

NEWS

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thebmj.com

▶ Persistent depression doubles stroke risk despite treatment

Public must be made aware of need for clinical research in children, report urges



An animated version of the report for children is available at www.nuffieldbioethics.org/children

Emma Parish **THE BMJ**

A new report by the UK Nuffield Council on Bioethics calls for researchers to be trustworthy and open and to have courage when designing and conducting research involving children and teenagers.¹

The report, by a working group set up in 2013 and chaired by Bobbie Farsides, professor of clinical and biomedical ethics at Brighton and Sussex Medical School, outlines the main ethical challenges in conducting research with children and gives key recommendations to improve the involvement of young people, with the aim of broadening the evidence base for care in this age group.

After a two year review that engaged with over 500 stakeholders in the UK and internationally, the working party made recommendations for individual researchers and the main organisations that govern research or advocate for children's health needs. The recommendations include

balancing child and parental consent, creating processes for prioritising research, improving transparency and sharing of information, and raising public awareness of the need for clinical trials.

The report is timely, said Hugh Whittall, the Nuffield Council's director, because “there needs to be a change in culture across all areas of children's health research where children's and families' views and opinions help shape how research is conducted, so children aren't placed in vulnerable situations.”

The report highlights this concern about the vulnerability of children as contributing to the lack of an evidence base for current care offered to young people. Farsides said, “It will always be easier to say ‘no’ to research with children on the grounds that it's too difficult.”

Progress has been made in the management of leukaemia in the UK, the report said. Recent data show that the 10 year survival

rate has risen to 81%, from 27% in the 1970s—an example where vulnerable children have been helped by well conducted research, the report said.

Purposely avoiding offering a checklist for research in children, the group instead called for the collaboration of several organisations. They recommended that the Royal College of Paediatrics and Child Health should lead on ensuring that the “outcomes of ‘innovative’ or ‘experimental’ treatment given to children and young people outside the context of research is properly documented.” The National Research Ethics Service, along with royal colleges and other appropriate bodies, should “establish a database of experts” to act as advisers to research ethics committees. And it said that the All Party Parliamentary Group on Medical Research should explore ways to increase the general public's awareness.

Cite this as: *BMJ* 2015;350:h2612

IN BRIEF

Strokes rise in people under 54:

The number of admissions of men aged 40-54 to hospital for stroke rose by 46% from 4260 in 2000 to 6221 in 2014, a Stroke Association analysis has found. The number of women in the same age group admitted for stroke was 4604 in 2014, a 30% rise from 3529 in 2000. Unhealthier lifestyles and changes to hospital admissions were thought responsible.

Major US journal reconsiders relationship with industry:

Jeffrey Drazen, editor of the *New England Journal of Medicine*, has said in an editorial that a divide between academic researchers and industry was not in the best interests of journals, many of which struggled to find reviewers and authors who did not have ties to drug companies. Collaboration may work better, he said (*BMJ* 2015;350:h2575).

Iron deficiency may affect diabetes diagnosis:

A review in *Diabetologia* has found that iron deficiency can increase HbA_{1c} values and may lead to false diagnosis of diabetes (doi:10.1007/s00125-015-3599-3). When glucose and HbA_{1c} measurements give different results, doctors should consider anaemia or iron deficiency, the researchers said.

Think tank urges tax on processed food:

In newly rich countries such as Mexico and Brazil the price of fruit and vegetables rose by up to 91% between 1990 and 2012, while some processed foods, such as ready prepared meals, had dropped in price by up to 20%, the think tank the Overseas Development Institute has found (*BMJ* 2015;350:h2569). Governments should consider taxing unhealthy foods, it said.



IN BRIEF

Pfizer must compensate Parkinson's patients who became addicted:

An Australian court has approved payout deals for patients who developed gambling, sex, and eating addictions after taking cabergoline (marketed as Cabaser or Dostinex) to treat tremors associated with Parkinson's disease or raised prolactin concentrations. The confidential settlement ends a four year court battle for the patients, some of whom gambled away their life savings after taking the drug and who claimed not to have had any pre-existing gambling problems.

