

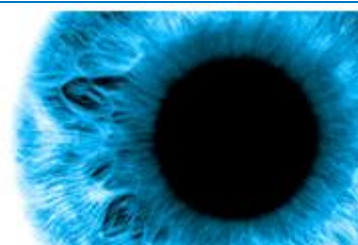
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Issue 67 – November 2014

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NICE has recently published Evidence Updates on:

- Preventing type 2 diabetes: population and community-level interventions
- Headaches

Eyes on Evidence survey

Thank you to all our readers who have completed the Eyes on Evidence survey. Your views on the bulletin are important to us and will help to shape the future of Eyes on Evidence.

There's still time to share your views on the bulletin by completing the short online survey. The survey seeks information on how you use the bulletin and your satisfaction with the service, as well as details on your specialty and areas of interest. The survey will close at the end of Friday 28th November.

Click [here](#) to complete the survey.

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Premature death in people with learning disabilities

Overview: The term 'learning disability' refers to people who have:

- a significantly reduced ability to understand new or complex information and to learn new skills (impaired intelligence);
- a reduced ability to cope independently (impaired social functioning) and;
- a disability that started before adulthood, with a lasting effect on development ([Department of Health 2001](#)).

In 2012, an estimated 1.14 million people in England had learning disabilities, 908,000 of whom were adults aged 18 years or over ([Improving Health and Lives: Learning Disabilities Observatory 2013](#)).

People with learning disabilities are more likely to die prematurely than people in the general population ([Tyrer et al. 2007](#)). This group of people often has important comorbidities and associated polypharmacy ([McCarron et al. 2013](#)), which might contribute to the higher rate of premature death. However, other factors such as the environment, provision of care, and access to health and social care services are also likely to have a role.

Reports by the charity Mencap in 2004 ('[Treat me right](#)') and 2007 ('[Death by indifference](#)'), and the Disability Rights Commission in 2006 ('[Equal Treatment](#)'), highlighted that people with a learning disability often receive poor healthcare. In response, an independent inquiry into the premature deaths of people with learning disabilities was conducted ([Michael 2008](#)). This inquiry found evidence that people with learning disabilities are less likely to receive treatment for medical problems and many receive less effective treatment. It recommended that a time-limited confidential inquiry into premature deaths of people with learning disabilities should be set up 'to provide evidence for clinical and professional staff on the extent of the problem and guidance on prevention'. An inquiry was subsequently commissioned by the Department of Health (the [confidential inquiry into the premature deaths of people with intellectual disabilities](#)).

Current advice: The [Equality Act 2010](#) states that public sector bodies, such as health and social care organisations, must not discriminate against people with disabilities, including those with mental impairments or any impairment that has a substantial and long-term effect on their ability to carry out normal day-to-day activities. Public sector bodies also have a duty to make reasonable adjustments to ensure that procedures and physical provisions do not put disabled people at a disadvantage. Such reasonable adjustments might include making sure that information on health and social care services is accessible to people with learning disabilities and giving people more time with doctors and nurses.

In 2011, the [public sector equality duty](#) became part of the Equality Act. This amendment requires public organisations to have due regard to the need to eliminate discrimination of people who are disabled, advance equality of opportunity, and foster good relations between people who are disabled and those who those who have no disability.

NICE guidance on [patient experience in adult NHS services](#) recommends that healthcare workers should ensure that that factors such as physical or learning disabilities and difficulties with reading,

understanding or speaking English are addressed so that patients are able to participate as fully as possible in consultations and care. NICE is currently preparing guidance on [care of people with challenging behaviour and learning disabilities](#) and on [mental health problems in people with learning disabilities](#). Guidance is also being developed on [transition from children's to adult services for young people using health or social care services](#), which encompasses young people with learning disabilities.

New evidence: [Heslop et al. \(2014\)](#) reported the findings of the [confidential inquiry into the premature deaths of people with intellectual disabilities](#). The inquiry examined the deaths of people with learning disabilities aged 4 years or older in 5 former primary care trusts in south west England. Data on deaths were collected from health, social care and voluntary services; community contacts; statutory agencies; GPs; prisons; and community groups, leaders and services. A local review panel designated a death as premature if it was more likely than not that the person would have continued to live for at least 1 more year without a specific event that formed part of the pathway that led to death. Deaths could also be categorised as 'avoidable' if they could have been prevented by public health interventions, avoided through good quality health care, or both.

