Issue 71 – March 2015

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A Cochrane review found limited evidence from randomised controlled trials to support the efficacy and safety of allopurinol over placebo and other urate-lowering medicines in chronic gout. Significantly more adverse events were reported with allopurinol than febuxostat, but there was no difference in serious adverse events or withdrawal due to adverse events.

Genetic testing for fetal chromosome abnormalities
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Child safeguarding in acute healthcare services
A cross-sectional audit at a single UK hospital reported that asking adults who presented with mental health problems, drug or alcohol misuse, or problems related to violent behaviour, about children at home identified a considerable number of child safeguarding cases.

Local food environment and diet in children and young people
A systematic review found some evidence that the availability and accessibility of food outlets and the local availability and cost of specific foods affected diet in children and young people.

New NICE Evidence Search
NICE Evidence Search is now mobile friendly and links more closely to key NICE guidance topics and pathways.

Case study from the Quality and Productivity collection
We highlight 1 new example from the Quality and Productivity collection demonstrating how NHS organisations have implemented new local practices that have both cut costs and improved quality.

- Pharmacist-led repeat prescription management: ensuring appropriate prescribing and reducing wastage

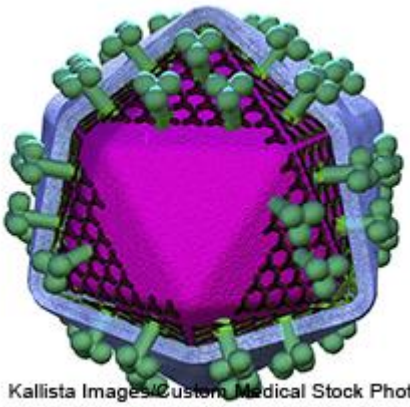
Evidence Updates
NICE has recently published an Evidence Update on:

- Feverish illness in children

Changes to NICE evidence awareness products
NICE has announced some changes to 2 of its evidence awareness products: Evidence Updates and Eyes on Evidence. Evidence Updates are being replaced by new guideline surveillance reports, and Eyes on Evidence has moved to a new home on the NICE website.

HIV testing in healthcare settings other than specialist clinics

Overview: An estimated 107,800 people in the UK were living with HIV in 2013 (Public Health England 2014). People diagnosed with HIV late – that is, those who have a CD4 count of more than 350 cells/mm^3 within 3 months of diagnosis – have a 10-fold increased risk of death in the year after diagnosis compared with those diagnosed promptly. Almost half (42%) of people diagnosed with HIV in 2013 were diagnosed late.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HIV is routinely diagnosed in genitourinary medicine, sexual health and antenatal clinics. In 2013, 71% of people who attended a genitourinary medicine or sexual health clinic in England and 98% of pregnant women who underwent antenatal screening were tested for HIV (Public Health England 2014). In 2007 the UK's Chief Medical Officers and Chief Nursing Officers recommended extending HIV testing all healthcare settings to reduce the number of people with undiagnosed HIV infection and late diagnosis.

Current advice: The UK National Guidelines for HIV Testing, produced by the British HIV Association in 2008, recommend that universal HIV testing should be offered in the following settings:

- Genitourinary medicine and sexual health clinics.
- Antenatal services.
- Termination of pregnancy services.
- Drug dependency programmes.
- Healthcare services for those diagnosed with tuberculosis, hepatitis B, hepatitis C and lymphoma.

An HIV test should be considered for all men and women registering in general practice and for all general medical admissions in settings where diagnosed HIV prevalence in the local population exceeds 2 cases per 1000 population.

HIV testing should also be routinely offered and recommended to people diagnosed with sexually transmitted infections or with illnesses for which HIV is considered in differential diagnosis. In addition, testing should be offered to sexual partners of people who are HIV positive; all male and female sexual contacts of men who have sex with men; people with a history of injecting drug use; and all men and women from a country of high HIV prevalence (>1%) or who have had sexual contact with people from such a country.

NICE has published public health guidance on increasing the uptake of HIV testing among men who have sex with men and among black Africans in England. These 2 pieces of guidance likewise recommend offering HIV testing in primary and secondary care, as well as in genitourinary medicine and specialist sexual health services. NICE is currently preparing guidance on increasing the uptake of HIV testing among people at higher risk of exposure (expected publication date September 2016).

The NICE Pathway on HIV testing and prevention brings together all related NICE guidance and associated products on this area in a set of interactive topic-based diagrams.

