Continuing drug when dementia symptoms worsen might delay care home admission

Taking patients with Alzheimer’s disease off donepezil, a drug costing little more than £20 a year, seems to double the chance that they will go into a nursing home within a year, a study published in Lancet Neurology indicates.

But experts have criticised the study for being based on secondary outcomes and for its small numbers of participants.

Donepezil is indicated for the treatment of mild to moderate Alzheimer’s disease and is usually withdrawn when a patient’s cognitive symptoms worsen.

Researchers at University College London monitored the effects of continuing or discontinuing the drug in a group of 295 patients with moderate to severe Alzheimer’s disease for whom donepezil had been prescribed continuously for at least three months, at a dose of 10 mg for at least the previous six weeks, and who scored between 5 and 13 on the standardised mini-mental state examination.

Patients were randomised to continue donepezil alone at 10 mg a day, discontinue donepezil, discontinue donepezil and start memantine at 20 mg a day, or continue donepezil 10 mg a day and start memantine 20 mg a day, all for 52 weeks. After 52 weeks, choice of treatment was left to the patients and their doctors. Patients were followed up for four years.

More than half (162) of the patients entered a nursing home over the four years, and the proportions were similar in all four groups. However, the results indicated that continuing to take donepezil delayed entry into a nursing home.

Fewer patients in the two groups where donepezil was continued entered a nursing home within the first year than in the two groups in which donepezil was stopped (hazard ratio 2.09 (95% confidence interval 1.29 to 3.39)). The study found no difference between the combined donepezil continuation groups and the combined discontinuation groups in nursing home placements in the subsequent three years (hazard ratio 0.89 (0.58 to 1.35)). Adding memantine seemed to have no effect on the likelihood of nursing home placement.

But Richard Gray, professor of medical statistics at the University of Oxford, pointed out that over the four years there was no difference in the numbers of patients going into residential care (54% of those continuing donepezil and 56% of those who discontinued it).

“The emphasis on the results in the first year, when 18% went into care with donepezil compared to 31% who stopped, is inappropriate, because this was not a pre-planned analysis and is therefore potentially misleading,” said Gray, who was chief investigator of the AD2000 trial. “The apparent halving of the risk of entering residential care in the first year seems implausibly large.”

Ingrid Torjesen, London
Cite this as: BMJ 2015;351:h5739

LATEST ONLINE COMMENT AND BLOGS

- Malaria vaccine difficult to roll out because four doses are needed, WHO says
- Senior citizens were routinely tested for “angel dust” in scam that led to $256m settlement
- Primary care commissioners need five year budgets to transform care, says report
- Academic’s call for moratorium on HPV vaccine sparks controversy
Processed meats are carcinogenic, says review
Processed meats such as sausages, bacon, and ham have been classified as carcinogenic by the WHO’s International Agency for Research on Cancer because of evidence that their consumption causes colorectal cancer.1 They now appear in the same risk group for cancer (group 1) as asbestos, cigarettes, and alcohol.

The agency concluded that each 50 g portion of processed meat eaten daily increased the risk of colorectal cancer by 18%.

Non-processed red meat was classified as probably carcinogenic (group 2A), with limited evidence linking its consumption with colorectal cancer.

Elizabeth Lund, an independent consultant in nutrition, said, “Data from 2011 indicate the lifetime risk for bowel cancer in the UK is about 58 men per 100 000 and 38 women per 100 000. An increased risk associated with red meat consumption is in the region of 28%. A much bigger risk factor is obesity and lack of exercise. Overall I feel that eating meat once a day combined with plenty of fruit, vegetables, and cereal fibre, plus exercise and weight control, will allow for a low risk of colorectal cancer.”

Zosia Kmietowicz, The BMJ
Cite this as: BMJ 2015;351:h5729

Saturday 24th
Mental health detentions rise by almost 10%
Detentions under the Mental Health Act in England rose by almost 10% in 2014-15 to 58 400, the Health and Social Care Information Centre has said. Marjorie Wallace, chief executive of the mental health charity SANE, said that doctors were being forced to use the act to secure an inpatient bed for treatment. “What we need is more rather than fewer beds where those who need sanctuary and healing can receive help,” she said.

Sunday 25th
Public backing grows for sugar levy
More than half (53%) of 2191 people who were asked said that they supported a levy on sugary drinks and food, a poll conducted by ComRes and commissioned by the Royal College of Paediatrics and Child Health has found. Neena Modi, president of the college, said, “The groundswell of support for taxes on unhealthy food and drinks in order to improve the health of the nation is becoming increasingly difficult for the government to ignore.”

Hikes in generic drug prices revealed
Drug companies are “milking” the NHS by increasing the prices of some drugs by more than 2000%, a Sunday Times investigation showed. In August the Competition and Markets Authority said that it had reached a “provisional view” that Pfizer and Flynn Pharma have charged “excessive and unfair” prices for phenytoin sodium capsules, but the newspaper also named other examples of drug companies increasing the cost of generic drugs by as much as 2358%.

Enforce rules to reduce injuries from tackles, say US paediatricians
US football coaches and game officials should improve the teaching of proper tackling techniques and enforce existing rules to reduce the incidence and severity of football injuries, the American Academy of Pediatrics has said. Eliminating tackling from football could reduce the numbers of injuries. “Participants in football must decide whether the potential health risks of sustaining these injuries are outweighed by the recreational benefits associated with proper tackling,” the academy said. Tackling and being tackled accounted for about half of high school and college football injuries, including most concussions and most of the catastrophic brain and cervical spine injuries. (See the full story in The BMJ at doi:10.1136/bmj.h5726.)

