

- Patients with reflux disease, i.e., with recurring problems caused by reflux of stomach contents through the upper orifice of the stomach (cardia), are soon symptom-free with antacids such as the proton pump inhibitor.
- Drugs within the NSAID group (anti-inflammatory agents, but not of the cortisone type) often have side effects such as dyspepsia, and are a common reason for ulcers, mainly in the stomach. They are used for acute and chronic joint and muscle diseases. In long-term use of NSAIDs, such as for chronic rheumatoid arthritis, prophylactic treatment should be considered in patients having risk factors. It is relatively well documented that proton pump inhibitors and misoprostol, with the capacity to both inhibit gastric acid formation and protect the mucous membrane of the stomach, are the most effective in treating lesions in the stomach, while proton pump inhibitors and histamine-2-receptor blockers are the most effective in treating lesions in the duodenum.
- Severe and alarming stomach problems, e.g., hemorrhaging, should lead to acute or speedy examination of the esophagus and the stomach by gastroscopy, a special instrument for direct inspection of these organs. In some cases, the existence of *H. pylori* is investigated to determine whether gastroscopy should be conducted. In the report, we have presented and discussed the advantages and disadvantages of different management strategies using a decision tree model. Clinical examinations using practical application of this and similar theoretical decision models would be valuable, both for the individual patient and for society's resources.
- Stomach cancer comprises less than 1% of all dyspepsia and seldom appears in people below 45 years of age. *H. pylori* infection is associated with a somewhat higher risk for stomach cancer. Presently, it would be irrational to conduct mass screening for this bacteria infection and to treat cancer preventively, since several other factors of importance exist. We do not have sufficient scientific knowledge about the virulence (capacity to cause disease) of various bacteria strains and about the receptivity of the individual—the prerequisites for preventive intervention.

MINI-SUMMARIES FROM THE U.K. HTA PROGRAMME

Geriatric Rehabilitation Following Fractures in Older People: A Systematic Review

SUMMARY POINTS

- Geriatric service interventions after hip fracture are complex and strongly influenced by local conditions. The effectiveness of rehabilitation programs is uncertain, and comparative studies comparing different treatments and strategies are of poor to moderate quality.
- Based on the available evidence, geriatric hip fracture and early supported discharge programs are probably cost-effective since they appear to shorten the average length of hospital stay and are associated with significantly increased rates of return to previous residential status. Clinical pathways also appear to reduce total length of stay in hospital.
- Geriatric orthopedic rehabilitation units are unlikely to be cost-effective, but some frailer patients may benefit in respect of reduced readmission rates and need for nursing home placement.
- Length of stay may be reduced by the introduction of prospective payment systems, but these have led to increased use of nursing homes in the United States.
- There is no evidence that any of the programs evaluated are associated with changes in mortality. However, there are insufficient data to assess the impact of any program on level of function, morbidity, quality of life, or impact on carers.

Implantable Contraceptives (Subdermal Implants and Hormonally Impregnated Intrauterine Systems) Versus Other Forms of Reversible Contraceptives: Two Systematic Reviews to Assess Relative Effectiveness, Acceptability, Tolerability, and Cost-effectiveness

SUMMARY POINTS

- There was insufficient evidence to suggest that one type of subdermal implant was any more or less effective in preventing pregnancy than another implant or any of the other methods with which they were compared.
- From the evidence on hormonally impregnated intrauterine systems (IUS), levonorgestrel-20 IUS was found to be no more or less effective than copper intrauterine devices (IUD) with a copper wire surface area $>250 \text{ mm}^2$.
- Levonorgestrel-20 IUS users were significantly less likely to experience intrauterine or extrauterine pregnancies than IUD $\leq 250 \text{ mm}^2$ users. However, women using the levonorgestrel-20 IUS were more likely to experience amenorrhea, which was a notable reason for discontinuation of IUS.
- Generally the cost-effectiveness ratios for subdermal implants and IUS were quite high, indicating that they were more costly per pregnancy averted than the other contraceptive methods with which they were compared.

The Effectiveness and Cost-effectiveness of Prophylactic Removal of Wisdom Teeth

SUMMARY POINTS

- A rapid and systematic review of the literature was undertaken. Studies were included if they:
 - a) Were randomized controlled trials (RCTs), literature reviews, or decision analyses;
 - b) Involved people with unerupted or impacted third molars, or those undergoing surgical removal of third molars either as prophylaxis or due to associated pathological changes; and
 - c) Measured either the pathological changes associated with retention of third molars or post-operative complications following extraction.
- The review concluded that there is no reliable research evidence to support the prophylactic removal of disease-free impacted third molars. Available evidence suggests that retention may be more effective and cost-effective than prophylactic removal, at least in the short to medium term.
- There is a need for well-designed RCTs to compare prophylactic removal versus management by deliberate retention using long-term follow-up. Decision analysis models are also needed to compare long-term outcomes of prophylactic removal with retention of impacted third molars.