New evidence: Elmahdi et al. (2014) conducted a systematic review and meta-analysis of HIV testing in at-risk populations in settings other than genitourinary medicine, sexual health and antenatal clinics in the UK. The authors searched for quantitative studies from after the 2008 UK National Guidelines for HIV Testing were published. The 2 patient groups covered were people diagnosed with a disease indicative of HIV infection, such as tuberculosis or Kaposi's sarcoma, and people who should have been routinely screened for HIV according to the 2008 guidelines.

A total of 30 studies measuring HIV testing in recommended settings were identified (n=109,290), 14 of which were cross-sectional studies or retrospective audits from hospital settings. In a random effects meta-analysis, the proportion of people eligible for HIV testing who were offered and accepted an HIV test was estimated as 27.2% (95% confidence interval [CI] 22.4 to 32.0%). Among those tested, 0.5% (95% CI 0.3 to 0.7%) were positive for HIV infection.

Less than one-quarter (22.4%, 95% CI 13.9 to 30.9%) of people diagnosed with a disease indicative of HIV infection received an HIV test (10 studies, n=3947). Almost one-third (29.5%, 95% CI 23.6 to 35.4%) of people attending settings where screening should have routinely been offered had an HIV test (20 studies, n=105,343).

Among studies reporting the number of tests offered (14 studies, n=62,725), less than half of eligible people were offered an HIV test (40.4%, 95% CI 24.3 to 56.7%). However, almost three-quarters of people who were offered a test decided to take it (71.5%, 95% CI 56.0 to 86.9%; 14 studies, n=62,725).

The authors suggest that the low proportion of eligible people who received an HIV test in settings other than specialist clinics indicates that adherence to the UK National Guidelines for HIV Testing is poor. This analysis was limited by the varying quality of the included studies and the wide variety of populations, settings, duration and methods in the included studies (heterogeneity [I^2] was 100% for some analyses). As such, the authors conclude that caution should be used in interpreting the summary statistics as a true level of overall test coverage.

Commentary: "The evidence presented by Elmahdi et al. (2014) reinforces the difficulties of expanding HIV testing to general medical services. There are clear benefits to both the individual and to society of diagnosing HIV as early as possible, yet nearly half of new HIV diagnoses (47%) in 2013 were diagnosed late.

"Expanding HIV testing in general medical services is one part of a public health strategy to reduce these unacceptably high rates of late diagnosis. However, progress is slow, despite recommendations in national HIV testing guidelines. Worryingly, Elmahdi et al. (2014) found low coverage of HIV testing even in individuals with clinical indicator diseases, where there is both a clinical and public health imperative to

offer an HIV test. The rate of HIV diagnosis in this group was 2.7% (95% CI 1.1 to 4.4%), equivalent to that seen among the highest risk individuals being tested in sexual health clinics.

"The excess costs of treating a late HIV diagnosis, both in the short and long term, continue to inflate the HIV treatment budget. Data presented here indicate that routine HIV testing in services and for clinically-indicated diseases is a cost-effective intervention, with the positive rates surpassing the 0.1% threshold. Thus, despite the clinical, financial and moral arguments for more widespread HIV testing, there remains a long way to go before it becomes embedded as routine practice." ***– Dr Anthony Nardone, Head of Sexual Health Promotion, HIV and STIs Department, Public Health England***

Study sponsorship: This study was not funded.

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Allopurinol for chronic gout

Overview: Gout is a disorder of purine metabolism characterised by a raised level of uric acid in the blood (hyperuricaemia) and the deposition of urate crystals in joints (NICE 2012). The presence of crystals causes acute, intermittent and painful attacks of gouty arthritis in the joints, usually the foot (especially the big toe), knee, hand or wrist. In chronic gout, the joints are affected by subcutaneous concentrations of urate crystals (nodular tophi). Renal damage and kidney stones may also occur.

The estimated prevalence of gout in the UK is 1.4% (Mikuls et al. 2005). Around 72% of people with gout in the UK experience at least 1 gout flare annually. The frequency of flares is associated with serum uric acid levels.

Current advice: The NICE Clinical Knowledge Summary on gout advises that acute attacks are usually treated with non-steroidal anti-inflammatory drugs (NSAIDs, with gastroprotection if indicated) or colchicine (second-line treatment). Corticosteroids are an alternative when NSAIDs and colchicine are unsuitable or not tolerated. Lifestyle advice should be offered to all people with gout.