Dutch court dismisses organ trafficking case: A rare prosecution in the Netherlands for online organ trafficking has been dismissed after a judge ruled that it was not certain that Marc H, 40, really intended to sell one of his kidneys. He advertised it for €50000 (£36000) on the internet but removed the advertisement after several hours, claiming that he was simply curious about the reaction. The waiting time in the Netherlands for a donor kidney is currently three years.

WHO advises on sexual transmission of Ebola: Men who have survived Ebola virus disease should be offered semen testing for three months after the onset of the disease, the World Health Organization has said, while data are collected on the risks of sexual transmission.² If a man tests positive he should have further tests once a month until semen tests are negative. During the testing period men should practice safe sex or abstain from sex. On 1 May the US Centers for Disease Control and Prevention reported the case of a woman who may have contracted Ebola from having sex with a survivor five months after he left hospital.³

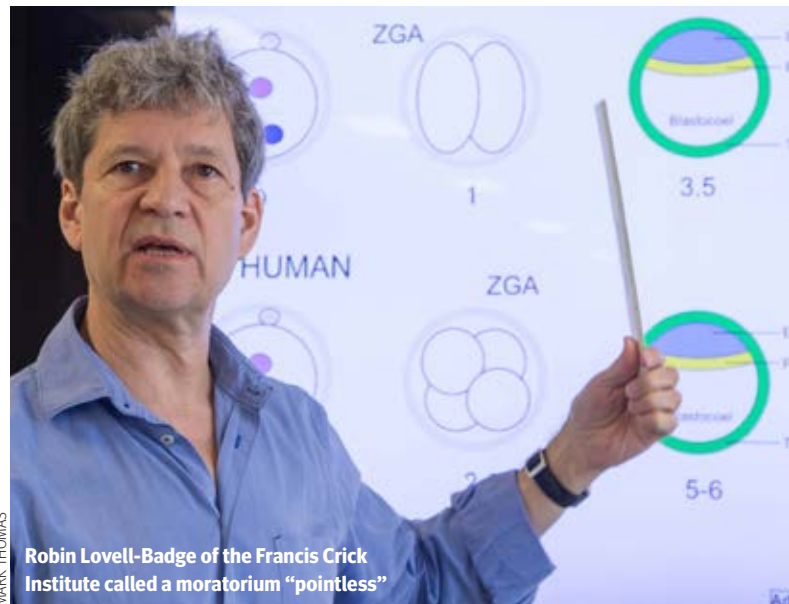
Hepatitis C incidence soars in rural US states: The incidence of hepatitis C infections more than tripled (by a factor of 3.64) in four Appalachian states from 2006 to 2012, fuelled by misuse of injected prescription drugs, says a report by the US Centers for Disease Control and Prevention.¹ Data show that rates of hepatitis C virus infection are rising across the US, with the biggest increases among people aged under 30 in Kentucky, Tennessee, Virginia, and West Virginia, among whom infections rose from about 1.5 per 100000 population in 2006 to about 5.5 per 100000 by 2012.

**Israeli doctors protest against nominee for top medical post:**

The Israel Medical Association has sent a letter to its members asking them to protest against the nomination of a non-physician and bureaucrat to the post of director general of the health ministry, the first time this has happened in Israel's 67 years. The job has been offered to the Treasury health budgets official Moshe Bar Siman-Tov. The association said that the director general job was "a professional position that requires the taking of decisions that are strictly medical."

Quicker test for drug resistant tuberculosis: A new technique developed by researchers from University College London will reduce the time it takes to genetically sequence the bacteria causing tuberculosis from patient samples from weeks to days.⁴ Whole genome sequencing can pinpoint drug resistance mutations, so the test could help to ensure that appropriate treatments were given quickly to control transmission and to monitor outbreaks of the disease.

