# Guideline Summary NGC-9946

## Guideline Title

**Dapagliflozin in combination therapy for treating type 2 diabetes.**

## Bibliographic Source(s)

National Institute for Health and Care Excellence (NICE). Dapagliflozin in combination therapy for treating type 2 diabetes. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. 61 p. (Technology appraisal guidance; no. 288).

## Guideline Status

This is the current release of the guideline.

## Scope

### Disease/Condition(s)

Type 2 diabetes

### Guideline Category

Assessment of Therapeutic Effectiveness

Treatment

### Clinical Specialty

Cardiology

Endocrinology

Family Practice

Internal Medicine

### Intended Users

Advanced Practice Nurses

Nurses

Physician Assistants

Physicians

### Guideline Objective(s)

To assess the clinical effectiveness and cost-effectiveness of dapagliflozin in combination therapy for treating type 2 diabetes

### Target Population

Adults over 18 years old with type 2 diabetes whose glycaemic control, with metformin or insulin, with or without a second oral agent, and together with diet and exercise, is not satisfactory

### Interventions and Practices Considered

Dapagliflozin in combination therapy

### Major Outcomes Considered

- Clinical effectiveness
  - Change in glycosylated haemoglobin (HbA1c)
  - Change in body weight

- Systolic blood pressure
- Fasting plasma glucose
- High density lipoprotein (HDL) level, low density lipoprotein (LDL) level, total cholesterol, triglyceride level
- Incidence of cardiovascular events and renal diseases
- Safety outcomes (episodes of hypoglycaemia, infection, any adverse event)

- Cost-effectiveness

## Methodology

### Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Searches of Unpublished Data

### Description of Methods Used to Collect/Select the Evidence

**Note from the National Guideline Clearinghouse (NGC)**: The National Institute for Health and Care Excellence (NICE) commissioned an independent academic centre to perform a systematic literature review on the technology considered in this appraisal and prepare an assessment report. The Evidence Review Group (ERG) report for this technology appraisal was prepared by Aberdeen Health Technology Assessment (HTA) Group (see the "Availability of Companion Documents" field).

**Clinical Effectiveness**

**Description of Manufacturer's Search Strategies and Critique**

Overall the sources searched for this submission were appropriate although the electronic searches lacked sensitivity. Furthermore, in the main submission, there is no evidence that systematic searching was undertaken after May 2011. However, four studies (including three of the five main dapagliflozin randomised controlled trials [RCTs] considered by the manufacturer) were published after this date and it is unclear which methods were used to identify these additional papers. There were no literature searches undertaken for additional information on adverse events from case series studies therefore the evidence-base for evaluation of adverse events might be incomplete. A detailed critique of the manufacturer's search strategy is given in Appendix 1 of the ERG report (see the "Availability of Companion Documents" field).

**Inclusion Criteria**

The inclusion criteria used in the systematic review of clinical effectiveness are tabulated in Table 1 of the ERG report (see the "Availability of Companion Documents" field).

RCTs involving metformin as a comparator in the insulin add-on network meta-analysis (NMA) were also excluded at this stage. The manufacturer maintained that as metformin is not a comparator of interest in the UK for the insulin add-on indication since it would usually be used in combination with insulin, before dapagliflozin.

**Cost-Effectiveness**

**Description of Manufacturer's Search Strategies and Critique**

The manufacturer's search was designed for each database to retrieve relevant cost-effectiveness, utilities and resource utilisation studies. Ten databases were searched, including the major relevant ones; MEDLINE, EMBASE, National Health Service Economic Evaluation Database (NHS EED), and Health Technology Assessment (HTA) Database. The ERG is unclear, however, on why databases of clinical effectiveness reviews (Cochrane Database of Systematic Reviews [CDSR] and Database of Review of Effectiveness [DARE]) and of trials (CENTRAL) were also searched. The searches were conducted in October 2011.

The MEDLINE and EMBASE searches were structured by combining a fairly focused clinical search using diabetes and relevant drug terms with an appropriate range of controlled vocabulary and free text economic terms. The strategies were considered fit-for-purpose.

