluation methods—which essentially assess whether interventions work through an explicit and prospective focus on how and why they are thought to work—has increased considerably, especially since the publication of Pawson and Tilley’s *Realistic Evaluation* (1997)<sup>7</sup> and Connell and Kubisch’s theories of change approach (1998).<sup>8,9</sup> However, with a few exceptions,<sup>10</sup> these approaches have been used more successfully for systematic reviews than primary research.<sup>11,12</sup>

To be fair, the new MRC guidance makes many encouraging references to the use of intervention theory, and not just for guidance in developing or optimising the intervention (which was its main use advocated in the original MRC framework). For example, a “good theoretical understanding of the intervention” is now also advised when choosing suitable outcome measures. The whole document reflects the general shift in health services research away from just asking “what works?” towards asking how and why an intervention or public health programme works or fails in different circumstances. Correspondingly, the new guidance encourages the use of process evaluations alongside outcome evaluations, partly because they can “clarify causal mechanisms and identify contextual factors associated with variation in outcomes.” Several of the included case studies further show the use of process evaluations, in some cases to develop an intervention’s theory.

As a health economist, I find the recommendations on assessing cost effectiveness disappointingly brief. Crucially, they do not indicate how the different dimensions of complexity of the intervention challenge existing methods for conducting an economic evaluation. Also, by repeating the conventional view that “the main purpose of an economic evaluation is estimation rather than hypothesis testing,” the guidance may unwittingly encourage the status quo.

Most economic evaluations are still primarily quantitative evaluations of “black box” interventions—that is, with little or no explicit interest in how and why they generate different effects or place different demands on the use of resources—so evidence for explaining differential cost effectiveness is often speculative rather than empirical.

This is perhaps unsurprising. With the exception of the recent article by Shiell and colleagues,<sup>5</sup> few attempts have been made to bridge the gap between methods of economic evaluation and the broader methodological debates about the definition and evaluation of complex interventions. This is a shame, because economic evaluation is probably the one area of health services research where methodological advances have been driven almost exclusively by the needs of evaluators of pharmaceuticals (rather than directors of public health or service managers).

It could be argued that the lack of coverage of complexity theory in evaluation or of the use of theory driven approaches to evaluation is because these approaches are based on fundamentally different and unfamiliar paradigms of explanation. Trying to weave them into the MRC guidance might therefore have served only to confuse rather than clarify matters. It is more likely, however, that their omission simply reflects a paucity of practical examples where these approaches have clearly added value—at least in the sense of creating new knowledge that enables policy makers to design more effective interventions or to implement, tailor, or target them better in different populations or service contexts. It is therefore still up to researchers to demonstrate this, as well as research funders—like the MRC with its new methodological remit—to give them the chance to do so.

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## Research methods and reporting

A new section of the *BMJ* about how to do and write up research

**EDITORIAL, p 944**  
**RESEARCH METHODS AND REPORTING, p 979**

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Nearly 15 years ago Doug Altman, the *BMJ*'s senior statistical adviser and professor of medical statistics, asked in this journal, "What should we think about researchers who use the wrong techniques (either wilfully or in ignorance), use the right techniques wrongly, misinterpret their results, report their results selectively, cite the literature selectively, and draw unjustified conclusions? We should be appalled. Yet numerous studies of the medical literature, in both general and specialist journals, have shown that all of the above phenomena are common."<sup>1</sup>

Things may have improved somewhat since then, but we still have much to do. Like most other medical journal editors, we at the *BMJ* continue to be dismayed by submissions that describe poorly conducted studies and by reports of apparently adequate studies that are so incomplete and confusingly written that they are impossible to appraise. Many of these unsatisfactory articles come from well resourced countries, and we must assume that most of these shortcomings in conduct and reporting of research reflect lack of education and supervision rather than lack of money or integrity. To help fill this gap, the *BMJ* has launched a new section called research methods and reporting.

The new section will contain "how to" articles—those that discuss the nuts and bolts of doing and writing up research—that will be both actionable and readable.<sup>2</sup> We welcome articles on all kinds of medical and health services research that will be relevant and useful to *BMJ* readers—whether that research is quantitative or qualitative, clinical or not. Because this section is for the "how?" of research, the "what, why, when, and who cares?" will usually belong elsewhere. Original studies evaluating ways to conduct and report research (for example, a systematic review evaluating whether a guideline on how to report research has actually improved the quality of reporting) should go to the *BMJ*'s research section; articles that debate (rather than present) research concepts and discuss translation of research into practice and policy should go to analysis, editorials, or features; and those expressing personal opinions should go to personal view.

The research methods and reporting section will be the place for articles that propose and explain practical and theoretical developments in research methodology—for instance, articles on choosing more meaningful outcomes in clinical trials or incorporating patients' preferences, on innovative statistical design and analysis, or on combining biomedical and social research methods. The section's inaugural article is a good example, because it summarises the revised UK Medical Research Council's guidelines on designing, conducting, evaluating, and implementing complex interventions in health care.<sup>3</sup> These guidelines now recommend the use of observational studies as well as randomised trials in health services research, exhort policy makers to commission experimental or high quality non-experimental evaluations when initiatives have uncertain effectiveness, and urge researchers to explain

their interventions fully. As Rob Anderson says in an accompanying editorial, "the whole document reflects the general shift in health services research away from just asking, 'what works?' towards asking how and why an intervention or public health programme works or fails in different circumstances."<sup>4</sup>

Regarding reporting, this new section will showcase articles on improving the clarity and transparency of reports about research studies, protocols, and results. We are soon to publish the CONSORT (Consolidated Standards of Reporting Trials) extension statement for improving the reporting of pragmatic trials,<sup>5</sup> and the revised SQUIRE (Standards for Quality Improvement Reporting Excellence) guidelines,<sup>6</sup> and we hope that this new *BMJ* section will give these added prominence. To improve *BMJ* papers' reporting and increase reviewers' understanding we ask our research authors to follow such guidelines and to complete the appropriate reporting checklist before external peer review. We do not, however, despite some concerns to the contrary,<sup>7</sup> use reporting guidelines as critical appraisal tools to evaluate study quality or filter out articles. Our aim is to make research articles so clear that peer reviewers, editors, clinicians, educators, ethicists, policy makers, systematic reviewers, guideline writers, journalists, patients, and the general public can tell what really happened during a study.

Increasingly, research protocols and results are published in places and formats that do not rely on review and publication by journals. Just this month—in its latest update of the uniform requirements for manuscripts submitted to biomedical journals—the International Committee of Medical Journal Editors gave important support to research reporting outside journals, by confirming that editors should not count the posting of results on clinicaltrials.gov as prior publication as long as it is done within the rules laid down in the Food and Drug Administration Amendment Act.<sup>8,9</sup> Online trial registration, reporting of results in registries, and sharing of raw research data are all hot topics on which we will welcome practical submissions for the research methods and reporting section.

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