Cite this as: *BMJ* 2015;350:h2565



MARK THOMAS

Robin Lovell-Badge of the Francis Crick Institute called a moratorium "pointless"

UK scientists reject call to ban gene editing

Nigel Hawkes LONDON New techniques for editing genes, used for the first time in human embryos by researchers in China, have considerable potential as a research tool and are already being used in animals, UK experts told a briefing at the Science Media Centre in London on 12 May.

Clinical applications in humans are far more problematical and much further off, and the use of the technique has raised ethical concerns, because such changes are heritable and could have unpredictable effects on future generations. The UK scientists, however, rejected calls for a moratorium. Tony Perry of the University of Bath said it would be unenforceable and would risk

driving research underground, and Robin Lovell-Badge of the Francis Crick Institute called a moratorium "pointless."

The disclosure that a group led by Junjiu Huang at Sun Yat-sen University in Guangzhou had edited human embryonic genes caused a stir when it was disclosed last month. The embryos used by the team were not viable, so could not have given rise to modified humans. But editing of the germline crossed what has long been regarded as an ethical line.

In principle, the technique could be used for eliminating genetic diseases whose cause was known and where the relevant genetic change was simple

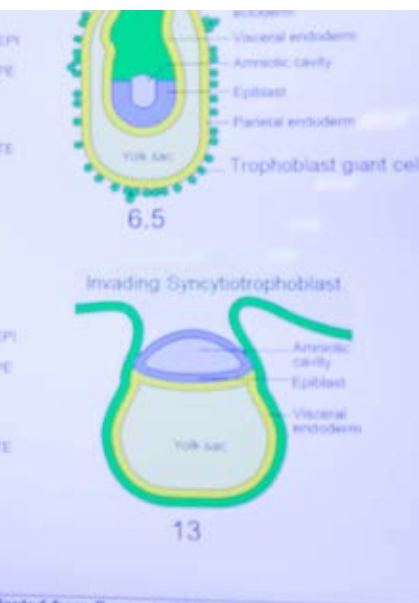
Problem drinking is rising among women

Sophie Arie LONDON Alcohol consumption is falling or stable in most rich countries, but in the United Kingdom it is rising, and in England more and more young and highly educated women are drinking too much, a major report from the Organisation for Economic Co-operation and Development (OECD) has said.¹

Across the UK the proportion of 15 year olds who had drunk any alcohol rose from 71% in 2002 to 75% in 2010. And in England 40% of girls (twice as many as

boys) reported having been drunk at least twice before they were 15 years old. The proportion of highly educated women who now drink in a way that could damage their health was almost as high as among educated men. Some 20% of highly educated women, and 23% of educated men, consumed a weekly amount of pure alcohol of 140 g or more for women or 210 g or more for men. Hazardous drinking was most common among women aged 45 to 64.

Cite this as: *BMJ* 2015;350:h2610



enough to do—cystic fibrosis, for example, which is caused by a single defective gene. But Peter Braude, emeritus professor of obstetrics and gynaecology at King's College London, said that this was already possible by using preimplantation genetic diagnosis (PGD), where embryos are examined before implantation in in vitro fertilisation treatment and only those not containing the genetic defect are selected.

"It's a very exciting technique, but why do it?" Braude asked. "Even without editing we can select what's there naturally, with 100% accuracy, and eliminate the disease."

Lovell-Badge said that the main short term benefit would be in research.

Cite this as: [BMJ 2015;350:h2601](#)

Primary care changes were linked to rise in child hospitalisations

Susan Mayor LONDON

A rise in unplanned admissions to hospital of children with conditions usually managed by GPs came at the same time as NHS primary care changed to focus on chronic disease management, says a study looking at trends in hospital admissions.