If hyperuricaemia persists despite lifestyle modification and further attacks of gout occur, urate-lowering therapy should be considered. The British Society for Rheumatology and British Health Professionals in Rheumatology guideline for the management of gout (under review) recommends allopurinol in a starting dose of 50–100 mg/day and adjusting to a maximum dose of 900 mg/day until a serum urate level of less than 0.3 mmol/l (5.4 mg/dl) is reached. Cohort studies have shown that people who achieved plasma urate levels of less than 0.36 mmol/l (6 mg/dl) had a reduced frequency of subsequent gout attacks. Other urate-lowering medicines (such as sulfinpyrazone) are second-line options.

NICE guidance advises that febuxostat is an option for managing chronic hyperuricaemia in gout, but only for people who are intolerant of allopurinol or for whom allopurinol is contraindicated (NICE technology appraisal guidance 164). NICE does not recommend pegloticase for treating gout (NICE technology appraisal guidance 291).

The NICE Pathway on musculoskeletal conditions brings together all related NICE guidance and associated products on gout in a set of interactive topic-based diagrams.

New evidence: A Cochrane review by Seth et al. (2014) compared the efficacy and safety of allopurinol with placebo and urate-lowering medicines in 4531 people with chronic gout. It included 11 studies (7 randomised controlled trials [RCTs] and 4 quasi-RCTs) that mostly enrolled males, with gout duration ranging from a few days to 25 years.

In the 2 studies comparing allopurinol with placebo (n=453), participants who received allopurinol 100–300 mg daily were more likely to achieve a target serum urate level than those who received placebo (data could not be pooled due to heterogeneity; moderate-quality evidence). Allopurinol did not perform better than placebo for other outcomes such as reduction in acute gout attacks or pain.

When allopurinol 100–300 mg daily was compared with febuxostat 80 mg daily, 3 studies (n=1136, low-quality evidence) found no significant difference in the incidence of acute gout attacks over 8–24 weeks. However, 4 studies (n=2618, low-quality evidence) provided some disease-oriented evidence of the efficacy of allopurinol compared with febuxostat. More people achieved a target serum urate level of less than 0.36 mmol/l (6 mg/dl) at 6–12 months with febuxostat than with allopurinol (70% with febuxostat 80 mg daily versus 40% with allopurinol 100–300 mg daily; relative risk [RR]=0.55, 95% confidence interval [CI] 0.48 to 0.63, p<0.00001).

In 3 trials (n=2555, moderate-quality evidence), there was no significant difference between allopurinol 100–300 mg daily and febuxostat 80 mg daily in the number of withdrawals due to adverse events or serious adverse events over 24–52 weeks. However, there were significantly more adverse events with allopurinol than febuxostat 80 mg daily (RR=1.06, 95% CI 1.01 to 1.12, p=0.022; 4 studies, n=2656) or 120 mg daily (RR=1.12, 95% CI 1.05 to 1.20, p=0.0007; 2 studies, n=1036). The most common adverse event reported with allopurinol was skin rash.

The authors concluded that there was limited RCT evidence to support the efficacy and safety of allopurinol compared with placebo and other urate-lowering medicines. Limitations of this review include that the studies were often at high or unclear risk of bias; comparisons with other clinically relevant drugs were either lacking or from small, single studies; and no studies reported on function, health-related quality of life or participants' global assessment of treatment success.

Commentary: "Gout is the most common form of inflammatory arthritis diagnosed in men and the only curable form of arthritis. This evidence shows the paucity of good quality clinical trials investigating allopurinol, which is the most commonly used drug to treat gout and has been used in clinical practice since the 1970s.

"Unfortunately allopurinol is rarely used effectively in the UK (Annemans et al. 2008). The principles of 'treat to target' (maintaining serum urate levels at less than 0.36 mmol/l [6 mg/dl] long term) and upward dose titration dependent on urate levels are often neglected. If allopurinol was used appropriately, many more patients would achieve long-term cure from their gouty arthritis, resulting in reduced long-term disability from erosive joint disease.