The analysis found that the median age at death of the 247 people with learning disabilities was 65 years (interquartile range [IQR] 54–76 years) for males and 63 years (IQR 54–75 years) for females. These median ages were 13 years younger than the median age at death in the male general population of England and Wales (78 years) and 20 years younger than in the female general population (83 years). The panel decided that 100 (42%) of the 238 deaths that they reached agreement on were premature.

Among the 244 deaths of people with learning disabilities for whom data on cause of death were available (ICD-10 codes), 119 (49%) deaths were categorised as avoidable, almost double the rate in the general population (24%). A total of 21% of deaths among people with learning disabilities were designated as preventable by public health interventions, the same rate (21%) as in the general population. However, 37% of deaths in people with learning disabilities could have been avoided with good quality healthcare, compared with 13% of deaths in the general population.

A comparison between 58 people with learning disabilities and 58 matched general population comparator cases from the same general practices found significant differences in the potential contributing factors surrounding the death. A greater proportion of people in the learning disabilities group had inadequate or inappropriate accommodation for their needs; family or paid carers who did not feel they were listened to; and problems in advanced care planning. For people in the learning disability group, there were also problems with those responsible for their care recognising the person's needs and adjusting care when needs changed, and poor adherence to the Mental Capacity Act.

The authors warned that the links between contributing factors and deaths in people with learning disabilities may not be causal. In addition, the sample of people with learning disabilities who died was small and may not have included all deaths among people with learning disabilities in the study area.

Commentary: "This paper provides the first reasonably robust estimates of the extent to which the premature mortality of people with learning disabilities in England results from what Mencap described as institutional discrimination in our health and social care system. People with learning disabilities were twice as likely as the general population to have had deaths that were avoidable, and nearly three times more likely to have had deaths that could have been avoided by the provision of good quality healthcare.

"There is a strong moral imperative to redress this injustice. In addition, healthcare commissioners and providers also have a clear legal responsibility under the Equality Act 2010 to introduce 'reasonable adjustments' to take account of the specific needs and situation of people with learning disabilities. These adjustments could include but are certainly not limited to ensuring regular health checks are provided for people with learning disabilities (and to further reduce the age of eligibility for these checks) and ensuring that people with learning disabilities have access to information in formats they can most easily understand." – **Professor Eric Emerson, Emeritus Professor of Disability and Health Research, Centre for Disability Research, Lancaster University and Professor of Disability Population Health, University of Sydney, Australia**

Study sponsorship: Department of Health.

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Self-harm and suicide in prisons



Overview: Self-harm is any act of self-poisoning or self-injury carried out by an individual, irrespective of motivation ([NICE 2011](#)). This commonly involves self-poisoning with medication or self-injury by cutting. A household survey conducted in 2007 suggested that 4.9% of people in England have self-harmed at some point in their life ([Health and Social Care Information Centre 2009](#)).

In 2012, the suicide rate in the UK was 11.6 deaths per 100,000 people ([Office for National Statistics 2014](#)). The suicide rate in English and Welsh prisons is more than 8 times higher: the rate in 2013–14 was 100 deaths per 100,000 prison population ([Ministry of Justice 2014](#)).

Self-harm increases the likelihood that the person will eventually die by suicide in a 12-month period ([Owens et al. 2002](#)). Around 50% of prison inmates who die by suicide have a history of self-harm, which is associated with a risk of suicide in custody 8 times higher than in prisoners who do not self-harm ([Fazel et al. 2008](#)).

Current advice: NICE has guidance on both the [short-term](#) and the [long-term](#) management of people aged 8 years and older who self-harm. The guidance on short-term management makes recommendations for the physical, psychological and social assessment and treatment of people in primary and secondary care in the first 48 hours after having self-harmed.