The researchers analysed short admissions (less than two days) to hospital of children younger than 15 years in England between April 2000 and March 2012. Their study, reported in the *Annals of Family Medicine*,¹ concluded that the introduction of new primary

care health policy in 2004 was associated with an 8% increase in short stay admissions of children with chronic diseases would generally be managed by a GP.

The increase was on top of the 3% annual increase that would have been expected from previous trends and was equivalent to an extra 8500 short stays. At the same time there was no increase in short stays in hospital of children with infectious illness, the number of which was rising each year before the 2004 changes. And the proportion of children who were admitted to

hospital after being referred by a GP showed no increase.

"Although we cannot infer causation from our findings, the magnitude of an 11% increase in short stay admissions for [children with] chronic disease lends weight to speculation that such admissions may increase when primary care provision is withdrawn," wrote the researchers, led by Elizabeth Cecil, of Imperial College London. Fewer than 3% of the targets introduced in the 2004 reorganisation applied to children's care.

Cite this as: [BMJ 2015;350:h2572](#)

Woman asks for right to use dead daughter's eggs to produce grandchild

Clare Dyer BMJ

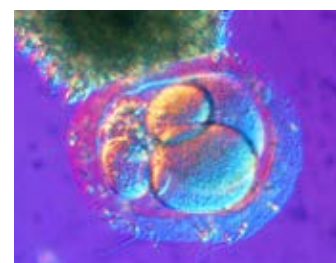
A 59 year old woman has launched a High Court action against the UK's regulator of infertility treatment for the right to try to become pregnant with her own grandchild by using her dead daughter's frozen eggs.

The woman, referred to in court as "Mrs M," wants to take the eggs to New York, where a clinic has agreed to fertilise them with donor sperm and implant the resulting embryos in her womb. Her daughter froze the eggs after she was given a diagnosis of bowel cancer in the hope of using them herself, but she died four years ago in her 20s.

The Human Fertilisation and Embryology Authority has refused

to issue a special direction to allow the eggs to be taken out of storage and delivered to the United States. The authority ruled that there was insufficient evidence that the daughter wanted her mother to carry her child. Although she had filled in a form asking for the eggs to be stored after her death, she failed to draw up a separate document indicating how she wanted them to be used.

At the High Court in London lawyers for Mrs M asked Mr Justice Ouseley to rule that the authority's decision was unlawful and a breach of the family's human rights. Jenni Richards QC, for Mrs M, said that the daughter had grown up in "a close and happy



family unit" and that having her own family was important to her.

Richards read a statement from Mrs M in which she explained that her daughter had told her that she knew she was going to die. She said that the daughter had wanted her mother to carry her child and for her parents to raise it, knowing that it would be "safe."

The case continues.

Cite this as: [BMJ 2015;350:h2528](#)



Alistair Burt is the new minister for care and support, replacing Norman Lamb

Gareth Iacobucci THE BMJ

Healthcare leaders have urged the returning health secretary for England, Jeremy Hunt, to urgently prioritise investment in the NHS.

Prime Minister David Cameron this week reappointed Hunt to his cabinet

Tackle shortfall in NHS funding first, healthcare leaders tell Hunt

after the Conservative Party's victory in last week's UK general election, with Hunt to continue in the role he has held since replacing Andrew Lansley in September 2012.

Cameron made two new appointments to the Department of Health, with Ben Gummer replacing Dan Poulter as undersecretary of state for health and Alistair Burt replacing the departing Liberal Democrat minister for care and support, Norman Lamb.

As *The BMJ* went to press the public health minister, Jane Ellison, minister for health quality, Lord Howe, and life

sciences minister, George Freeman, looked set to remain in their roles.

After his reappointment Hunt said, "My biggest priority now is to transform care outside hospitals—just as we have dramatically improved the quality of care inside hospitals in the last few years. All of us want every single older and vulnerable person to be treated with the highest standards of care, so we need a step change in services offered through GP surgeries, community care, and social care."