Monday 26th
E-cigarettes can cause nicotine addiction
The US Food and Drug Administration should regulate e-cigarettes and other electronic nicotine delivery systems as it does other tobacco products, imposing similar age restrictions and banning advertising and media promotion, the American Academy of Pediatrics said in a new policy statement. Claims from the manufacturers that their products were “healthier” and “safer” than conventional cigarettes had not been scientifically validated, the academy said. In fact, the academy added, aerosols for electronic nicotine systems included various potentially harmful “intoxicants and carcinogens,” including aldehydes, nitrosamines, tobacco alkaloids, and polycyclic aromatic hydrocarbons. (Full BMJ story at doi:10.1136/bmj.h5728.)

Keogh disputes Hunt’s claim on excess deaths
NHS medical director Bruce Keogh has distanced himself from claims made by England’s health secretary, Jeremy Hunt, that poor staffing at weekends was responsible for 11 000 excess deaths a year. Last week Fiona Godlee, editor in chief of The BMJ, wrote to Hunt protesting that he was wrongly citing BMJ research to back this claim. More than 1000 doctors also wrote to Keogh, who coauthored the research article, making the same
point. In reply this week Keogh told the doctors, “We were very clear about that [the weekend mortality rate] in the paper where we stated: ‘It is not possible to ascertain the extent to which these excess deaths may be preventable.’”

**Tuesday 27th**

**US task force advises screening blood sugar in overweight adults**

All overweight and obese adults aged 40 to 70 should be screened for abnormal blood sugar concentrations, says new guidance from the US Preventive Services Task Force. People found to have high concentrations should be referred to intensive behavioural counselling to promote a healthy diet and regular exercise, it added. A diagnosis of impaired fasting glucose, impaired glucose tolerance, or type 2 diabetes should be confirmed by repeating the same test on a different day. Limited evidence exists for frequency of screening of adults, but the guidance said that screening every three years would be reasonable. (Full BMJ story at doi:10.1136/bmj.h5648.)

**Thursday 29th**

**Different cancer growth patterns explain variable effects of screening**

Differences in how cancers grow and metastasise may explain why screening halved the number of diagnoses of metastatic prostate cancer at first diagnosis but had no effect on the proportion of first diagnoses of metastatic breast cancer, concludes an analysis of US data from 1975 to 2012. The authors, writing in the *New England Journal of Medicine*, said that their findings could be explained by the fact that breast cancer is largely a systemic disease by the time it is detectable. (Full BMJ story at doi:10.1136/bmj.h5742.)

**Friday 30th**

**Global Health Film Festival launches**

*The Divide*, a film about the effects of rising social inequality, launches the first Global Health Film Festival at the Royal Society of Medicine in London. The film was inspired by the book *The Spirit Level*, by Richard Wilkinson and Kate Pickett, and the work of Michael Marmot and colleagues from University College London’s Institute of Health Equity. Cite this as: BMJ 2015;351:h5730

**FACT**

Junior doctors are to be balloted on whether to take industrial action from 5 to 18 November. A “yes” vote is predicted, but the BMA hopes the ballot will pressure ministers into withdrawing plans to impose a new contract.

**SIXTY SECONDS ON...**

**HIGH FRUCTOSE CORN SYRUP**

**OH YUM**

Oh no. High fructose corn syrup (HFCS) has been demonised as the ingredient that’s to blame for obesity and diabetes.

**WELL, IS IT?**

Some people certainly think so. It’s got more fructose than is delivered by standard sugar once it hydrolyses (60% versus 50%), but the jury is still out on the relevance of this. There’s also a theory that HFCS is metabolised differently from standard sugar so that it bypasses the satiety stage and leads to overconsumption. But others argue that obesity is simply a result of eating more of everything, not just sweetened foods.

**SO, WHAT’S SO SPECIAL ABOUT HFCS?**

It’s cheaper to produce (in the United States) than table sugar that comes from sugar beet, because of subsidies to corn farmers.

**TELL ME MORE**

As well as being a super-sweet syrup, HFCS enhances flavours, acts as a stabiliser, adds texture, stability, and consistency, and can be poured. It can be used in savoury foods (such as ketchup) and in a wide range of cereals, baked goods, and snacks.

**AS I SAID, YUM**

In the US the availability of HFCS has led to a fall in the price of sugary drinks relative to other foods, while in the UK prices of sugary drinks have risen. In the 15 years after HFCS was introduced in the US sugar consumption (including HFCS) rose by 20%.

**WHAT ABOUT EUROPE?**

The European Common Agricultural Policy has so far largely kept HFCS from our doors.

**PHEW**

But that’s all about, change with liberalisation of the policy by 2017, when it will be possible to produce and use more HFCS here.

**SO?**

Expect more and cheaper sugary foods and drinks. Oh, and bigger health inequalities.

**SHOULDN’T FOOD POLICY TAKE ACCOUNT OF HEALTH?**

That’s just pie in the sky.

Cite this as: BMJ 2015;351:h5693

© ANALYSIS, p 22
How reputation bamboozled science

*The BMJ* has just retracted a paper published in 1989. **Caroline White** reports on the longstanding concerns about Ranjit Chandra’s work and the difficulties in getting to the truth

By his 60th birthday, in 1998, Ranjit Kumar Chandra, the self proclaimed “father of nutritional immunology,” had become an internationally renowned researcher who had received several awards, including the Order of Canada.

But he had also been investigated for suspected research fraud and had published several studies that have since had their integrity repeatedly questioned. He had also amassed around $2m (£1.3m), stashed away in what was described as a “labyrinth of bank accounts and financial transactions” by Justice Wells in his judgment during Chandra’s protracted divorce trial in 2000. The judge doubted that these large sums could have come from teaching and medical practice income, or canny investments.

The judge also noted the extent to which Chandra maintained sole control of the couple’s finances and the “absence of full disclosure” and “of full explanation” during the trial—behaviours that featured in Chandra’s research undertakings and his responses to those who queried the findings.

**RESEARCH MISCONDUCT**

**First doubts at The BMJ**

Among them was the former editor in chief of *The BMJ*, Richard Smith, whose suspicions were aroused in 2000 when Chandra submitted a follow-up study of a major trial published in the *Lancet* in 1992.