Ultrasound Screening in Pregnancy: A Systematic Review of the Clinical Effectiveness, Cost-effectiveness, and Women's Views

SUMMARY POINTS

- There is evidence that routine ultrasound in early pregnancy provides a) better gestational age assessment; b) earlier detection of multiple pregnancies; and c) detection of clinically unsuspected

fetal malformation at a time when termination of pregnancy is possible. However, these effects have not been shown to improve ultimate fetal outcome.

- Data about first trimester anomaly screening are lacking. There are substantial variations in, and limits to, detection rates of fetal structural abnormalities using routine ultrasound screening. Women and clinicians seem insufficiently aware of this.
- No convincing evidence of benefit from routine examination in late pregnancy (>24 weeks) was found, whether using imaging or Doppler ultrasound.
- A number of inefficiencies in the routine ultrasound screening program were identified (including the need for repeat scans and that not all women book at early gestation), some of which are unavoidable but which have implications for both clinical and cost-effectiveness.
- Ultrasound is very attractive to women and their partners, provided the appearance of the baby is normal, but there is potential to cause anxiety and shock if the scan shows a problem.
- Decision analysis modeling to calculate the cost-effectiveness of ultrasound screening for fetal abnormalities showed one scan in the second trimester to be a clear reference case. However, more representative cost data are required before precise estimates of additional costs and benefits of alternative screening options can be determined.

Randomized Controlled Trial of Nondirective Counseling, Cognitive Behavior Therapy, and Usual General Practitioner Care in the Management of Depression as well as Mixed Anxiety and Depression in Primary Care

SUMMARY POINTS

- In this randomized controlled trial, a total of 464 eligible patients, aged 18 years and over, were referred by 73 GPs and allocated to psychological therapy (nondirective counseling or cognitive behavior therapy) or usual GP care for depressive symptoms.
- Nondirective counseling and cognitive behavior therapy were both more effective clinically than usual GP care after 4 months (short-term) treatment. But at 12 months, the patients in all three groups had improved to the same extent.
- Psychological therapy provided in primary care was found to be a cost-effective method of reducing depressive symptoms in the short term, but the benefits did not endure over the long term.
- No differences in direct or indirect costs between the three treatments were observed at either 4 or 12 months. The additional costs associated with providing practice-based psychological therapy were recouped due to savings in visits to primary care, psychotropic medication, and other specialist mental health treatments.

Routine Referral for Radiography of Patients Presenting with Low Back Pain: Is Patients' Outcome Influenced by GPs' Referral for Plain Radiography?

SUMMARY POINTS

- This randomized controlled trial (RCT) based in U.K. general practice was designed to compare short- and long-term outcomes for patients with low back pain who were referred or not referred for lumbar spine x-ray after first presentation. The study also had an observational arm to enable comparisons to be made with patients not recruited to the RCT. A total of 153 patients were recruited to the RCT and 506 patients to the observational study.

Technology assessment reports

- There were few significant differences at 6 weeks or 1 year between patients who were referred for lumbar spine x-ray and those who were not. Patients who were referred showed a small improvement in psychological well-being over the following year. NHS costs at 6 weeks were higher among those referred for x-ray, mainly due to the cost of the x-ray.
- In the observational study, patients referred for x-ray had higher costs both in the short and long term. The poorer prognosis of patients referred for x-ray probably explains these differences.
- This study suggests that early x-ray referral does not lead to less morbidity and that the benefit from early x-ray is small.
- The results support existing guidelines. Early x-ray is not indicated, although it might still be considered when patient anxiety is a major feature.
- It cannot be assumed that patients will reconsult if symptoms do not improve.

A Systematic Review to Evaluate the Effectiveness of Interventions to Promote the Initiation of Breastfeeding

SUMMARY POINTS

- Human breastmilk provides complete nutrition for infants and helps protect against certain childhood diseases. Despite this, rates of initiation of breastfeeding in the United Kingdom remain low relative to other countries. The government has highlighted the promotion of breastfeeding in order to assist improvements in health and to reduce the health inequalities of mothers and children in the United Kingdom.
- This systematic review of the literature showed that informal, small group health education, delivered during the antenatal period, appears to be effective at increasing initiation rates among women from different income groups and from some minority ethnic groups. One-to-one health education can also be effective at increasing initiation rates among women on low incomes.
- Peer support programs, delivered in both the antenatal and postnatal periods, have been shown to be effective at increasing both the initiation and duration of breastfeeding among women on low incomes, and particularly among women who have expressed a wish to breastfeed.
- Effective packages appear to include a peer support program and/or a media campaign combined with structural changes to the health sector and/or health education activities.

