

Global deaths from TB surpass those from HIV/AIDS for second year

There are calls for increased funding to halt the global tuberculosis (TB) pandemic following the release of the *WHO Global Tuberculosis Report 2016* (www.who.int/tb/publications/global_report/en/).

For the second year in a row the number of TB deaths has surpassed the number of HIV/AIDS deaths globally, making TB the leading global infectious disease killer. The report's data shows that TB cases, including drug-resistant strains, are increasing globally.

Antidepressants double harms related to suicide and violence in healthy adults

The first review of trials of antidepressants taken by adults with no signs of a mental disorder has found that antidepressants doubled the harms related to suicide and violence (Bielefeldt et al, 2016). The harms of antidepressants, including the risk of suicide, are often explained away as if they are disease symptoms or only a problem in children.

Thirteen double-blind, placebo-controlled trials were included in the systematic review undertaken by a team from the Nordic Cochrane Centre and the University of Copenhagen. As they had access to only the published articles rather than the full data for 11 of the 13 trials, the researchers believe that the review actually underestimates the harms of antidepressants.

Lead author Professor Peter Gøtzsche, of the Nordic Cochrane Centre, said: 'While it is now generally accepted that antidepressants increase the risk of suicide and violence in children and adolescents, most people believe that these drugs are not dangerous for adults. This is a potentially lethal misconception.'

Bielefeldt AØ, Danborg PB, Gøtzsche PC (2016) Precursors to suicidality and violence on antidepressants: systematic review of trials in adult healthy volunteers. *J R Soc Med* 109: 381–92 (doi: 10.1177/0141076816666805)

State of Care report from CQC shows mixed results

State of Care is the annual overview of health and social care in England from the Care Quality Commission (CQC) which looks at the trends, highlights examples of good and outstanding care, and identifies factors that maintain high quality care (www.cqc.org.uk/content/state-of-care). The report identifies that many health and care services in England are providing good quality care despite a challenging environment, but that substantial variation remains.

An important finding is that the sustainability of the adult social care market is approaching a tipping point, based on the evidence of inspections, information received through the CQC's market oversight function, and external data.

Jeremy Hughes, Chief Executive of Alzheimer's Society, said: 'The NHS and social care go hand-in-hand – we cannot fix one if the other remains broken. Social care urgently needs a solid financial grounding before this entire house of cards falls.'

This fragility of the adult social care market is now beginning to impact both on the people who rely on these services and on the performance of NHS care – bed occupancy rates exceeded 91% in January to March 2016, the highest quarterly rate for at least 6 years. This is translating to increased emergency department attendances, emergency admissions and delays to people leaving hospital, which in turn is affecting the ability of a growing number of trusts to meet their performance and financial targets.

Despite the financial challenges in the NHS, the CQC has found much good and outstanding care – particularly in children's and young people's services and critical care. They have given outstanding ratings to five acute trusts and two mental health trusts, and five trusts have exited special measures since April 2015.

The quality of care received in NHS mental health trusts is broadly similar to that in acute trusts, but with an even higher level of variability within providers as well as between them. The report raises concerns about the safety of acute mental health services. Problems with the physical environment frequently contributed to a rating of requires improvement or inadequate for inpatient services.

However, the report stated that there was too much acute care that they had rated inadequate – particularly urgent and emergency services and medical services.

Commenting on the report, Nuffield Trust Chief Executive Nigel Edwards said: 'The report highlights that almost half of health care providers rated "requiring improvement" were unable to improve their rating. With funding tight and demand for care rising, this suggests that these providers may have reached a saturation point beyond which further organization-wide improvements are increasingly hard to achieve.'

Edwards emphasized: 'Simply instructing providers to improve services will have little effect when the causes of poor quality care lie beyond their control.'

Stephen Dalton, Chief Executive of the NHS Confederation, said: 'Public spending plans are becoming less realistic by the day and it's crucial that the upcoming Autumn Spending Review addresses this crisis. Relying on a political rhetoric that promises to protect the NHS, but fails to acknowledge that a cut in social care results in a cost to the NHS, is an economic deception.'

Writing in the foreword to *State of Care*, Peter Wyman, Chair, and David Behan, Chief Executive of CQC, stated: 'Our evidence suggests that finance and quality are not necessarily opposing demands; many providers are delivering good quality care within the resources available, often by starting to transform the way they work through collaboration with other services and sectors.'

They added: 'We cannot ignore the impact of tough financial conditions on providers – but our focus will always be on quality and we will always act in the interest of people who use services.... Working with our partners, we will offer the system whatever support we can to make the changes necessary to ensure high-quality care into the future.'