The guideline on long-term management covers the longer-term psychological treatment and management of both single and recurrent episodes of self-harm. This guideline recommends that healthcare professionals undertake an assessment of the risk that the person who has self-harmed may self-harm again or commit suicide. This assessment should take into account a variety of factors, including methods and frequency of current and past self-harm and current and past suicidal intent. Risk assessment tools and scales should not be used to predict future suicide or repetition of self-harm. The key areas of needs and risks identified in the assessment should be used to develop a care plan and a risk management plan in conjunction with the person who self-harms and their family, carers or significant others, if this is agreed with the person.

NICE is currently preparing a guideline on the [mental health of people in prison](#).

The NICE Pathway on [self-harm](#) brings together all related NICE guidance and associated products on the condition in a set of interactive topic-based diagrams.

New evidence: [Hawton et al. \(2014\)](#) conducted a case–control study to measure the prevalence of self-harm among prisoners in England and Wales and the risk of subsequent suicide. Data on all incidents of self-harm between 2004 and 2009 in prisoners aged 15 years or older were collected from a mandatory reporting system for the 2 countries. The characteristics of prisoners who self-harmed were compared with those of the rest of the prison population to identify risk factors associated with self-harm. Suicides among prisoners who self-harmed were also analysed.

A total of 139,195 incidents of self-harm in 26,510 prisoners were reported in England and Wales during the 6 year study period. The annual rate of self-harm ranged from 200 to 249 incidents per 1000 prisoners. An estimated 20–24% of female prisoners self-harmed each year, compared with 5–6% of male prisoners. On average, women who self-harmed did so 8 times a year, whereas men who self-harmed did so twice a year. In both sexes, self-harm was associated with age younger than 20 years, white ethnic origin, and a life sentence or being unsentenced ($p < 0.0001$ for all). In female inmates, committing a violent offence against another person was also a factor ($p < 0.0001$). An adjusted Bayesian estimation indicated that 15% of the variation in self-harm behaviours could be attributed to the time and location of prisoners who self-harmed, suggesting clustering of self-harm episodes by time and by prison.

Among the prisoners who self-harmed during the study period, 109 committed suicide (95 males and 14 females). The mean annual rate of suicide among male prisoners was more than double that among

female prisoners (334 per 100,000 prison population versus 149 per 100,000 prison population). The rates of suicide in prisoners who did not self-harm were 79 per 100,000 prison population for men and 98 per 100,000 prison population for women. More than half (53%) of suicides in prisoners who self-harmed took place within 1 month of a self-harm incident. In multivariate analysis, older age (in particular age 30–49 years) and a previous self-harm episode that required resuscitation, life support, or admission to hospital were associated with suicide in male prisoners who self-harmed. A life sentence and more than 5 self-harm episodes a year were associated with suicide in female prisoners.

The authors warned that the factors associated with self-harm in their analyses were mostly non-specific and non-modifiable. In addition, the low absolute number of suicides in prisoners who self-harmed, in particular in women, limited the power of the variables identified to predict suicide. Differences in the length of prison stay of prisoners and in the quality of data entered by prisons might have affected the findings.

Commentary: "This study included all reported self-harm episodes in prisons in England and Wales over a 6 year period, so has much larger numbers than previous studies. The authors found a significant association between self-harm episodes and subsequent suicide. It is also the first study to address clustering in location and time of self-harm incidents. Significant clustering was found that could include an element of copycat behaviour or other prison-related factors.

"This study did not take account of whether prisoners who self-harmed had an existing psychiatric disorder or were receiving ongoing treatment with medication. The authors suggest this will be important for future studies to improve prevention of self-harm and suicide in prisoners.

"Previous research has found a high prevalence of mental health problems among prisoners, with around 80% of female prisoners and 70% of male prisoners needing treatment for a psychiatric condition. Often these needs were not identified when the person entered prison or later. About 40% of prisoners were found to need treatment for mental illness but were not receiving any appropriate care.