"At face value, the clinical studies discussed by Seth et al. (2014) show that febuxostat is more effective than allopurinol 300 mg daily or lower at reducing serum urate levels to less than 0.36 mmol/l (6 mg/dl). However, this finding was based on evidence considered low quality by the authors. In addition, reduction in serum urate levels is a disease-oriented outcome and less useful than patient-oriented outcomes such as reduction in gout attacks. These results are consistent with NICE guidance that febuxostat is an option for managing chronic hyperuricaemia in gout, but only for people who are intolerant of allopurinol or for whom allopurinol is contraindicated (NICE technology appraisal guidance 164).

"The main anxiety concerning these studies is that higher doses of allopurinol were not trialled. In the rheumatology community, it is widely accepted that doses of allopurinol up to 600 mg daily are likely to be required to reduce serum urate levels to below 0.36 mmol/l (6 mg/dl). Patients increasingly have obesity and polypharmacy compared with the 1970s, when dosing studies suggested allopurinol 300 mg daily was effective at reducing serum urate levels to less than 0.36 mmol/l (6 mg/dl).

"It is unlikely clinical practice will be altered dramatically by this evidence. Hopefully the findings will encourage clinicians to titrate the dose of allopurinol upwards dependent on serum urate level and allow

alternative treatment options for patients unable to take allopurinol." ***– Dr Kelsey M Jordan, Consultant in Rheumatology and Honorary Senior Lecturer, Brighton and Sussex University Hospitals NHS Trust***

Study sponsorship: University Hospital Southampton NHS Foundation Trust; School of Public Health and Preventive Medicine, Monash University, Australia; University of British Columbia, Vancouver, Canada; and Institute for Work & Health, Toronto, Canada.

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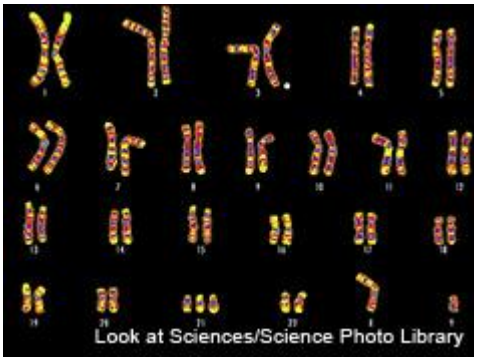
Genetic testing for fetal chromosome abnormalities



Overview: Aneuploid chromosome disorders occur when a developing fetus has too many or too few chromosomes in its cells. Down's syndrome is characterised by 3 instead of 2 copies of chromosome 21 (trisomy 21), and Edwards' syndrome by 1 extra copy of chromosome 18 (trisomy 18).

Pregnant women are screened for Down's syndrome with a blood test to measure the levels of several hormones and an ultrasound scan to measure the thickness of the nuchal translucency (a pocket of fluid) at the back of the fetus's neck (NHS Choices 2013). Edwards' syndrome is usually detected at the 18–20 week ultrasound scan or at the test for Down's syndrome (NHS Choices 2014). If these tests indicate a high risk, definitive diagnosis with genetic tests on invasively collected samples (chorionic villus sampling or amniocentesis) is offered.

An alternative approach to screening for these abnormalities is sequencing cell-free DNA (cfDNA) testing. cfDNA is fetal DNA that circulates freely in the maternal blood stream. Several studies have suggested that cfDNA testing can accurately detect fetal chromosome abnormalities in high-risk women (Palomaki et al. 2012, Sehnert et al. 2011). However, the effectiveness of this test in a general obstetric population is not yet clear.

Current advice: NICE guidance on antenatal care recommends that all pregnant women should be offered screening for Down's syndrome between 11 weeks 0 days and 13 weeks 6 days gestation. The screen for Down's syndrome should comprise the 'combined test': nuchal translucency screening and biochemical tests for beta-human chorionic gonadotrophin and pregnancy-associated plasma protein-A.

For women who book screening later in pregnancy, the most clinically and cost-effective serum screening test should be offered between 15 weeks 0 days and 20 weeks 0 days. Either the triple test (human chorionic gonadotrophin, unconjugated estriol and alpha-fetoprotein) or quadruple test (as per triple test plus inhibin A) should be offered.

The NICE Pathway on antenatal care brings together all related NICE guidance and associated products on the subject in a set of interactive topic-based diagrams.

New evidence: Bianchi et al. (2014) conducted a multicentre observational study comparing cfDNA prenatal testing against standard prenatal screening for identifying aneuploid chromosome disorders in a general obstetric population.