Type 2 diabetes diagnoses in England predicted to hit 5 million by 2020, 5 years earlier than forecast

Analysis of 713 million rows of data released by NHS Digital and sourced from the NHS Business Services Authority has been carried out by Exasol. The data capture every GP prescription dispensed at all pharmacies across England from August 2010 to July 2016.

Over the past 5 years, the number of prescriptions of type 2 diabetes medication has risen by one third (33%). In 2011, there were 26 million prescriptions, which rose to 35 million prescriptions in 2015. In the first 6 months of 2016 the number of prescriptions of type 2 diabetes medications was already up by more than 8% compared to the same period the year before.

The research predicts that England will

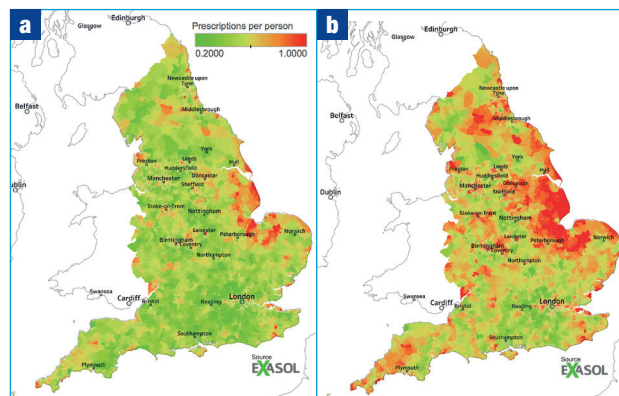
reach 5 million diagnoses of type 2 diabetes in 2020, 5 years sooner than previously thought. At the beginning of 2016, 3.5 million adults were believed diagnosed with type 2 diabetes in the UK according to figures from Diabetes UK.

The analysis found large variations in prescribing across England (*Figure 1*). The London district of Newham has the highest prescribing in the country, over double the national average. London boroughs have three of the highest prescribing districts (Newham, Tower Hamlets, Harrow), and Lincolnshire has two of the top three highest prescribing districts (East Lindsey, South Holland).

Compounding the headline figure of a 33% increase in overall diabetes prescribing, the use of sitagliptin, a popular second-line drug used when a combination of diet/exercise and metformin fails, has doubled in the 5 years to 2015 from over 96 000 prescriptions to over 192 000.

Looking at individual drugs, the research found that over half of all prescriptions are for metformin, and around a quarter of prescriptions are for gliclazide. Most concerning is that prescriptions of these therapies have doubled in the 5 years to 2015.

Figure 1. Type 2 diabetes prescribing in England in (a) 2011 and (b) 2015.



Fertility reduced in young men conceived by ICSI

First results from the world's oldest group of young men conceived by means of intracytoplasmic sperm injection (ICSI) fertility treatment because of their fathers' infertility show that these men have lower sperm quantity and quality than men who were spontaneously conceived (Belva et al, 2016).

These men, aged between 18 to 22 years, had almost half the sperm concentration and a two-fold lower total sperm count and total count of motile sperm than did naturally conceived men of a similar age.

In addition, compared to men born after spontaneous conception, ICSI men were nearly three times more likely to have sperm concentrations below 15 million/ml semen (World Health Organization's definition of

'normal'), and four times more likely to have total sperm counts below 39 million.

'These findings are not unexpected', said Professor André Van Steirteghem, emeritus professor at Vrije Universiteit Brussel and a consultant at Universitair Ziekenhuis Brussel. 'Before ICSI was carried out, prospective parents were informed that it may well be that their sons may have impaired sperm and semen like their fathers. For all the parents this information was not a reason to abstain from ICSI because, as they said: "if this happens ICSI can then also be a solution for our sons".'

Belva F, Bonduelle M, Roelants M, Michielsen D, Van Steirteghem A, Verheyen G, Tournaye H (2016) Semen quality of young adult ICSI offspring: the first results. *Hum Reprod* (doi: 10.1093/humrep/dew245)

T cell subset associated with progression to type 1 diabetes

A recently described T cell subset may have a central role in the development of type 1 diabetes. Levels of these so-called follicular T helper cells were found to be increased at the onset of type 1 diabetes, and the phenomenon was linked with the presence of autoantibodies commonly associated with the disease (doi: 10.2337/db16-0714).

Early diaphragm pacing has no benefit in patients with amyotrophic lateral sclerosis

A multicentre, randomized, controlled, triple-blind trial carried out in 12 centres in France has found that early diaphragm pacing in patients with amyotrophic lateral sclerosis and incipient respiratory involvement did not delay non-invasive ventilation and was associated with decreased survival (doi: 10.1016/S1474-4422(16)30233-2).