"As the authors of this study point out, ensuring additional mental health input into the case management process for prisoners who self-harm and that the proportion of the prison healthcare budget allocated to mental health is at least equivalent to that in the community are issues that need to be addressed." – **Dr Nigel McKenzie, former Lead Consultant of Prison Mental Health Inreach Teams, Her Majesty's Prison Pentonville and Her Majesty's Prison Holloway**

Study sponsorship: Wellcome Trust, National Institute for Health Research, National Offender Management Service and Department of Health.

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Admissions to hospital for any type of infection and childhood vaccinations

Overview: The combined vaccine for measles, mumps and rubella (MMR) is a live vaccine made of attenuated viable organisms. Other types of vaccine, such as the vaccines against pertussis and polio, are made from inactivated (killed) organisms or from products secreted by the organism, recombinant components or constituents of its cell walls.

Since its introduction into the UK in 1998, MMR has achieved an uptake of 90%, reducing the incidence of these once common childhood diseases ([Public Health England 2013](#)). For example, recorded deaths from measles dropped from a maximum of 1145 in 1941 to about 1 per year from 2000 until 2013 ([Public Health England 2014](#)).

Observational studies and randomised trials from low-income countries show that vaccines may have non-specific effects that affect morbidity and mortality from non-targeted diseases. The World Health Organization commissioned a working group to undertake a review of the evidence of non-specific effects of selected vaccines, including for measles (single vaccine and MMR), to inform policy recommendations. Their [report concluded](#) that current evidence 'neither excludes nor confirms the possibility of beneficial



or deleterious non-specific immunological effects of vaccines on all cause-mortality'.

Current advice: NICE has public health guidance on [reducing differences in the uptake of immunisations](#), but does not produce guidance on specific vaccination programmes. Public Health England maintains '[the Green Book](#)', which covers vaccination programmes in the UK. The MMR vaccine is administered twice: first within a month of the child's first birthday, and second at the age of 3 years and 4 months. The combined diphtheria, tetanus, pertussis, polio and *Haemophilus influenzae* type b (DTaP-IPV-Hib) vaccine should be given in 3 doses at 2, 3 and 4 months, with further doses before school entry and at around 14 years old. The Green Book does not cover potential health benefits of vaccination other than the protection from the specific diseases.

The NICE Pathway on [immunisation for children and young people](#) brings together all related NICE guidance and associated products on the condition in a set of interactive topic-based diagrams.

New evidence: [Sørup et al. \(2014\)](#) studied hospital admissions for infections in Denmark for children in the second year of life, comparing outcomes for children whose most recent vaccination was the live vaccine MMR with outcomes for children whose most recent vaccination was the inactivated vaccine DTaP-IPV-Hib. Hospital admission and diagnosis data were obtained from the Danish National Patient Register and matched to vaccination records using a unique personal identification number.

Children were assigned to a cohort depending on their vaccination schedule. The first cohort (recommended schedule; n=456,043) had 3 doses of DTaP-IPV-Hib and MMR administered at a later point. The second cohort (reversed schedule; n=19,219) had 2 doses of DTaP-IPV-Hib and then MMR – the third dose of DTaP-IPV-Hib may have been administered later. Most children were followed from vaccination to age 2 years (n=436,258, 91.8%) or to administration of another vaccine (n=38,533, 8.1%). Overall, 56,889 admissions attributable to any type of infection were recorded. Analyses were adjusted to account for differences between cohorts in birth, health and demographic variables.

In the recommended schedule cohort, fewer children whose most recent vaccination was MMR were admitted to hospital with infection than children whose most recent vaccination was DTaP-IPV-Hib (8.9 admissions per 100 person-years versus 12.4 9 admissions per 100 person-years, incidence rate ratio [IRR]=0.86, 95% CI 0.84 to 0.88, p<0.001). In the reversed schedule cohort, the rate of hospital admission for infection was higher in children whose most recent vaccination was DTaP-IPV-Hib than in those whose most recent vaccination was MMR (12.8 9 admissions per 100 person-years versus 9.9 admissions per 100 person-years, IRR=1.62, 95% CI 1.28 to 2.05, p<0.001). When type of infection was considered, the strongest association between vaccination schedule and admission to hospital was for lower respiratory tract infections in the recommended schedule cohort (IRR=0.80, 95% CI 0.76 to 0.84). The rate of hospital admissions did not differ between groups in the first 15 days after vaccination.