Women with singleton pregnancies in their first or second trimester were recruited from 21 medical

centres in 14 US states. All participants had planned to undergo or had completed standard prenatal screening tests, such as human chorionic gonadotrophin and unconjugated estriol (with or without first-trimester measurement of nuchal translucency). Blood samples were collected at enrolment and analysed using massively parallel sequencing of cfDNA. The data from the standard prenatal tests and the cfDNA tests were analysed by blinded study personnel for trisomy 21 (Down's syndrome) and trisomy 18 (Edwards' syndrome). All patients were followed up for pregnancy outcomes and categorised as affected or not affected for trisomies 21 and 18.

A total of 2052 women were enrolled; 1909 (93%) women were screened for trisomy 21 and 1905 (93%) for trisomy 18. cfDNA testing returned fewer false positives than standard prenatal screening for trisomy 21 (0.3% versus 3.6%, $p<0.001$) and trisomy 18 (0.2% versus 0.6%, $p=0.03$). When the data for trisomy 21 and trisomy 18 were combined, the false positive rates were 0.5% for cfDNA screening and 4.2% for standard prenatal screening. This difference means that 89% fewer women would have required an invasive procedure to confirm a positive screening result if all pregnant women had undergone cfDNA testing as the primary screening method, and all women with positive results had undergone an invasive procedure.

Limitations of this evidence include the relatively small number of true positive results (5 cases of trisomy 21 and 2 cases of trisomy 18), which limited the authors' ability to determine test sensitivity. In addition, pregnancy outcomes were determined mainly by clinical examinations, and nearly 1% of cfDNA tests did not provide results. The study was supported by Illumina, the company that provided the cfDNA testing.

Commentary: "This study adds further evidence to suggest that the performance of non-invasive prenatal testing for aneuploidy is likely to be good in all women as well as in the high-risk group. However, in addition to the relatively small sample size, a major drawback of this study is the fact that Downs' syndrome screening and cfDNA testing was not done at the same time, with non-invasive prenatal testing being done later in pregnancy and often in the third trimester.

"In the UK, the target gestation for Down's syndrome screening is 11–13 weeks (that is, in the first trimester). Non-invasive prenatal testing for aneuploidy can be done from 10–11 weeks, at which point the amount of cfDNA is usually sufficient. Data on the performance of non-invasive prenatal testing in a large number of 'all risk' women at this stage of pregnancy is what is really required. In addition, we know that the proportion of cfDNA increases with gestation, and thus performance may be improved at later gestations.

"As it stands, this study alone does not deliver sufficient evidence to influence current practice in the UK, where we need to understand the overall costs and benefits of cfDNA testing. This will require knowledge of any potential influence of cfDNA testing on overall uptake of Down's syndrome screening and any subsequent invasive diagnostic testing, as well as test performance in all risk women in early pregnancy." ***– Professor Lyn Chitty, GOSHCC Professor of Genetics and Fetal Medicine, UCL Institute of Child Health, Great Ormond Street Hospital NHS Foundation Trust and University College London Hospitals NHS Foundation Trust, London***

Study sponsorship: Illumina.

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Child safeguarding in acute healthcare services

Overview: Public sector bodies in England have a legal responsibility to safeguard children by promoting their welfare and protecting them from harm (Working together to safeguard children 2013). Professionals who come into contact with children and families, such as doctors and teachers, are required to notify children's social care at their local authority if they are concerned that a child is being maltreated, that his or her health or development is being impaired, or that they are not receiving safe and effective care.

Efforts to safeguard children in healthcare settings have traditionally focused on identifying features of maltreatment in children. However, there is growing recognition of the need to consider how adults with physical and mental health problems may affect the wellbeing of their children.

Current advice: NICE guidance on when to suspect child maltreatment provides a summary of the physical and psychological symptoms associated with child maltreatment (alerting features) that may be observed when a child presents to healthcare professionals. It covers alerting features that may be observed in parent–child or carer–child interactions, and features of neglect resulting from poor parental provision and supervision. The guidance outlines 5 steps to follow if a healthcare professional encounters an alerting feature that prompts them to consider, suspect or exclude child maltreatment as a possible explanation.

Guidance from the General Medical Council on protecting children and young people recommends that doctors who treat adults should consider whether the patient poses a risk to children or young people. Doctors must be aware of the risk factors that have been linked to abuse and neglect, such as having parents with mental health or substance misuse issues, and look out for signs that a child or young person may be at risk.