Early lens extraction effective treatment for primary angle-closure glaucoma

Clear-lens extraction showed greater efficacy and was more cost-effective than laser peripheral iridotomy to treat primary angle-closure glaucoma, according to a randomized controlled trial of 419 patients, and should be considered as an option for first-line treatment (doi: 10.1016/S0140-6736(16)30956-4).

World Union of Wound Healing Societies Florence, Italy, 25–29 September

Audit warns pressure ulcers are under-reported

Current standard reporting systems only identify about two-thirds of pressure ulcers, warned an audit of hospitals in England (abstract OR116-ID194).

From a stratified random sample of 34 NHS trusts providing inpatient services in England, 24 (72.7%) agreed to take part in the study. The study included 2239 patients from 2468 beds across 121 wards. Data collected by the wards in October 2014 showed a prevalence of pressure ulcers of 4.7% (160/2239 patients).

The researchers then assessed the rate of pressure ulcers using an audit based on a full skin inspection carried out by two nurses. This identified 189 (8.4%) patients with an existing or healed pressure ulcer, and 83 patients with one or more serious pressure ulcers (category 3 or higher) compared to only eight who were reported to the Strategic Executive Information System as a serious incident.

‘These results indicate high levels of under-reporting of pressure ulcers of all categories with existing monitoring systems,’ lead author Isabelle Smith, from the Leeds Institute of Clinical Trials Research, University of Leeds, Leeds, told the congress.

Guideline recommends intensifying treatment of diabetic foot ulcers

Advanced topical treatments should be considered for diabetic foot ulcers where the wound area has not reduced by 50% after 4 weeks of optimized management and infection has been excluded, recommended a new position statement supported by Acelyty and presented by the World Union of Wound Healing Societies (www.wuwhs2016.com/files/WUWHS_DFUs_web.pdf).

An expert panel, led by Keith Harding, Dean of Clinical Innovation at Cardiff University, reviewed the latest evidence on the incidence, costs and management options for diabetic foot ulcers. The annual risk of a diabetic patient developing a diabetic foot ulcer is around 2%, with a one in four risk of ulceration during an individual’s lifetime. Diabetic foot ulcers account for an increasing number of amputations.

‘The chances that diabetic foot ulcers will heal spontaneously are limited because diabetes impairs the process of normal wound healing,’ warned Paul Chadwick, Consultant Podiatrist at Salford Royal Hospital NHS Foundation Trust, Salford. The position statement recommended using a systemic strategy to control ischaemia, wound severity and foot infection to reduce the risk of amputation.

The expert panel recommended that diabetic foot ulcers should initially be treated with standard local management, including

debridement, cleansing, management of exudate and infection, and appropriate offloading and protection. Patients should then be assessed weekly and second-line therapies considered where the wound area has not reduced by 50% after 4 weeks of optimized treatment and exclusion of infection.

Panel members said they generally used collagen dressings or negative pressure wound therapy as second-line treatments for diabetic foot ulcers. Research showed that collagen dressings reduced the elevated protease and inflammatory cytokine activity that may occur in stalled, chronic wounds. Negative pressure wound therapy is particularly useful for treating highly exuding, deep diabetic foot ulcers.

Paul Chadwick, Consultant Podiatrist, Salford Royal Hospital NHS Foundation Trust, Salford



Negative pressure dressings improve wound healing after reconstruction

Women managed with closed incision negative pressure dressings after breast reconstruction following surgery for breast cancer showed a 50% reduction in surgical site infections compared to historic norms in results from a US study (abstract OR108-ID790).

Complications following breast reconstruction surgery are common, up to 40% following alloplastic breast reconstruction. The study retrospectively reviewed outcomes in 19 consecutive breast reconstructions carried out over a

10-week period in 13 women (average age 57 years). Nearly half of the women (46%) were obese, 38% had a history of radiation, 15% had received neoadjuvant chemotherapy and 7% had diabetes.

Prevena negative pressure dressings were placed on each patient’s donor site and on the mastectomy incision in women undergoing reconstructive surgery using expanders. The system connects a dressing to a small, portable device that maintains negative pressure removing fluid and infectious material from the incision.

Three women had surgical site occurrences, including two infections requiring removal of the expander and one haematoma not requiring intervention.

‘Compared to historic norms this small series of patients had a 50% reduction in surgical site occurrences,’ reported lead author Devinder Singh, from the Anne Arundel Medical Center, Annapolis, Maryland, USA. He noted that the study is limited because it is retrospective and includes only a small number of women.