Chandra was the sole author of the study, which showed that his patented multivitamin and mineral supplement boosted the memory and thinking in people aged over 65. But peer review raised several concerns.

When the journal’s statistical reviewer concluded that “the data had all the hallmarks of being entirely invented,” Smith contacted Chandra’s employer, Memorial University of Newfoundland, requesting an investigation. The university replied that there was no case to answer. But it didn’t mention that it had already investigated Chandra for suspected data fabrication, prompted by his research nurse Marilyn Harvey, whom Chandra later tried to sue. She was responsible for recruitment to the infant formula studies Chandra had been asked to carry out for Ross Laboratories, Nestlé, and Mead Johnson.

**“Dr Chandra’s research activity was very much operated as a pyramid system where only one person at the top had access to all the final raw data”**

**RANJIT CHANDRA: CHRONOLOGY OF THE CANADIAN RESEARCHER’S STORY**


- Ross Laboratories, Nestlé, and Mead Johnson ask Chandra to study whether their infant formulas can prevent allergies
- *Chandra* appointed to Order of Canada
- *Mead Johnson* study published in *The BMJ*. First Nestlé (Carnation) study published in *Annals of Allergy*
- *Chandra* receives distinguished service award from the Canadian Society for Nutritional Sciences
- 18 month follow-up Carnation study published in *Annals of Allergy*
- Study on improvement of older people’s memory and thinking after taking nutritional supplement published in the *Lancet*
- First Nestlé (Carnation) study published in *Annals of Allergy*
Cutting air pollutants could save five million lives a year, WHO says

Reducing emissions of black carbon, ozone, and methane could save millions of lives a year, a new report by the World Health Organization has found.¹

The report said that exposure to outdoor air pollution is estimated to cause around 3.7 million premature deaths a year, and 4.3 million deaths a year are attributed to household air pollution from burning solid fuel. Diseases caused by exposure to these pollutants include ischaemic heart disease, which is responsible for more than 2.6 million deaths a year, stroke (2.97 million deaths), chronic obstructive pulmonary disease (966,900), and lung cancer (499,000).

If governments adopted a range of policies to cut so-called short living climate pollutants WHO estimated that 3.5 million deaths a year could be prevented by 2030 and as many as five million deaths a year by 2050.

These policies include shifting to cleaner transport and improving vehicle technologies. Emissions from diesel vehicles account for about 20% of global black carbon emissions, and particle emissions from older diesel vehicles are often around 75% black carbon. Retro-fitting diesel particle filters on vehicles and implementing more stringent vehicle emission and efficiency standards would substantially reduce black carbon and particulate matter, WHO advised.

Anne Gulland, London

Cite this as: BMJ 2015;351:h5688

IN THE PICTURE: THE “TRIANGLE OF DEATH”

Boys in a Roma camp play beside a blaze of toxic waste. This image, by photographer Massimo Berruti, is part of a series that captures one of Europe’s worst scenes of environmental devastation. Known as Italy’s “Triangle of Death,” a massive area of poisonous waste stretches through Campania, where the mafia has been dumping millions of tonnes of toxic material. Although the dumping scheme has been going on for decades, the full extent became known to the Italian press only in 2013. See www.youtube.com/watch?v=1g7wMdSngcs
Currently children consume three times the recommended amount of sugar and adults twice the amount.

Public Health England found that displays at the ends of supermarket aisles led to a 50% increase in purchases of fizzy drinks and that food promotions were more widespread in Britain than anywhere else in Europe and increased by 6% the amount of sugar in food that people bought.

Halving the amount of sugar in soft drinks would reduce by 5 g daily sugar consumption among children aged under 10 and among adults over 19 and by 11 g among the 10-19 year olds, said the review. And increasing the price of food and drink with high sugar content was likely to reduce purchases of these products, at least in the short term, it concluded.

Commentators have urged the government to act on the recommendations.

Sheila Hollins, chair of the BMA’s board of science, said, “While sugar sweetened drinks are very high in calories, they are of limited nutritional value, and when people in the UK are already consuming far too much sugar, we are increasingly concerned about how they contribute towards conditions like diabetes.

“It is vital that the government takes on board the concerns already raised by doctors and now echoed by Public Health England.”

Julian Hamilton-Shield, professor of diabetes and metabolic endocrinology at the University of Bristol, said, “No one can really doubt the harm sugar containing drinks do to children: they rot their teeth and likely make them obese and at risk of later type 2 diabetes. If a tax is needed to reduce sugar consumption, I am right behind it. No one complains about tobacco taxation; sugar should be treated the same way.”

Zosia Kmietowicz, The BMJ
Cite this as: BMJ 2015;351:h5675
ANALYSIS, p 22

Doctor manipulated system for four years to abuse boys, investigation finds

A paediatric consultant haematologist at a leading UK teaching hospital manipulated the appointments system and hospital policies to abuse boys in his care unnoticed over a four year period, an independent investigation has found.

Colleagues missed clues that could have led to the discovery that Myles Bradbury was abusing young patients at Addenbrooke’s Hospital in Cambridge from 2009 to 2013, concluded a report by the public service consultancy Verita.

Bradbury is serving 16 years in prison after admitting 25 offences of sexually assaulting 18 victims, as well as voyeurism and possessing more than 16 000 indecent images. He used a “spy pen” to capture images of his adolescent victims while carrying out unnecessary genital examinations.

Staff at the paediatric day unit where he saw patients with blood cancers and non-malignant blood diseases such as leukaemia thought that he was going out of his way to help patients by seeing them outside normal clinic hours. Consultations were often not recorded, disguising the fact that he was seeing the patients more often than necessary. The report found that he had groomed and manipulated families, giving them his mobile phone number through which to arrange appointments.