The authors concluded that recent receipt of the live MMR vaccine was associated with a lower rate of hospital admission for infection than recent receipt of the inactivated DTaP-IPV-Hib vaccine. They noted that selection bias could be a possibility if children who received MMR first were healthier than those who received DTaP-IPV-Hib first. However, they discounted this possibility for several reasons, including that an effect caused by general health should have been seen in the first 2 weeks after vaccination, and that hospital admissions were consistently lower after MMR compared with DTaP-IPV-Hib even when the vaccines were delivered in difference sequences.

Commentary: "MMR coverage in the UK is at the highest level since the vaccine was introduced in 1998. However, coverage at a national level remains below the WHO target of at least 95%, and there are important regional differences, with coverage in London remaining below 90%. There is therefore still work to be done to improve MMR uptake.

"Although a link between MMR and autism has been firmly discredited, another concern has been that MMR might overload the immune system. To counter this, the Green Book cites a small UK study (436 cases) that showed a lower hospital admission rate for serious bacterial infection in the 90 days post-MMR ([Miller et al. 2003](#)).

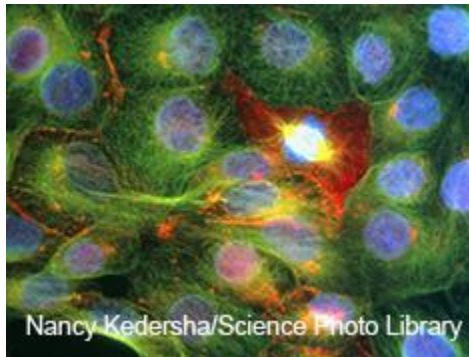
"This much larger Danish study provides far stronger evidence that MMR prevents rather than causes hospital admissions for any infection, and shows that the benefit extends beyond 90 days. The authors estimated that the number needed to vaccinate to avoid one hospital admission was 93 to 201, suggesting that every 1% improvement in MMR coverage in the UK would avoid between 40 and 86

hospital admissions. The Sørup study should further reassure parents about the safety of MMR, and should provide a spur to healthcare professionals to promote the timely administration of MMR." – **Dr Jim Gray, Consultant Microbiologist, Birmingham Children's Hospital NHS Foundation Trust**

Study sponsorship: Danish Health Foundation, Rosalie Petersen Foundation and Novo Nordisk Foundation.

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Radical radiotherapy or prostatectomy for prostate cancer



Overview: Prostate cancer is the most common cancer in men in the UK, with almost 35,000 new cases of prostate cancer diagnosed in 2010. It is relatively uncommon in men under 45 years but becomes more common with age. In 2010, 75% of new cases occurred in men aged 65 years and older.

Prostate cancer was the second most common cause of death from cancer in men in 2010, after lung cancer, accounting for 13% of all cancer deaths in men ([Office for National Statistics 2013](#)). Survival is slightly lower for men aged 15–49 years (90%) than for those aged 50–69 years (92%, [Office for National Statistics 2012](#)).

Current advice: NICE guidance on [prostate cancer](#) recommends a range of treatment options to offer men with localised prostate cancer, depending on their risk status. For men with low-risk prostate cancer, active surveillance is the first option, with radical radiotherapy or prostatectomy offered if there is evidence of disease progression. For intermediate risk prostate cancer, active surveillance is an option for men who do not wish to have radical treatment. However, men with high-risk prostate cancer should not be offered active surveillance.

The guidance adds that given the range of treatment modalities and their serious side effects (such as sexual dysfunction, urinary incontinence and radiation-induced enteropathy), men with prostate cancer who are candidates for radical treatment should have the opportunity to discuss their treatment options with a specialist surgical oncologist and a specialist clinical oncologist.

The NICE Pathway on [prostate cancer](#) brings together all related NICE guidance and associated products on the condition in a set of interactive topic-based diagrams.