The NICE Pathway on when to suspect child maltreatment brings together all related NICE guidance and associated products on the condition in a set of interactive topic-based diagrams.

New evidence: A cross-sectional audit by Gonzalez-Izquierdo et al. (2014) investigated the proportion of child safeguarding notifications prompted by a parent's presentation for acute healthcare.

The audit took place at a single acute hospital in London. Any department could notify children's social care about child safeguarding concerns on the basis of presentation of a child or presentation of a parent. To identify safeguarding issues as a result of parental behaviour, staff were trained to ask adults presenting with mental health problems, drug or alcohol misuse, or problems related to violent behaviour, whether there were children living at home. Children's social care was notified if maltreatment was suspected, if the child had been exposed to violence, or if parents were incapacitated and unable to look after the child. Notification was also made if the child's own behaviour placed them at risk of harm. All notifications from any hospital department during two 6-month periods were categorised by whether the notification was initiated by presentation of the parent or of the child.

Overall, 681 children were notified to social services over the study period, at an average of 57 notifications a month. A total of 40% of notifications were initiated in response to a parent presenting to healthcare, compared with 60% for presentation of a child. Among the 270 notifications following adult presentation, 60% were from the emergency department and 37% were from maternity services (the remaining 3% were from outpatients or other departments). The majority (87%) of the 411 child presentations that led to social services being notified came from the emergency department. The remainder came from admissions (10%) and outpatients (3%).

The authors noted that the hospital studied has a long-established policy of asking adults who present with behaviour associated with abuse or neglect about children at risk at home. Their findings may not be

generalisable to hospitals where there are lower levels of awareness among healthcare staff about dealing with adults over child safeguarding concerns and no policy of direct questioning. Other limitations of this study are that it took place at a single urban hospital and that no data was available on the outcome of notifications to child social services.

Commentary: "Healthcare professionals are in a key position to be able to identify vulnerability within families and act upon concerns when it is thought that an infant, child or young person may be in need of early help or at risk of harm. In order to do this successfully, it is essential that each individual service recognises its own responsibility in identifying concerns, sharing information and taking action where necessary.

"It is widely recognised that healthcare professionals such as GPs, health visitors and paediatric nurses have a key role in safeguarding children. Latest guidance from the Royal College of Paediatrics and Child Health (2014) emphasises that the responsibility to safeguard children and young people also lies with healthcare professionals who work primarily with adults. These individuals should consider whether presenting adults have dependent children and if these children may be at risk as a direct result of the parents' behaviour or poor health. However, to ensure that this does occur, it is vital that healthcare staff who work with adults are provided with the adequate support and education in order to empower and encourage collaborative assessments and subsequent reporting.

"What Gonzalez-Izquierdo et al. (2014) successfully highlight is the importance of a broad policy where adults presenting to acute services are asked about their caring responsibilities to promptly identify safeguarding concerns for children or young people living within that family structure. This is certainly an approach that should be considered within adult-focused services to encourage professionals to consider the needs of the family as a whole." ***– Sheena Bynoe, Lecturer in Child Health, Florence Nightingale Faculty of Nursing & Midwifery, King's College London***

Study sponsorship: Department of Health.

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Local food environment and diet in children and young people

Overview: The term 'obesogenic environment' refers to the role environmental factors may play in determining both energy intake and expenditure. (Government Office for Science 2007). Environmental factors may act by determining the availability and consumption of different foods, the levels of physical activity undertaken by populations, or both.

The food environment can be described as the opportunities for people to obtain food. The concept of food environment can be broken down into 4 aspects (Glanz et al. 2005):

- The community food environment (for example, location and accessibility of food outlets)
- The consumer food environment (for example, price, promotion and placement of food choices)
- The organisational food environment (for example, access to food in settings other than home, such as workplaces and schools)
- The information food environment (for example, food marketing, media and advertising).

Previous studies have suggested that the local food environment can influence the likelihood of children being obese or overweight (Osei-Assibey et al. 2012).

Current advice: The 2011 government report Healthy Lives, Healthy People: A Call to Action on Obesity in England recommended that government, local government and 'key partners' (such as the food and drink industry) should change the environment to support individuals in making healthier choices to prevent weight gain.

NICE's public health guidance on working with local communities to prevent overweight and obesity states that local policy makers should consider the full range of factors that may influence weight, such as access to food and drinks that contribute to a healthy and balanced diet or opportunities to use more physically active modes of travel. Commissioners should aim to influence the wider determinants of health, including, for example, ensuring access to affordable, healthier food and drinks.