He also manipulated the system that allowed boys aged 14 and 15 to request a discussion with the doctor alone as part of their transition to adult services at 16. He breached the rules by seeing children under 14 alone and by carrying out intimate examinations, for which hospital policy required a chaperone or family member to be present, during some of those appointments.

Neither staff nor families raised any concerns officially until November 2013, when the grandmother of an 11 year old patient in remission from leukaemia asked a receptionist whether Bradbury had acted appropriately in requiring her grandson, who was seen without a chaperone, to strip naked and handle his own genitals.

The investigation report praised Cambridge University Hospitals NHS Foundation Trust for having acted swiftly in sending Bradbury home immediately and involving the local authority and police.

Clare Dyer, The BMJ
Cite this as: BMJ 2015;351:h5700

Older patients with diabetes are often overtreated, say researchers

Older patients with diabetes whose treatment had resulted in very low blood pressure or haemoglobin A\textsubscript{1c} levels rarely had their medicines reduced or withdrawn, a US study published in JAMA Internal Medicine has found. The authors said that this represents a lost opportunity to reduce overtreatment.

The retrospective cohort study included 211 667 diabetes patients with a mean age of 78 who were receiving treatment for blood pressure and blood glucose level control. More than half of the cohort received treatment that resulted in moderately low or very low blood pressure, and more than 20% developed moderately low or very low Hba\textsubscript{1c} levels.

The rates of treatment deintensification (either dosage reduction or drug withdrawal) in the people with low blood pressure and Hba\textsubscript{1c} levels were only just above the rates seen in people with normal levels, the study found. Treatment was deintensified in 16% of the 25 995 patients with moderately low blood pressure (systolic blood pressure 120-129 mm Hg; diastolic less than 65 mm Hg), compared with 18.8% of the 81 226 patients with very low blood pressure (systolic less than 120 mm Hg; diastolic less than 65 mm Hg).

Jacqui Wise, London
Cite this as: BMJ 2015;351:h5698

Myles Bradbury often saw patients out of hours
Nominations open for eighth annual BMJ Awards

The search for medical excellence is on again as The BMJ Awards 2016 invite nominations for the eighth year of a competition now firmly established in the annual medical calendar. The process that begins with completing a nomination form could end for the winners in recognition among their peers at a gala night at the Park Plaza Hotel on Westminster Bridge Road, London, on 5 May, when the awards will be presented.

The format is firmly established and a success, but each year sees evolutionary changes. This year’s most significant change is the introduction of expert patients in the judging process—each panel will include at least one patient, in keeping with The BMJ’s Patient Partnership initiative (bmj.com/campaign/patient-partnership), launched last year.

Once again, the headline sponsor for the awards is MDDUS, the Medical and Dental Defence Union of Scotland.

Iain Chalmers, one of the founders of the Cochrane Collaboration and coordinator of the James Lind Initiative, receives the Lifetime Achievement Award at last year’s awards

This year’s categories show some changes from last year, introducing the Cancer Care Team of the year, sponsored by Macmillan, and Prevention Team of the year, sponsored by Public Health England.

Phil Johnson, director of the awards, said, “The BMJ Awards are a fantastic reminder of all that is good in UK medicine. Each year we are thrilled by the enthusiasm of the teams and humbled by the hard work they have put in. We are delighted to play our part in uncovering such excellence, showcasing the achievements of the various teams to a wider audience and getting them the recognition they deserve. This year we are excited to have put patients at the heart of the judging process.”

The BMJ’s editor in chief, Fiona Godlee, said, “Every year we are amazed at the quality and breadth of the entries we receive. They reflect the professionalism, commitment, creativity, and hard work that characterise so much of the day to day provision of healthcare in the UK.”

A raft of measures is needed to reduce how much sugar people consume, Public Health England has said in its much delayed review of the evidence.

Reducing special offers and discounts on sugary foods in supermarkets, shops, and restaurants, controlling advertising of high sugar products to children, and reducing the sugar content and portion sizes of processed foods would all help to reduce sugar consumption, it said.

The government should also consider a tax on high sugar foods, such as a 10% to 20% levy on the price of sugar sweetened drinks, it said, though this was likely to be less effective than the other three measures.

The review, which was originally due to be published in July, was finally published on 22 October after the main author told MPs about its main findings two days earlier.1

Alison Tedstone, chief nutritionist at Public Health England, said: “PHE’s evidence review shows there is no silver bullet solution to the nation’s bad sugar habit. A broad and balanced approach is our best chance of reducing sugar consumption to healthier levels and to see fewer people suffering the consequences of too much sugar in the diet.”

In July the Scientific Advisory Committee on Nutrition recommended that people should halve their consumption of sugar to no more than 5% of their total daily energy intake, though health experts have warned that this would be difficult to achieve, as

Cut special offers on sugary foods, says delayed review

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CATEGORIES FOR THE BMJ AWARDS 2016

- Primary Care Team (sponsored by MDDUS)
- Gastroenterology Team (sponsored by Takeda and the charity Crohn’s and Colitis UK)
- Cancer Care Team (sponsored by Macmillan)
- Prevention Team (sponsored by Public Health England)
- Dermatology Team (sponsored by Leo Pharmaceuticals)
- Education Team
- Innovation Team (sponsored by Imperial Health College Partners)
- Palliative Care Team
- Clinical Leadership Team (sponsored by the General Medical Council and the Faculty of Medical Leadership and Management)
- Cardiology Team
- UK Research Paper
- Lifetime Achievement Award (sponsored by the BMA)

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1 Nigel Hawkes, London
   ◊ For more details go to thebmjawards.bmj.com.
   Cite this as: BMJ 2015;351:h5665
Editors' note

The need for such trials has been recognised for almost 100 years. The need to detect modest benefits might therefore focus attention on the importance of excluding bias and confounding in observational analyses. However, the quality of pandemic observational data is often woeful: most studies are retrospective and often use poor methods. They frequently lack adjustment for important confounders such as severity, and the most prominent study includes less than one fifth of the available data, introducing selection bias; the authors have also not been able to share a copy of a protocol written before the analysis was begun, despite repeated requests, raising the risk of bias (and perception of bias) from multiple analytical strategies. These shortcomings can be reversed. Recent analyses of the Ebola outbreak showed trials happened too late, mainly because of bureaucratic and logistical barriers, but have resulted in clear frameworks for off the shelf protocols ready to deploy in the next emergency. Problems with publication delay must also be solved. In the next pandemic, the agendas of government emergency response committees should automatically include clear questions about what trials we are doing and how the results will be made available quickly.