The BMA urged Hunt to focus on six key priorities: to tackle the current

shortfall in funding; remove market competition in healthcare; increase numbers of doctors and retain and value them; maintain safeguards for patients and doctors; restore investment in general practice; and prioritise health and wellbeing and the prevention of ill health.

Mark Porter, chairman of the BMA Council, said, "It is vital that the health secretary takes on board the views of doctors and works with the BMA for the benefit of the NHS and the patients that it serves."

Cite this as: [BMJ 2015;350:h2577](#)

Doctors in New York “pill mill” worked under daily threats from gangsters, court hears



Owen Dyer **MONTREAL**

The doctor owner of two Bronx clinics described by prosecutors as the biggest “pill mill” chain in the US northeast used gangsters and bouncers to control doctor employees who were paid cash to produce thousands of prescriptions for oxycodone.

Kevin Lowe, owner of the Astramed clinics, was convicted in a Manhattan court of conspiracy to distribute and possess oxycodone with intent to distribute, which carries a maximum sentence of 20 years in prison. Twenty four other defendants in the case have already pleaded guilty, including one other doctor.

The Astramed clinics, which typically employed a

dozen doctors, produced nearly 35 000 prescriptions for 5.5 million oxycodone pills with a street value of more than \$165m (£106m), US attorneys said. Lowe earned \$7m in cash while the scheme operated between 2011 and 2014. He wrote no prescriptions himself and “managed largely to keep his hands clean by hiring other doctors,” US attorney Edward Diskant told the Manhattan Federal Court.

Crowds of up to 100 people gathered daily outside the Astramed office on Bronx’s Southern Boulevard, waiting to see doctors for visits that typically lasted moments and involved no examination.

Cite this as: *BMJ* 2015;350:h2596

Evidence is insufficient to recommend e-cigarettes for quitting, US group says

Ingrid Torjesen **LONDON**

There are not enough data on the effectiveness of electronic cigarettes to determine whether the devices can help smokers quit, the US Preventive Services Task Force has concluded.¹

The Task Force, which makes recommendations on the effectiveness of preventive healthcare services such as screening, counselling, and use of drugs, issued its draft evaluation of tobacco smoking cessation in adults and pregnant women on 5 May. The evaluation said that “the current evidence is insufficient to recommend electronic nicotine delivery systems (ENDS) for tobacco cessation.” It recommended that clinicians “direct patients who smoke tobacco to other cessation interventions with established effectiveness and safety.”

Most adults needing help to quit smoking should be directed to Food and Drug Administration approved pharmacotherapy (such as nicotine replacement therapy,

bupropion, and varenicline) or to behavioural interventions, and these could be used alone or in combination, the task force said. Pregnant women were the exception: for them the task force recommended the use of behavioural interventions alone.

The task force said that it had not been able to determine the balance of benefits and harms of using e-cigarettes because of “a critical gap in the evidence”—a lack of well designed, randomised controlled trials reporting rates of smoking abstinence or adverse events. It identified just two randomised controlled trials that evaluated the effect of e-cigarettes on abstinence from smoking in adults, and they produced mixed results.^{2,3} Although neither study reported any serious adverse events, the safety of the e-liquid components and vapours was unknown, and there had been cases of poisoning in children who mishandled nicotine cartridges, the task force said.

Cite this as: *BMJ* 2015;350:h2488



“A critical gap in the evidence” stopped vaping being recommended as a stop smoking aid

ELIZABETH SHAFER/REDFERNS



Anil Potti resigned in 2010 and Duke retracted most of his research

Duke University settles claims over cancer research trials

Clare Dyer **THE BMJ**

Duke University in North Carolina has settled lawsuits alleging that patients with cancer were “fraudulently” entered into clinical trials that were based on flawed research by the oncologist Anil Potti. Eight lawsuits were filed against Duke and Potti by patients or deceased patients’ estates, claiming that they were exposed to unnecessary and harmful chemotherapy during the trials, which were finally discontinued in 2010.¹ The settlement terms are confidential.