The NICE Pathways on obesity and diet bring together all related NICE guidance and associated products on the areas in interactive topic-based diagrams.

New evidence: A systematic review by Engler-Stringer et al. (2014) investigated how the community and consumer food environments affect diet among children and young people.

The review sought studies in children and young people aged less than 18 years that assessed the community food environment (for example, number or distance of food outlets from participants' homes) or the consumer food environment (for example, price and promotion of food in local food outlets). The outcomes of interest were any dietary measures, such as intake of healthy or unhealthy foods and quality of diet.

A total of 26 studies were identified, most of which were cross-sectional studies conducted in the USA, Canada or Europe. Overall, 22 of these 26 studies showed at least one association between the food environment and diet in children and young people.

A total of 16 studies (approximately 81,000 participants) assessed the availability and access of food outlets within 0.1 to 6 miles of children and young people's homes. Of the 15 studies considering availability of food outlets, 11 found that the presence, number and density of food outlets near home were associated with dietary outcomes. Only 5 of the 14 studies that assessed access to food outlets reported an association between distance of the nearest food outlet from home and diet. However, the direction of effect was not consistent; for example, 1 study found that high vegetable intake was associated with both living further from a fast food outlet and living further from a supermarket.

Among the 4 studies that assessed perceived food availability (approximately 31,000 participants), 3 found that perceived availability of food outlets was associated with diet.

The remaining 6 studies considered the consumer food environment: cost of local food (3 studies, approximately 64,000 participants) and availability of specific food groups in local outlets (3 studies, approximately 1800 participants). Cost of fast food appeared to be negatively associated with fast food consumption, and availability of specific food types, such as vegetables, in local outlets seemed to be linked with consumption.

This analysis is limited by the variation among the included studies, in how the community and consumer food environment was assessed and in the diet outcome measures used. In addition, studies selected for this review were assessed for inclusion by only 1 reviewer, and study quality and publication bias were not evaluated.

Commentary: "This high-quality review brings together the published evidence on the association between the community and consumer food environments and children's diets. This is a notoriously difficult field to measure, because there are significant challenges in assessing both diet and aspects of the environment. The findings – that the availability and accessibility of food outlets and the local cost and availability of specific foods affected diet in children and young people – are therefore of great importance. It seems likely that further methodological developments would only serve to strengthen these

conclusions.

“We therefore do not need to wait to take action. There should be strong concerted actions to improve the availability of and access to healthy foods. People should not be bombarded with promotions for food loaded with sugar and fat, while fresh fruit and vegetables lie out of reach. Action should focus on all places where people have access to food, including workplaces, schools, cafes, restaurants, takeaways, and the retail environment. The aim should be to make the healthier choice the easy choice.” ***– Dr Nick Cavill, Independent Consultant, Cavill Associates Ltd and Research Associate, University of Oxford***

Study sponsorship: Canadian Institutes for Health Research.

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New NICE Evidence Search

Over the past few months, NICE has been working to improve the way health and social care professionals can search for high-quality evidence to make decisions about treatments, interventions or the use of resources.

NICE Evidence Search provides free open access to a unique index of authoritative, evidence-based information from hundreds of trustworthy and accredited sources. The new and improved Evidence Search has been developed following valuable feedback from the many users who tested the BETA site. It presents relevant, high-quality evidence and best practice more quickly and clearly.

Our usage data showed that a third of people used Evidence Search on mobile devices. Evidence Search is now mobile friendly, resizing and reshaping content to fit the device used to browse it. Its new design functions on a wide range of browsers, and the download speed of the site has been improved to be as fast as possible when using mobile devices.

Evidence Search now links more closely to key NICE guidance topics and pathways, although will still continue to provide a wide range of high-quality evidence from other evidence providers.

The main benefits of the new Evidence Search are:

- The service works equally well on desktop, tablet and mobile.
- Mobile accessible filters.
- Quicker download speed of the site, especially when using mobile devices.
- Closer links to key NICE guidance by displaying relevant NICE topics and pathways in a right hand panel.
- Quick links to popular sources such as Clinical Knowledge Summaries (CKS) and the BNF/BNFC.
- Clearer search filters on the left hand side of the page.

Try the new NICE Evidence Search.