ENDURING AVOIDABLE WASTE

Most important is that the enduring avoidable waste and uncertainty seen with flu treatments should not be repeated in the future, not least because of the substantial public health and strategic implications. Innovation is driven by an expectation of rational and substantial financial rewards for producing effective treatments and the knowledge that current treatments are inadequate. Panic, permissiveness, and poor evidence have turned a drug with modest effects into a global blockbuster.

Cite this as: BMJ 2015;351:h5635

Carl Heneghan, professor of evidence based medicine
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Ben Goldacre, senior clinical research fellow, Centre for Evidence-Based Medicine, Nuffield Department of Primary Health Care, University of Oxford, Oxford, UK

Panic, permissiveness, and poor evidence have turned a drug with modest effects into a global blockbuster
UK: the best place in the world to die

But could still be better

The 2015 Quality Of Death Index from the Economist Intelligence Unit once again ranks the United Kingdom as providing the best “quality of death” and “quality of palliative care” in a comparison of 80 countries. The exemplary features of the highest scoring health economies include a national policy framework for palliative care, relatively high levels of healthcare expenditure, good training in specialist and generalist palliative care, financial subsidies (from the charitable sector in the case of the UK), availability of opioids, and public awareness of palliative care.

However, even within the UK, there are notable failings. The report highlights examples of poor symptom control at the end of life, poor communications with patients and families, and inadequate generalist and specialist out of hours services. It cites this year’s parliamentary and health service ombudsman’s report, which estimated that end of life care could be improved for up to 355,000 people a year in England.

The quality of death report contains several important messages, the first of which concerns use of language. It correctly distinguishes between palliation and end of life care and also assumes that end of life care refers to the terminal phase of an illness rather than using the unhelpful phrase “last year of life,” which has become commonplace in the UK.

The meaning of “palliative care”

Importantly, palliative care is stated to be “applicable early in the course of an illness in conjunction with other therapies intended to prolong life.” This crucially establishes palliation, and by association palliative care specialists, as being relevant to more than just dying patients. It is also an important message for the general public, who may be unwilling to accept palliative care if it is regarded as purely a herald of imminent death.

The second message is the demographic shift of palliation into the care of vulnerable older patients with complex needs. These are patients who do badly in hospital and who, generally, would choose to be cared for in their own residence if at all possible. The report makes a good case for seeing palliative care as an integral part of community services.

Ironically, this calls into question the role of hospices and where the hospices of the future (given increasing survival from cancer) feature in the provision of palliative and end of life care, particularly for frail older patients. A shift to community and “own residence” care is a clear direction of travel but, given the mix of funding in the UK palliative care system, there are some financial hazard lights.

This leads to the third message in the report, which aligns high quality care with high levels of spending. For the UK to maintain its ranking at the top of the index there needs to be recognition of, and a debate about, long term funding. Palliative care risks a triple whammy. Firstly, a flatlining NHS economy is clearly a threat to a system under pressure from demographic trends that drive up palliative care costs. Secondly, social care, which must underpin successful community provision, is increasingly underfunded. And, thirdly, a move away from hospices to community based palliative care may reduce charitable donations.

Not working 9 to 5

The UK must also do better in its provision of 24/7 coordinated care. Research commissioned to support Sue Ryder’s “Dying doesn’t work 9 to 5” campaign showed that a staggering 92% of areas lack appropriate coordinated support services. This lack of provision leaves people scared, alone, and desperate for help during times of need.

Overall, the UK does well in the quality of death index, but the sector must do better in its provision of 24/7 coordinated care; it must strive to get the language and culture right; and there has to be an honest debate about the future of recruitment and funding across the health and social care environment.

Cite this as: BMJ 2015;351:h5440
A demonstration of a synthetic milk was given recently at the Melco Laboratories in Westminster. The casein and albumin of the product are supplied by the American “peanut,” which is cultivated extensively in that part of the world. The nut is rich in protein and fat and is skinned and minced into a meal to which water, malted dextrine, and salts are added. The mash is strained, treated with fatty acids, and a lactic acid is added. The milk is produced at a cost of 3 d a gallon, whereas cow’s milk costs 8 d. The fluid has the appearance of cow’s milk but unfortunately has the flavour of the nut which “to many tastes would not be agreeable.” The total solid content of the milk is 13 per cent, compared with the government standard of 11.5 per cent for cow’s milk.

Cite this as: BMJ 1915;2:646

FROM THE ARCHIVE: THIS WEEK IN 1915

A demonstration of a synthetic milk was given recently at the Melco Laboratories in Westminster. The casein and albumin of the product are supplied by the American “peanut,” which is cultivated extensively in that part of the world. The nut is rich in protein and fat and is skinned and minced into a meal to which water, malted dextrine, and salts are added. The mash is strained, treated with fatty acids, and a lactic acid is added. The milk is produced at a cost of 3 d a gallon, whereas cow’s milk costs 8 d. The fluid has the appearance of cow’s milk but unfortunately has the flavour of the nut which “to many tastes would not be agreeable.” The total solid content of the milk is 13 per cent, compared with the government standard of 11.5 per cent for cow’s milk.

Cite this as: BMJ 1915;2:646
Nestlé, and Mead Johnson in the 1980s.