New evidence: [Sooriakumaran et al. \(2014\)](#) used a national dataset called PCBaS Sweden to conduct an observational study of outcomes after treatment for prostate cancer. PCBaS Sweden includes information from the National Prostate Cancer Registry of Sweden, the Swedish cancer register, the national cause of death register and 6 other national registers. Data from the separate registers were matched using the unique personal identification number assigned to every resident in Sweden. The dataset covers 98% of all cases of prostate cancer diagnosed since 1998 plus cases from limited regions of Sweden for 1996 and 1997, and has almost complete data on a range of demographic and clinical variables.

The primary outcome in this study was death from prostate cancer. Survival time was defined as the time from diagnosis to death, emigration or end of follow-up (31 December 2010). An analysis of mortality was done for men who had surgery (n=21,533) compared with those who had radiotherapy (n=12,982).

Compared with men who had surgery, those who had radiotherapy:

- were older at diagnosis (median age=66 versus 62 years, $p<0.001$),
- were diagnosed at an earlier date (2004 versus 2005, $p<0.001$)
- had higher serum levels of prostate-specific antigen (PSA, $p<0.001$)
- generally had a more serious stage and grade of tumour.

For non-metastatic prostate cancer, a higher proportion of men who had radiotherapy (n=12,109) than those who had surgery (n=20,737) died of prostate cancer (n=592, 4.9% versus n=293, 1.4% respectively, $p<0.001$) and from other causes (n=1057, 8.7% versus n=931, 4.5% respectively, $p<0.001$). The comparison of radiotherapy with surgery resulted in a crude hazard ratio (HR) of 3.09 (95% confidence interval [CI] 2.69 to 3.56, $p<0.001$) for prostate cancer mortality and 1.77 (95% CI 1.62 to 1.93, $p<0.001$) for other causes of death.

In analyses using multivariable models adjusted for differences between the treatment groups, radiotherapy was still associated with increased risk of death compared with surgery, but the effect size was smaller. The adjusted HR for death from prostate cancer was 1.77 (95% CI 1.49 to 2.09, $p<0.001$) and for other causes it was 1.28 (95% CI 1.16 to 1.42, $p<0.001$). No significant differences between radiotherapy or surgery were detected for men with metastatic prostate cancer, either for mortality from prostate cancer or for mortality from other causes.

The authors noted that although they attempted to adjust the results to account for differences in characteristics between groups, biases such as confounding by indication could not be completely eliminated. Information on type or doses of radiotherapy or surgical technique was not available, so comparisons with current practice were not possible. Additionally, no data on secondary treatments were available; the authors noted that radiotherapy after surgery would be more common than surgery after radiotherapy, which would result in a bias in favour of surgery. The Swedish sample consisted mainly of white men who did not participate in prostate cancer screening programmes, so generalising the results to other nations or ethnicities may not be possible.

Commentary: "NICE guidance indicates that localised prostate cancer may be treated either by surgery or by radiotherapy. There are no good quality completed randomised trials comparing these two approaches, and the choice between them rests largely on patient preference.

"The study by Sooriakumaran et al. (2014) is a large, well-conducted retrospective comparison of outcome in terms of mortality between patients who chose surgery and those who chose radiotherapy. However, as with any retrospective comparison, it is not possible to exclude the effect of unknown confounders. Furthermore, in practice the choice of treatment modality depends as much on treatment-related morbidity as it does on mortality, and no data were available on functional outcomes. It would therefore be wrong to alter clinical practice on the basis of this study. Rather, we should wait for the results of ongoing randomized trials that are comparing surgery versus radiotherapy, such as [ProtecT](#) and [SPCG15](#) ." – **Dr Chris Parker, Clinical Oncologist, Royal Marsden NHS Foundation Trust**

Study sponsorship: This study was not funded.

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● Effects of decision aids on patients' decision-making about treatments or screening

Overview: Decision aids aim to help patients to decide which treatment or screening options are most suitable for them. They supplement clinicians' information and counselling about treatment options. Decision aids differ from usual patient information in that they are explicit about the decision being considered and provide evidence-based information about harms and benefits of available options. Such tools also have a detailed, specific focus on helping the patient to understand what features and outcomes of the available options are most important to them.