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Case study from the Quality and Productivity collection: pharmacist-led repeat prescription management

Approximately 2.1 million repeat prescriptions are issued nationally each day (Health and Social Care Information Centre 2012). Estimates suggest that 80% of prescriptions by volume are for repeat prescriptions, accounting for 60–70% of total prescribing costs (Department of Health 2012).

The government action plan 'Improving the use of medicines for better outcomes and reduced waste' (Department of Health 2012) emphasises the need to reduce the unnecessary costs associated with repeat prescriptions and medicines wastage. It states that practice-based pharmacists can be part of the solution by identifying opportunities to reduce medicines wastage.

The NICE guideline on medicines optimisation recommends medicines reconciliation by a trained and competent health professional – ideally a pharmacist, pharmacy technician, nurse or doctor – when a person moves from one care setting to another. Carrying out a structured medication review should be considered for some groups of people when a clear purpose for the review has been identified; for example, adults, children and young people taking multiple medicines.

Walsall Clinical Commissioning Group implemented a pharmacist-led repeat prescription management service aimed at reducing medicines wastage, minimising possible harm from medicines and improving the quality of repeat prescribing. Practice-based pharmacists worked as an integral part of primary care teams to manage repeat prescriptions.

The previous system, common in many general practices, involved administrative staff generating the repeat prescription for authorisation by the GP(s) on duty. On average, each GP authorised approximately 200 repeat prescriptions per week.

The Walsall initiative invested in pharmacist time to manage repeat prescriptions. The pharmacists generated the repeat prescriptions and authorised those within their medical competence, with the rest authorised by GPs.

Productivity savings were made by reducing wastage due to over-ordering and by implementing drug formulation changes and medication alignment. Non-quantifiable savings arose from improvements to care quality by reducing future appointments, hospital admissions and disease progression in some cases.

Wastage on all prescribed medicines has been estimated at up to £300 million per annum nationally (Department of Health 2012). Before implementation, the wastage of medicines within the Walsall health economy was estimated to be in excess of £1 million a year.

For the financial year 2013–14, the repeat prescription management service delivered net savings of £610,270. For every £1 invested in pharmacist time, there was a saving of £3.05.

Bharat Patel, Head of Medicines Management and Primary Care at Walsall Clinical Commissioning Group, said: "While the initiative realised real cash savings, the process has also brought many other clinical benefits. Quality and safety is likely to be improved for patients because the extra pharmaceutical checks help to ensure they are given the right medicines in the right doses, monitoring needs are identified and patients signposted for review of long term conditions. It also results in time savings for GPs, which releases more time for helping patients with complex needs, and embeds practice-based pharmacists into the primary care team."

The NICE Quality and Productivity collection provides users with practical case studies that address the quality and productivity challenge in health and social care. All examples submitted are evaluated by NICE to assess the degree to which the initiative meets the Quality and Productivity criteria: savings, quality, evidence and implementability. Visit the NICE website for more details of pharmacist-led repeat prescription management and other examples of quality and productivity initiatives.

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Evidence Updates

NICE has recently published an Evidence Update on:

- Feverish illness in children

This Evidence Update highlights and provides commentary on selected new evidence published since the NICE guidance was issued. 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 feverish illness in children was published by NICE in February 2015. It includes commentary from the EUAG on 7 new articles (relevant to NICE clinical guideline 160), covering the following topics:

- Assessment of risk of serious illness
- Diagnostic value of laboratory tests in children younger than 3 months and in children aged 3 months or older
- Causes and incidence of serious bacterial infection.

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Changes to NICE evidence awareness products

NICE has announced some changes to 2 of its evidence awareness products: Evidence Updates and Eyes on Evidence.

From April 2015, NICE will no longer produce Evidence Updates. However, information on important new evidence in relation to NICE guidelines will still be available through NICE surveillance reports.

Surveillance reports will contain a summary of new evidence related to the guideline and an in depth commentary on a selection of this evidence, and will provide a decision on whether the relevant guideline should be updated in light of the new evidence. To receive the new surveillance reports, please email surveillance@nice.org.uk.

The Eyes on Evidence awareness service has moved to a new home on the NICE website. Information about Eyes on Evidence and how to subscribe to the service is now available on the NICE newsletters and alerts page. Previous Eyes on Evidence articles can be found in NICE Evidence Search by searching for "Eyes on Evidence". Previous issues will be available on the NICE newsletters and alerts page.

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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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