She told internal university investigators in 1994 that the numbers of infants recruited and reported on for the Nestlé study didn’t match and that neither a three year follow-up study of these infants nor the Mead Johnson study had ever been carried out.

These allegations were investigated in some detail by Memorial in an internally published report in 1995 by H Kieffe, chair of the investigating committee. This report drew on expert opinion and the testimony of many witness statements but not on Chandra’s raw data because he threw these away after publication.

The report concluded that “scientific misconduct has been committed by Dr Chandra in this matter” and highlighted the “remarkable lack of communication and openness” in Chandra’s research environment, including with his coauthors.

“Dr Chandra’s research activity was very much operated as a pyramid system where only one person at the top had access to all the raw data,” said the report.

But Memorial took no further action, and the report wasn’t made public until it became part of the evidence for the libel case that Chandra brought against the broadcasting company CBC, after its three part investigation into his research activities and financial affairs in 2006. CBC alleged that it had uncovered a pattern of scientific fraud and financial deception dating back to the 1980s. The jury ruled in 2015 that the CBC’s broadcasts were “true.”

University failures
In one of these programmes, Jack Strawbridge, director of faculty relations at Memorial at the time, defended the university’s failure to act on the report’s findings. He explained that Memorial was publicly funded and Chandra had threatened to sue for defamation.

The BMJ asked for a copy of the Kieffe report this summer. Gary Kachanoski, Memorial’s president and vice chancellor, replied that it would be “inappropriate” to release it because it “could not be relied upon on the basis of significant flaws in the investigation process.” Memorial has so far declined to explain what these flaws were, or to answer many of the questions The BMJ has put to it.

In the wake of the CBC broadcasts Memorial commissioned Paul Pencharz of Toronto’s Hospital for Sick Children to carry out an independent review of its research integrity procedures and policies, dating back to the 1990s. This concluded in 2007 that Memorial’s processes were “sound” and in keeping with those of other research institutions and national guidance of the time.

Pencharz recommended that Memorial advocate for a national research integrity agency and reopen the Chandra case from 2000 onwards.

In response, Memorial’s then vice president of research, Chris Loomis, doubted the feasibility of revisiting the 2000 allegations in the absence of the raw data but said that a list of all Chandra’s publications had been placed on its website, “with a note that the research data on which some of the articles are based cannot be located or verified.” The BMJ has been unable to find either this list or the Pencharz report on Memorial’s website.

Conflicted interests
Saul Sternberg, professor of psychology at the University of Pennsylvania, along with Seth Roberts, emeritus professor of psychology at the University of California at Berkeley, raised the alarm in 2003 with both Nutrition and the Lancet about Chandra’s research.

Sternberg doesn’t think Memorial did everything it could have. “But Chandra was famous and brought in research funds, and universities really do have a conflict of interest when it comes to investigations into their own personnel, because it makes them look bad, especially if they don’t expect justice to be served,” he suggests. But The BMJ’s former editor Smith believes that Memorial was and is duty bound to pursue the matter.

Marc Masor, who managed and monitored Chandra’s infant formula study for Ross, thinks Memorial is “ultimately culpable” for letting Chandra off the hook. But others also had their part to play, he suggests. Various anomalies and inconsistencies, including Chandra’s insistence that he had not been paid enough to design the study correctly, fuelled mounting doubts about the validity of the research and convinced Ross not to publish.

Masor regrets that Chandra’s reputation convinced him to trust more than verify but is clear that the company’s procedures for conducting clinical studies with externally contracted researchers during that period were rigorous. He wonders if the same could be said of his former competitors. A five year follow-up of Nestlé’s Carnation study showed that the drop-out rate among more than 200 infants was zero. “Not only is that unlikely, but you are more likely to win the lottery three days in a row,” he insists.

Nestlé declined to respond directly to The BMJ’s questions
about the thoroughness of its monitoring of the Carnation study or whether it had been under pressure in 1988 to provide evidence to the US regulator of the benefits of its infant formula, as CBC had claimed.

But in a statement Catherine O’Brien, vice president of corporate affairs at Nestlé Canada, said that the company had cooperated fully with Memorial’s formal investigation and had ceased referencing Chandra’s study in 2006.

Asked why Ross Laboratories didn’t make its concerns known at the time, Masor, who no longer works for the drug industry, says, “We had nothing concrete that we could go to the university with.”

Journal failures

Michael Meguid, editor of Nutrition, which in 2001 published the paper rejected by The BMJ, accepts blame. “But there’s no question that an aura around an individual as being a good and important scientist and a man of distinction influences one’s perception,” he explains.

He was “bamboozled” by Chandra’s reputation and the lure of a follow-up study to published research in the Lancet that offered a potential boost to the impact factor of a relatively young journal, he says. Other researchers soon started pointing out the implausibility of the findings. Chandra at first dismissed the concerns and then when more followed, threatened, “If you publish this, bad things will happen to you,” Meguid recalls.

Chandra has published around 200 articles. But only Nutrition, and now The BMJ, have retracted his research since concerns were first raised over 20 years ago.

“We might need to post expressions of concern about all of [Chandra’s studies], and retract those looked at in more detail,” says Smith. The Nutrition paper has been cited more than 130 times since its retraction. Chandra has not responded to any of The BMJ’s emails but is now the managing director of a company based in India called Peridot Life Sciences, which sells nutritional supplements. Some of these have sparked the interest of the Indian government, says Meguid, who spoke to Chandra during the CBC trial.

The BMJ is still awaiting a formal response from the professional regulator in Newfoundland and Labrador, the province where Chandra worked while at Memorial. Chandra may also be stripped of his illustrious awards.

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Cite this as: BMJ 2015;351:h5683

COMMENTARY A public inquiry is needed

It is shameful that the university and Canadian authorities have taken no action and that it has been left to the mass media to expose his fraud

This week The BMJ retracted a 1989 paper by R K Chandra, 1 2 a Canadian scientist who recently lost a libel case against the Canadian Broadcasting Corporation (CBC).