Susan Mayor – Susan Mayor’s attendance at the congress in her capacity as a medical writer was supported by Acelyty

Smoking, obesity and physical inactivity cause much of social inequality in UK women's heart disease risk



Dr Sarah Floud, Social Epidemiologist, Cancer Epidemiology Unit, Nuffield Department of Population Health, University of Oxford, Oxford

Women with lower levels of education and living in more deprived areas of the UK are at greater risk of coronary heart disease. This is largely caused by smoking,

obesity and physical inactivity, according to a study of over a million women (Floud et al, 2016).

Dr Sarah Floud, lead author from the University of Oxford, said: 'Women with fewer educational qualifications and from more deprived areas of the UK were more likely to smoke, be obese and be physically inactive, although they consumed slightly less alcohol. We found that these factors accounted for most of the social inequalities in heart disease risk. The most important factor, however, was smoking; it alone accounted for about half of the associations of heart disease with education and deprivation.'

This study included 1.2 million participants in the Million Women Study, about 1 in 4 of all UK women born in the 1930s and 1940s. During 12 years of follow up 72 000 women developed heart disease. The large numbers made it possible to look carefully at the extent to which four lifestyle factors – smoking, alcohol consumption, physical activity and body mass index – accounted for the known social inequalities in heart disease.

Without taking into account the four lifestyle factors, women who had completed compulsory schooling with no qualifications had almost twice the risk of developing heart disease or dying from it than women who had a degree. Similarly, women in the most deprived areas had twice the risk of heart disease compared to women from the least deprived areas. After taking into account the lifestyle factors the differentials in risk diminished.

Dr Floud added: 'It is important to recognize that these health-related behaviours are themselves influenced by education and deprivation, and that it is harder to change them if you don't have the resources to do so.'

Floud S, Balkwill A, Moser K, Reeves GK, Green J, Beral V, Cairns BJ; Million Women Study Collaborators (2016) The role of health-related behavioural factors in accounting for inequalities in coronary heart disease risk by education and area deprivation: prospective study of 1.2 million UK women. *BMC Med* 14(1): 145 (doi: 10.1186/s12916-016-0687-2)

A human rights approach to end of life care

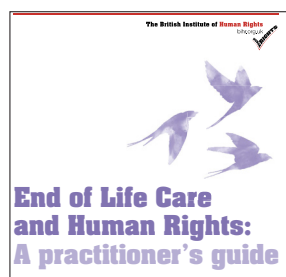
A new approach to end of life care using the Human Rights Act has been published by Sue Ryder Care and the British Institute of Human Rights, and is available to download from www.bihhr.org.uk/eolchumanrights or www.sueryder/humanrightsguide.

This important resource will help deliver good quality care that is person-centred, accountable, and balances the needs of individuals against the needs of others and the wider community.

Dr Alison Talbot, Associate Specialist, Sue Ryder Duchess of Kent, who attended a

training course about the resource, said: 'The practitioner's guide provides key information of practical assistance when making difficult decisions, which may impact on human rights of the people we work with and for, and helps to ensure best practice.... This guide will be a useful tool for everyone working in palliative care in the years ahead as we all strive to provide "exceptional care at the end of life".'

Dr Talbot concluded: 'My newly acquired knowledge has provided me with a new perspective on provision of holistic care.'



Antibiotics may be inappropriate for uncomplicated diverticulitis

Antibiotics are advised in most guidelines on diverticulitis, but results from a randomized trial question the effectiveness of this practice.

In the study (Daniels et al, 2016), which included 528 patients with computed tomography-proven, primary, left-sided, uncomplicated, acute diverticulitis, median time to recovery was 14 days for patients who underwent observation and 12 days for those who received antibiotics.

No significant differences between the observation and antibiotic treatment groups were found concerning rates of complicated diverticulitis, ongoing diverticulitis, recurrent diverticulitis, surgery, hospital readmission, adverse events and mortality. Hospital stay was significantly shorter in the observation group (2 vs 3 days).

Daniels L, Ünlü Ç, de Korte N et al; Dutch Diverticular Disease (3D) Collaborative Study Group (2016) Randomized clinical trial of observational versus antibiotic treatment for a first episode of CT-proven uncomplicated acute diverticulitis. *Br J Surg* (doi: 10.1002/bjs.10309)

Hospital bed squeeze is miscounted and causing congestion

Understanding Patient Flow, a briefing from the Nuffield Trust (www.nuffieldtrust.org.uk/publications/understanding-patient-flow-hospitals), lays out how greater speed through a system often requires more space.

Looking at trusts that meet the 4-hour target and those furthest from meeting it, the briefing estimates that at least 5.5% of beds need to be free for the standard to be met. Yet many hospitals are unable to provide this much of the time, making target breaches inevitable.

With a growing number of patients coming and going during the day, counting bed occupancy at midnight, as is current practice, means that crunch times are often invisible.