Combination Therapy (Interferon Alpha and Ribavirin) in the Treatment of Chronic Hepatitis C: A Rapid and Systematic Review

SUMMARY POINTS

- Hepatitis C is a viral disease of the liver that often develops into an insidious chronic disease.
- This systematic review showed that combination therapy (interferon alpha and ribavirin) is better than interferon alone and that it is cost-effective.
- There is evidence to support the use of 6 months of combination therapy as first-line treatment to patients not previously treated with interferon and also to patients who have relapsed following a previous course of interferon. At 6 months, continuation of treatment should depend on factors that may predict a good sustained response.
- Variations in the prevalence of hepatitis C virus mean that the cost of combination therapy would vary considerably among health authorities.

***Intravascular Ultrasound-guided Interventions in Coronary Artery Disease:
A Systematic Literature Review, with Decision-Analytic Modeling,
of Outcomes and Cost-effectiveness***

SUMMARY POINTS

- Intravascular ultrasound is the generic name for any ultrasound technology used *in vivo* within the blood vessels. The technology may be useful in guiding coronary interventions.
- This systematic review of the literature found few well-designed studies.
- In stenting, intravascular ultrasound may be beneficial, since the angiographic restenosis rate after 6 months is reported to be lower (16%; 7 studies) than stenting without intravascular ultrasound guidance (24%; 5 studies).
- Using a decision analytic model, the cost per restenosis event avoided was £1,545. The cost per QALY was £6,438, but the baseline QALY gain was only 0.03 years. Sensitivity analysis resulted in a saving of £5,000 to a cost of £24,000 per restenosis event avoided.
- The available evidence on the use of intravascular ultrasound for guiding coronary interventions is weak, and further research is required.

***A Randomized Controlled Trial to Evaluate the Effectiveness and
Cost-effectiveness of Counseling Patients with Chronic Depression***

SUMMARY POINTS

- This randomized controlled trial involved 181 patients suffering from depression for at least 6 months. The experimental group received usual GP treatment and either cognitive behavioral therapy or psychodynamic counseling. Patients in the control group received usual GP treatment.
- There were no differences between the treatment groups (or between cognitive behavioral therapy and psychodynamic counseling) after 6 or 12 months. However, most patients were very positive about the counseling and considered it helpful, and at 12 months significantly fewer patients in the experimental group were classified as “cases” than in the control group.
- Due to the costs of the counseling, the primary care costs during the intervention period were significantly higher in the experimental group. There were no significant differences in other costs.

Systematic Review of Treatments for Atopic Eczema

SUMMARY POINTS

- Atopic eczema is a very common inflammatory skin disease that can have a profound effect on the quality of life for both sufferers and their families.
- This systematic review of the literature showed that for many available products there is a lack of evidence supporting their use in the prevention and treatment of atopic eczema. Most studies are short-term trials of “me too” products, and the standards of clinical trial reporting are poor.
- Little research has evaluated commonly used treatments compared with each other or in combination.
- There is also a lack of common outcome measures that evaluate issues that are important to patients and a lack of data on questions that physicians and people with atopic eczema deem to be important. Further primary atopic eczema research that addresses these questions is needed.

The Management of Dyspepsia: A Systematic Review

SUMMARY POINTS

- There is still much uncertainty around the management of dyspepsia, including proven nonulcer dyspepsia and uninvestigated dyspepsia.
- This review indicates that the treatment for proven nonulcer dyspepsia, for which the evidence is most reliable, is *Helicobacter pylori* eradication. One in 15 patients with a normal endoscopy will benefit from *H. pylori* eradication. *H. pylori* eradication is cost-effective because the treatment is potentially curative rather than just suppressive.
- In primary care, the conclusions are much less robust. Initial endoscopy-guided management may be slightly more effective than empirical acid suppression, but is unlikely to be cost-effective in younger patients. Proton pump inhibitors are the most effective empirical treatment, since many patients have reflux symptoms. The cost-effectiveness of *H. pylori* “test and treat” is unknown.

The programme has to date produced over 60 monographs reporting health technology assessment that were commissioned after rigorous steps to identify and prioritize the topics of most importance to the health service. A list of the entire series to date, together with the full text and full executive summaries of all of them, is available at <http://www.nechta.org>.