Current advice: NICE recognises that decision aids are a useful tool for encouraging shared decision-making. Decision aids are recommended in several clinical guideline topics including '[patient experience in adult NHS services](#)', '[advanced breast cancer](#)' and '[antenatal and postnatal mental health](#)'. The NICE Evidence Update on [patient experience in adult NHS services](#) highlights and provides commentary on selected new evidence published since the NICE guideline was issued.

NICE has produced a [decision aid](#) for patients who are considering whether or not to take an anticoagulant to reduce the risk of stroke and a [decision aid](#) to help people make decisions about long-term heartburn treatment. These decision aids were produced to support the implementation of the clinical guidelines on [atrial fibrillation](#) and on [dyspepsia and gastro-oesophageal reflux disease](#) respectively.

New evidence: [Stacey et al. \(2014\)](#) reported a Cochrane review of 115 randomised controlled trials of decision aids compared with no intervention, usual care, or alternative interventions. Studies could include participants who were making decisions for themselves, a child, or an incapacitated significant other. Studies of hypothetical choices; decisions about lifestyle changes, entry into clinical trials, or general advance directives; general education programmes; and interventions to inform or meet requirements for informed consent about a particular option were excluded.

Decision aids were defined as interventions designed to help people make specific deliberative choices. The interventions had to provide information on the options and outcomes relevant to the patient's health status and include methods that help elicit and clarify the patient's values. The review had two primary outcomes, the first being improvement in how well the patient's decision matched the aspects of the decision that mattered most to them (knowledge of the treatment or screening, understanding of risk, or match with values). The second primary outcome was improvement in understanding of the decision-making process, including options and values. Scores for some outcomes were standardised to a scale of 0–100 to allow pooling of similar outcome measures.

Compared with usual care, patient decision aids resulted in higher average knowledge scores (mean difference [MD]=13.34%, 95% confidence interval [CI] 11.17 to 15.51%, $p<0.00001$; 42 studies, $n=10,842$). Decision aids containing information about outcome probabilities were associated with a higher likelihood of the patient having accurate risk perceptions, compared with control (relative risk [RR]=1.82, 95% CI 1.52 to 2.16, $p<0.00001$; 19 studies, $n=5868$). Decision aids with content for explicit clarification of values were associated with a greater likelihood of patients choosing an option matching their values compared with control (RR=1.51, 95% CI 1.17 to 1.96, $p=0.0017$; 13 studies, $n=4670$). Significant heterogeneity across studies was noted for all of these comparisons ($p<0.00001$).

Patients who had used a decision aid reported significantly lower uncertainty in choosing options (decisional conflict) than those who had received usual care (MD=-6.22 out of 100, 95% CI -8.00 to -4.44, $p<0.00001$; 17 studies, $n=5830$). People who had used a decision aid also scored lower on the decisional conflict subscales 'feeling uninformed about options' (MD=-7.26 out of 100, 95% CI -9.73 to -4.78, $p<0.00001$; 22 studies, $n=4343$), and 'feeling unclear about values' (MD=-6.09 out of 100, 95% CI -8.50 to -3.67, $p<0.00001$; 18 studies, $n=3704$). However, effects on patients' satisfaction with the decision-making process or with the decision made seemed to be variable. Decision aids did not appear to improve health outcomes, although these data could not be pooled.

The risk of bias of included studies was generally assessed to be low or unclear. A sub-analysis to investigate potential causes of heterogeneity found that patients' baseline accuracy of risk perception had an important effect. When patients' baseline perception of risk was lower, the observed improvement was greater.

Commentary: "This updated Cochrane review provides stronger evidence that patient decision aids improve the match between the patient's treatment or screening choice and their stated values and preferences, and particularly so when the decision aid includes a value clarification exercise.

"Not all decision aids will have the same benefit for patients. More research may be needed to understand how their format, length, accessibility, modes of delivery and quality affect outcomes. There is to date no standardised quality control of decision aids, thus it is crucial to develop systematic assessment and certification of the quality of available decision aids before making them freely available to patients and providers ([Joseph-Williams et al. 2014](#)).