The trials, launched in 2007 and 2008, were based on Potti’s research into a technique that used gene expression to predict which chemotherapy would be best for an individual patient with lung or breast cancer.

Scientists outside Duke raised questions about the data, and the trials were suspended in October 2009, pending an external review.

Cite this as: *BMJ* 2015;350:h2559

Bill Gates funds surveillance sites to prevent next large scale epidemic

Anne Gulland **LONDON**

The US philanthropist Bill Gates has announced a \$75m (£50m) grant to fund six disease surveillance sites in poor countries, aimed at catching the next large scale epidemic early.

Gates, a big funder of global health projects through his eponymous foundation, told BBC Radio 4’s *Today* news programme that the grant would fund laboratories in sub-Saharan Africa and Asia.

He said, “[They] will do very in-depth analysis of what’s killing children and mothers. The beauty of this endeavour is that it really serves two goals: the ongoing reduction of child and infant mortality and being able to catch an epidemic when you see kids turning up with fever.”

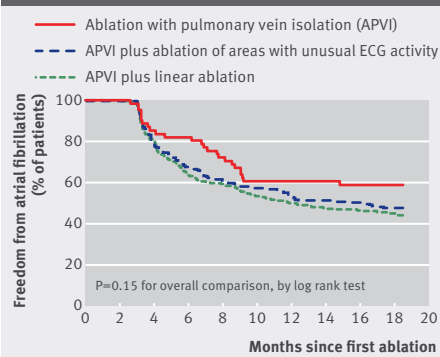
He said that the Child Health and Mortality Prevention Surveillance Network (CHAMPS) would have been set up even had the Ebola virus disease epidemic not occurred, but the epidemic gave the project added impetus.

The network of laboratories will help researchers gather more accurate data about how, where, and why children are dying in poor countries. The Gates Foundation said that it would help ensure that vaccines and treatments were delivered to the people who needed them most.

Cite this as: *BMJ* 2015;350:h2534

RESEARCH NEWS

Kaplan-Meier estimates of freedom from atrial fibrillation after a single procedure, with or without anti-arrhythmic drugs



PERSISTENT ATRIAL FIBRILLATION

Ablation of pulmonary veins is effective

Extensive catheter ablation is no more effective than more targeted ablation to isolate the pulmonary veins in reducing the rate of recurrent atrial fibrillation in patients with persistent atrial fibrillation, a trial reported in the *New England Journal of Medicine* has found.¹

Percutaneous catheter ablation of the pulmonary veins is an effective treatment for paroxysmal atrial fibrillation. However, ablation is less successful in persistent atrial fibrillation, and guidelines recommend that other areas of the heart need to be ablated as well as the pulmonary veins.

To investigate this, researchers randomly assigned 589 patients with persistent atrial fibrillation to ablation targeting either the pulmonary veins (67 patients), the pulmonary veins plus areas of heart tissue that show unusual activity on electrograms (263 patients), or the pulmonary veins plus linear ablation across the left atrial roof and the mitral valve isthmus (259 patients).

Results showed that 59% of patients treated with pulmonary vein isolation alone were free from recurrent atrial fibrillation 18 months after their ablation. In comparison 49% of patients undergoing pulmonary vein isolation plus complex electrogram ablation and 46% of those who had linear ablation ($P=0.15$) were free from recurrent atrial fibrillation at that time.

Further results showed no significant difference between the three groups of patients in secondary endpoints, including freedom from atrial fibrillation after two ablation procedures and freedom from any atrial arrhythmia. The procedure time was significantly shorter with pulmonary vein isolation alone ($P<0.001$).

Cite this as: *BMJ* 2015;350:h2442

CARDIOVASCULAR RISK

Piece of string is useful assessment tool, study finds

Measuring a person's waist with a piece of string is a better predictor of cardiovascular risk than using BMI alone, researchers have said.