The BMJ started the process that led to the Canadian programmes when in 2000 it asked Chandra’s university, the Memorial University of Newfoundland, to investigate a study submitted to the journal that the editors thought might be fraudulent. 3

The programmes, broadcast in 2006, “uncovered a pattern of scientific fraud and financial deception dating back to the 1980s.” 4 Studies for which Chandra had received substantial funding had simply not been done. He had also started a vitamin pill business, using his fraudulent studies to encourage sales, and when he sued the CBC he claimed losses from his business of $125 m (£81 m).

The three programmes, in which one of us (RS) appeared, are convincing. He still the university and Canadian authorities did nothing. Chandra sued the CBC for $132 m. He also sued the university, but as part of a settlement agreement, the university promised to consider Chandra for an emeritus professorship “in the same manner as any other nominee.” CBC fought and won the case in a trial lasting some three months in the summer of 2015; one of us (RS) gave evidence on behalf of CBC.

It has taken a quarter of a century for a study that is clearly fraudulent to be retracted. This saga highlights a collective failure to defend the integrity of science. It is shameful that the university, Canadian authorities, and other scientific bodies have taken no action against Chandra and that it has been left to the mass media to expose his fraud. The biggest failing lies with the university. The Canadian government should institute an independent public inquiry and share its learning with the world.

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Cite this as: BMJ 2015;351:h5694


- Canadian Institutes of Health Research asked to investigate Nutrition and Lancet studies; they don’t because they didn’t fund his research
- CBC airs documentary questioning at least 10 studies and alleging financial deception. Chandra sues CBC, Strawbridge, and Memorial
- Independent report commissioned by Memorial recommends further investigation
- Chandra changes CBC lawsuit to include invasion of privacy claim and demands $132m in damages
- Chandra awarded Queen Elizabeth II Diamond Jubilee Medal
- Memorial settles out of court. Chandra’s libel claim against CBC leads to a 55 day trial. Jury rules in favour of CBC with Chandra ordered to pay costs (photo: Memorial’s president, Gary Kachanoski)
The opt-out clause fallacy

Hugh Harvey looks at claims that service reform is being blocked by a clause allowing consultants to opt out of out-of-hours working.

Until Jeremy Hunt mentioned it, many consultants had never heard of it. So how can a four line clause hidden away in a decade old contract be causing so much discontent? Is this clause really responsible for 6000 deaths a year and millions of wasted pounds?

The consultant opt-out clause, known as S3P6, was introduced in the 2003 consultant contract. It states simply that consultants are not contractually obliged to do elective work out of hours, defined as being outside 7 am to 7 pm Monday to Friday, unless they agree to do so with their employer.

After its introduction, national media slowly started picking up on “extortionate rates” paid to consultants doing out-of-hours work, and ministers said that they would crack down on this behaviour. However, it wasn’t until Hunt’s speech that things came to a head. He threatened to remove the clause unilaterally if the BMA refused to agree. This grated with consultants for two reasons.

Firstly, data suggest that most consultants aren’t opting out. A BMJ Careers survey showed a 1% opt-out rate, and an unpublished survey of acute hospital trusts in England reveals that only 28 out of 25159 consultants (0.111%) have opted out. However, the government argues that these figures aren’t truly representative as the clause is used as a negotiation tactic during job planning meetings to avoid elective work out of hours and is not always documented.

Secondly, in 2013 a National Audit Office (NAO) survey found that 71% of extra non-emergency work by consultants was paid at locally negotiated rates (from 91% of 97 responding trusts), with a median of £114 per hour and mean of £113 per hour (range £48-£200). The survey did not look at how many of these consultants had actively opted out of non-emergency out-of-hours work, yet still linked extra out-of-hours payments to the opt-out clause, despite having no data to support this. Additionally, 90% of trusts in the survey agreed consultants “work beyond what they are contracted to do.”

But consultants aren’t gaming the system. The NAO survey was referring to waiting list initiatives—organised extra routine work performed out-of-hours. These lists have been implemented by trusts since the late 1980s, well before S3P6 was introduced in 2003. To point the finger at consultants who are opting to spend their free time doing extra work to benefit patients is destructive and divisive.

So why keep a clause that so few use? Two main arguments exist: health reasons (work related stress, increasing age, chronic fatigue, or recovery from a chronic illness) and part time contracts (consultants nearing retirement, increasing private practice work, new parents, and research clinicians). Removing the clause would risk destabilising these vulnerable few.

Blaming S3P6 is a clever distraction. The government fears that consultants will opt out of elective work at weekends if seven day working is implemented. But consultants are not workshy and already happily work at weekends. More to the point, there is no evidence to suggest that increasing weekend elective work will improve outcomes of emergency admissions or prevent “6000 avoidable deaths.” A better approach would have been to improve resources for elective working hours, rather than punish those who do extra work to attempt to solve the problem the government created.

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The ethics of striking

Marika Davies considers ethical aspects of strikes by doctors around the world.

When junior doctors in England are balloted on industrial action from 5 November, they will be conscious of the potential effect of any strike action on the care of patients and on doctors’ public image. There is a general consensus internationally that emergency care should always be provided during a strike, but other considerations also come into play when doctors consider the justification for a strike.

INDIA

In response to strike action by doctors in 2010 the Delhi Medical Council said that “under no circumstances doctors should resort to strike as the same puts patient care in serious jeopardy.” Despite this, doctors in India have repeatedly engaged in strike action, including a nationwide strike in June 2012. Researchers at the Lokmanya Tilak Municipal Medical College in Mumbai recommend that a strike must be a last resort. “We must remember that human dignity and respect must be preserved from a doctor towards a patient, and the converse also holds true.”