"Further, there is to date no clear evidence of the impact of decision aids on adherence with the chosen option, cost effectiveness, impact on lower literacy populations and optimal content and features of an intervention. In other words, although decision aids have been developed and evaluated for over a decade, we are still unable to clearly determine what are the key features and active components that achieve best effect.

"A recent systematic review demonstrated a moderate but positive effect of shared decision making

interventions on disadvantaged groups, which included lower literacy populations ([Durand et al. 2014](#)). Further research in this area is needed." – **Dr Marie-Anne Durand, Assistant Professor, The Dartmouth Institute for Health Policy and Clinical Practice, Hanover, New Hampshire, USA**

Study sponsorship: This study was not funded.

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Antibiotic prescribing in UK primary care

A NICE Medicines Evidence Commentary discusses a study by Public Health England and University College London that measured trends in antibiotic prescribing in UK primary care in relation to nationally recommended best practice ([Hawker et al. 2014](#)).

The study looked at trends in antibiotic prescribing in UK primary care and found improvement in some aspects of antibiotic prescribing between 1999 and 2011; however, there remain some areas of concern and significant variation between GP practices. For uncomplicated urinary tract infection in women aged 16–74 years, use of 3-day courses of trimethoprim in line with guidance increased from 8% of cases in 1995 to 49% of cases in 2011 (with the range for GP practices 16% to 71%). The proportion of prescriptions that were for a recommended antibiotic rose from 77% to 85% for otitis media and from 64% to 69% for sore throat. However, antibiotic prescribing for coughs and colds increased from 36% in 1999 to 51% in 2011 (range 32% to 65%). Prescribers should ensure they are following guidelines on appropriate antibiotic prescribing from [NICE](#) and [Public Health England](#).

This Medicines Evidence Commentary on '[Antibiotic prescribing: study suggests there is scope for improvements](#)' was published in the 6–10th October issue of the Medicines Awareness Weekly e-bulletin. Medicines Evidence Commentaries form part of NICE's [Medicines Awareness Service](#) and help contextualise important new evidence, highlighting areas that could signal a change in clinical practice. They do not constitute formal NICE guidance.

The full version of this article is available on the [NICE Evidence Services website](#).

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Evidence Updates

NICE has recently published Evidence Updates on:

- Preventing type 2 diabetes: population and community-level interventions
- Headaches

These Evidence Updates highlight and provide commentary on selected new evidence published since the NICE guidance was issued. For each topic, the evidence was considered by an Evidence Update Advisory Group (EUAG), a panel of experts, most of whom were involved in developing the original NICE guidance.

The Evidence Update on [preventing type 2 diabetes: population and community-level interventions](#) was published by NICE in October 2014. It includes commentary from the EUAG on 12 new articles (relevant to [NICE public health guidance 35](#)), covering the following topics:

- Modelling diabetes prevention policies: population-based and high-risk strategies
- Barriers and facilitators to exercise among older adults of South Asian origin
- Dietary interventions for weight loss and cardiovascular risk reduction in black people of African ancestry
- Mass media campaigns to promote physical activity
- Food taxes and subsidies to promote healthier food purchases
- Workplace health-promotion programmes

- Community interventions to increase physical activity
- Increasing physical activity among women with socioeconomic disadvantage
- Cost-effectiveness of training lay health workers in deprived communities

The Evidence Update on [headaches](#) was published by NICE in October 2014. It includes commentary from the EUAG on 13 new articles (relevant to [NICE clinical guideline 150](#)), covering the following topics:

- Acute treatment of migraine in children and young people
- Pharmacological prophylaxis of migraine with antiepileptics and with other drugs in adults
- Pharmacological prophylaxis of migraine in children and young people
- Non-pharmacological prophylaxis of migraine in children and young people
- Treatment of migraine during pregnancy
- Medication overuse headache

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Eyes on Evidence helps contextualise important new evidence, highlighting areas that could signal a change in clinical practice. It does not constitute formal NICE guidance. The commentaries included are the opinions of contributors and do not necessarily reflect the views of NICE.

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