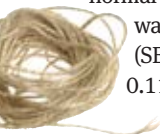
A study published at the European Congress on Obesity in Prague supported the finding that a person was at lower cardiovascular risk if they kept their waist measurement to less than half their height measurement.¹ This could be done by personnel with minimal training and resources by measuring a patient's height with a piece of string, folding it in half, and checking whether the waist measurement was less.

The study's leader, Margaret Ashwell, of Oxford Brookes University, said, "Checking that the waist to height ratio is less than 0.5 could not be simpler: all that is needed is a piece of string, not even a tape measure."

The study used data on 2917 adults from the Health Survey for England and found that 12% would be classed as normal by their BMI but had a waist to height ratio exceeding 0.5.

As expected, mean total cholesterol concentrations were highest (mean 5.7 mmol/L) among those with a high BMI and a high waist to height ratio and lowest (mean 5.1 mmol/L) among those with a low BMI and a low waist to height ratio. However, the "non-overweight apples" group with a low to normal BMI but high waist to height ratio had significantly higher mean total cholesterol than the "overweight pears" group who had higher than normal BMI but less fat around the waist (respectively, 5.72 mmol/L (SE 0.08) versus 4.98 mmol/L (SE 0.11); $P<0.001$).

Cite this as: *BMJ* 2015;350:h2434



MISCARRIAGE

Survey finds poor awareness among the general public

Many people mistakenly think that miscarriage is rare and that lifestyle factors during pregnancy are a common cause, show the results of a survey of US adults reported in *Obstetrics & Gynecology*.¹

Researchers said that they conducted the survey because miscarriage is a traditionally taboo subject that is rarely discussed publicly.

Their online survey asked 33 questions about miscarriage. Just over half (55%) of the 1084 adult responders believed that miscarriages were "uncommon"—defined as affecting less than 6% of all pregnancies. In fact, the latest US figures show that miscarriages end a quarter

of pregnancies and are by far the most common complication of pregnancy.

Most participants (74%) correctly believed that pregnancy loss was most commonly the result of a genetic or medical problem. But nearly a quarter (22%) incorrectly believed that lifestyle choices during pregnancy, including smoking and use of alcohol or drugs, were the single most common cause of miscarriage.

More than three quarters (76%) of respondents thought that stress could cause miscarriage. Of the 15% of participants who said that they had experienced a miscarriage, nearly half (47%) reported feeling guilty and a slightly smaller proportion (41%) believed that they had done something wrong.

Cite this as: *BMJ* 2015;350:h2533



PREMATURE BIRTH

Hospital practice explains variation in outcomes

Much of the variation seen in outcomes among infants born at 22, 23, or 24 weeks of gestation can be explained by differences in hospitals' practices on whether to initiate active treatment to save the lives of these extremely premature newborns, concludes a new study in the *New England Journal of Medicine*.¹

Currently, active intervention, such as the administration of surfactant therapy, intubation, ventilatory support, resuscitation, and parenteral support, is generally not recommended for infants born before 22 weeks of gestation. But the study found that the rates of active treatment for babies born at 22, 23, or 24 weeks varied widely among the hospitals.

The researchers looked at the treatment and outcomes of 4987 infants born before 27 weeks of gestation at 24 hospitals, 4329 (86.8%) of whom received active treatment.

The results showed that of the babies who received active treatment, 65.0% survived.

The overall rate of survival of infants born at 22 weeks of gestation was 5.1%, but among those who received active treatment it was 23.1%. Among infants born at 26 weeks the survival rate was 81.4%, and rates were similar among those who received active treatment.

Cite this as: *BMJ* 2015;350:h2524

Laura Piddock

Fights antibiotic resistance



PETERLOCKE

LAURA PIDDOCK, 55, professor of microbiology at the University of Birmingham, researches the ways in which bacteria become resistant to antibiotics. She leads Antibiotic Action, a global initiative that urges major investment by countries and companies to find new treatments for bacterial infections before resistance to existing infections makes simple injuries a life threatening experience and operations such as hip replacements too hazardous to undertake. Her research focuses on bacterial efflux pumps, the transporter mechanisms used by cells to spit out antibiotics, and the biological effects of acquiring resistance.