ISRAEL

In 1983 a strike by doctors in Israel over pay came to an end after 3000 doctors went on a hunger strike that paralysed the health system. An article about the strike in the Journal of Medical Ethics argued that strikes by doctors contradicted doctors’ responsibility to act in the best interest of patients. But the authors also pointed out that medicine could not function without the financial support of society and that responsibility for the patient did not rest solely with the doctor.

NIGERIA

Doctors’ strikes have become “a part of normal existence” in Nigeria, according to Olufemi Omolulu, a consultant in obstetrics and gynaecology in Lagos. Shima Gyoh, editor of Nigeria Africa Health, said that a strike by health workers was the worst option when negotiating for higher wages. “The pawn is the public, with human lives and limbs as the bargaining chips,” he wrote.

PAKISTAN

When doctors in Pakistan went on strike in 2012 over a lack of service structure, security, and low pay, the government called in law enforcement agencies to end the protests. Several doctors were physically tortured and arrested, and many were suspended from their duties. Imran Abbasi, a research fellow at Aga Khan University, said that it was important that the media were impartial when reporting on strikes. He said that in 2012 the media’s focus was on patients’ suffering. “People should have access to information and viewpoints of all stakeholders, which will help them in deciding the legitimacy of the situation,” he said.

SOUTH AFRICA

The problem of striking doctors in South Africa was described as an “epidemic” in 2009 and was the subject of a symposium at the Nelson Mandela School of Medicine in Durban in 2010. Gboyega Ogunbanjo, professor of family medicine at the University of Limpopo, said that advocacy, dissent, and disobedience should precede strike action but that when a situation arose that was ethically catastrophic then exit from professional duties could be justified. “In such situations patients are likely to be harmed so the justification . . . must be made on moral grounds,” Ogunbanjo wrote. “The only moral ground is that health care will overall be substantially improved for the greater population. Can strike action by doctors ever be morally justifiable? Yes it can. But always at a cost.”

FIVE VIEWS ON MEDICINE AS A CAREER

Last week, The Big Debate at BMJ Live asked if medicine was the best career in the world. Here five visitors to BMJ Live give their thoughts.

1 Studying

“Study-wise I am loving medicine,” says Rajeev Ram, a medical student at Peninsula Medical School. “But with this government, you wonder what they are going to do next. I'm still going to go for it. There are a lot worse careers to go into.”

2 Helping

“I believe medicine is still the best career, although we work so hard and the pay is less these days,” says Ayeza Sabih, an international medical graduate. “It sounds old fashioned but I like the fact that you get to earn a living while interacting and helping others.”

3 Vocation

“How can medicine be the best career? I would not recommend it,” says Sebastian Senocain, a general medicine physician working in London. “It’s draining, and you have no family life. For me it is a vocation; my family background is in medicine.”

4 Options

“One good thing is that it is so flexible,” says Rebecca Ede, a GP in Witney. “To my 18 year old self I would say that medicine is not the only option. There are so many other careers related to medicine I could have done and where you can still contribute to society.”

31 October 2015 | the bmj
Liam Donaldson
Proud of smoke-free public places

Liam Donaldson was England’s chief medical officer for more than a decade, from 1998 to 2010. His greatest achievement was to bring about the ban on smoking in public places despite opposition from the government of the day. He also backed a minimum price for alcohol, championed patient safety, and shepherded sensible rules on stem cell research into legislation. A lifelong supporter of Newcastle United (a condition for which there is no known cure), he marked his inauguration as chancellor of Newcastle University in 2009 by awarding an honorary degree to Alan Shearer, a club icon.

What was your earliest ambition? 
Cowboys were everything. My hope was to be deputised by a passing sheriff and join his posse in pursuit of outlaws. But disappointingly few sheriffs galloped past our house in Rotherham.

Who has been your biggest inspiration? 
The first chief medical officer, John Simon, who served for 21 years.

What was the worst mistake in your career? 
Turning down the chance to apply to be NHS chief executive. Building a new service around health, quality, and safety by igniting the passion of a million loyal and dedicated staff would have been a unique leadership challenge. But I decided that my mission as chief medical officer hadn’t been completed.

What was your best career move? 
Becoming the country’s 5th chief medical officer.

Bevan or Lansley? Who has been the best and the worst health secretary in your lifetime? 
“Iain Macleod, minister of health in 1954, chain smoked disgracefully through a press conference that he had been forced to convene to announce Bradford Hill and Doll’s findings on smoking and lung cancer.”

Who is the person you would most like to thank, and why? 
The people in that much derided place, the House of Commons. They implemented many recommendations from my reports, for which I’m deeply grateful: introducing smoke-free public places; permitting stem cell research; establishing clinical governance; creating a national patient safety programme; establishing a comprehensive health protection service; and reforming medical regulation. But they didn’t act on my final report’s recommendation for a minimum price for units of alcohol. They fear being labelled as the nanny state.

What book should every doctor read? 
Eliot Freidson’s Profession of Medicine. It’s a sociological analysis that brilliantly demonstrates the attributes that define a profession but also its downside—how it resists change.

If you were given £1m what would you spend it on? 
Commissioning new statues of the great public health figures of the past whose gift to us is the longevity we have today. They should be remembered and celebrated as much as our warriors. It’s a scandal that Edward Jenner’s statue was removed from Trafalgar Square.

What is your guiltiest pleasure? 
Reading a good novel while drinking a cup of great coffee, when I should really be working.

What personal ambition do you still have? 
There’s plenty still to strive for in my role as the World Health Organization patient safety envoy and as chair of the Independent Monitoring Board of the polio eradication programme.

Summarise your personality in three words 
Determined, insightful, fair-minded.

Do you have any regrets about becoming a doctor? 
When I left surgery after passing the fellowship and was on a prestigious training programme I was described as “half crazed”: no one on a successful trajectory could possibly want to leave surgery. When they heard that I was going to retrain in public health, the word went around that I had the ambition of becoming a “town clerk.” I have no regrets of ending up where I did, as regional director and chief medical officer (and I still like surgeons).