What single unheralded change has made the most difference in your field in your lifetime?

“The polymerase chain reaction. The ability to make many copies of pieces of DNA has revolutionised biology. It allows us to carry out experiments to determine what bacterial genes do and to make specific mutations and determine their effect”

What was your earliest ambition?

To be a ballerina. It was only when I didn't get offered a place at the Royal Ballet School at age 11 that I looked at alternatives. I then decided to become a graphic designer, but my parents were unhappy with that career choice and at age 18 ushered me into science instead.

What was the worst mistake in your career?

Staying in Birmingham. Early in my career this hindered me, but for family reasons I had no choice. Ultimately, though, this turned out to be a very good decision.

What was your best career move?

Working with Professor Richard Wise at Dudley Road (now City) Hospital, Birmingham.

Bevan or Lansley? Who has been the best and the worst health secretary in your lifetime?

I believe Andrew Lansley has been the worst, as he established privatisation by stealth of the NHS. It will be extremely difficult if not impossible to reverse the changes that he put in place.

Who is the person you would most like to thank and why?

John Barrett, who nominated me for the Bristol-Myers Squibb unrestricted grant in infectious diseases that I was awarded in 2001. Unfortunately, he did not live to see the outcome of the research I did with this funding. It allowed me to carry out research that would not have been funded through conventional means and led to me being promoted to professor at the age of 41.

What is your guiltiest pleasure?

Reading a novel all Saturday morning in bed.

If you were given £1m what would you spend it on?

Appointing bright, passionate scientists to work on antibiotic resistance.

Where are or were you happiest?

Many things make me happy: from getting a paper accepted for publication to getting a grant funded. However, spending time with my husband and children is extremely important, and my happiest memories are always of times with them on a warm sunny beach.

What single unheralded change has made the most difference in your field in your lifetime?

The polymerase chain reaction. The ability to make many copies of pieces of DNA has revolutionised biology. It allows us to carry out experiments to determine what bacterial genes do and to make specific mutations and determine their effect.

Do you support doctor assisted suicide?

Until we are able to manage pain completely or prevent people being trapped in their bodies unable to move, yes, I do, in circumstances where people request it and there are appropriate safeguards. I find it very strange that we euthanise our pets when they are extremely old or ill and in great pain but that we do not offer the same to people.

What book should every doctor read?

Bad Science by Ben Goldacre should be essential reading for every doctor and scientist, as it reveals how science and statistics can be misunderstood and misinterpreted.

What poem, song, or passage of prose would you like mourners at your funeral to hear?

The song “We have all the time in the world” sung by Louis Armstrong.

Clarkson or Clark? Would you rather watch *Top Gear* or *Civilisation*? What television programmes do you like?

By choice I would not watch either. However, my son and husband both love *Top Gear*, so inevitably I end up watching that. I prefer programmes about building houses and design (interiors, gardening, and fashion).

What is your most treasured possession?

A gold necklace my husband gave me on our first Christmas together as a couple. I wear it every day.

What, if anything, are you doing to reduce your carbon footprint?

I have 16 solar panels on the roof of my house and cavity wall insulation. Wherever possible, I buy produce locally.

What personal ambition do you still have?

To make a discovery that will improve the treatment of bacterial infections.

Summarise your personality in three words

Honest, tenacious, demonstrative.

Where does alcohol fit into your life?

It doesn't; I have always been teetotal.

What is your pet hate?

People who complain without offering solutions.

If you weren't in your present position, what would you be doing instead?

I am greatly enjoying public engagement and meeting politicians and policy makers to discuss the issues of antibiotic resistance. I suspect that I would enjoy being in a policy advisory role.

Cite this as: *BMJ* 2015;350:h2471