NHS EED and HTA database (as well as CDSR, DARE and CENTRAL) were searched using the Cochrane Library interface. The search strategy was focused using the appropriate MeSH diabetes term combined (using AND) with any of the included drugs and a range of economic terms. Since the former is a database of economic evaluations and the latter of health technology assessments it seems unnecessary to use any economic or cost terms in the search strategy and potentially is comprising sensitivity.

**Inclusion and Exclusion Criteria**

Inclusion criteria for the search for economic evaluation covered:

- Any full economic evaluation: cost-utility, cost-effectiveness, cost-benefit, cost-minimisation conducted in a UK specific setting.
- The search included the following indications within the dapagliflozin licence in order to match the patient populations covered by the dapagliflozin economic model presented in this submission:
  - Dual therapy, with any of the following used as an add-on to metformin (or background therapy): dapagliflozin, sulphonylureas (SUs), pioglitazone (a thiazolidinedione [TZD]), dipeptidyl peptidase-4 (DPP-4) inhibitors (sitagliptin, vildagliptin, saxagliptin), glucagon-like peptide-1 (GLP-1) (liraglutide, exenatide), insulin and insulin analogues, in adults with type 2 diabetes mellitus (T2DM).
  - Add-on therapy to insulin with one of: dapagliflozin, pioglitazone, a DPP-4 inhibitor or a GLP-1 analogue.

### Number of Source Documents

#### Clinical Effectiveness

- Five randomised controlled trials (RCTs) were included.
- In addition, 50 RCTs which focused on various comparator interventions were identified.

#### Cost-Effectiveness

- No relevant economic evaluations for dapagliflozin were identified.
- Four economic evaluations that reported cost per quality-adjusted life year (QALY) outcomes in a UK context for therapy as an add-on to metformin (dual therapy) were identified.
- The manufacturer presented an economic model.

### Methods Used to Assess the Quality and Strength of the Evidence

Expert Consensus

### Rating Scheme for the Strength of the Evidence

Not applicable

### Methods Used to Analyze the Evidence

Meta-Analysis

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

### Description of the Methods Used to Analyze the Evidence

**Note from the National Guideline Clearinghouse (NGC)**: The National Institute for Health and Care Excellence (NICE) commissioned an independent academic centre to perform a systematic literature review on the technology considered in this appraisal and prepare an assessment report. The Evidence Review Group (ERG) report for this technology appraisal was prepared by Aberdeen Health Technology Assessment (HTA) Group (see the "Availability of Companion Documents" field).

**Clinical Effectiveness**

#### Quality Assessment

The manufacturer assessed the quality of all included randomised controlled trials (RCTs) (both dapagliflozin and comparator RCTs). The quality assessment strategy is considered adequate by the ERG.

The quality of the five dapagliflozin RCTs was good. Methods to achieve randomisation were adequate and allocation was concealed using computerised schedules or interactive voice response systems. Analysis was on a modified intention-to-treat basis. The full analysis sets for the trials included all randomised patients who had received at least one dose of the investigational product, had a baseline measurement, and at least one post-baseline assessment. The ERG considers this strategy an acceptable alternative to a strict intention-to-treat analysis.

The quality of the comparator RCTs was generally good. However, the reporting of some of the comparator trials was not always adequate, particularly with respect to randomisation sequence generation and allocation concealment.

The ERG assessed the methodological quality of the manufacturer's systematic review of clinical effectiveness using the Centre for Reviews and Dissemination (CRD) criteria (see Table 3 in the ERG report [see the "Availability of Companion Documents" field]). In general, the quality of the systematic review was good. The ERG did, however, have concerns about the sensitivity of the literature search and the fact that it appeared that the search had not been updated since May 2011.

#### Assumptions of the Network Meta-Analyses (NMA)

There were many assumptions in the manufacturer's NMA. Various additional eligibility criteria were introduced. Although the ERG considers the manufacturer's NMA approach to be reasonable, it is worth pointing out that many details were lacking.

Due to the wide variation in the definitions of hypoglycaemia, the manufacturer considered both major and minor hypoglycaemic events within the NMA, even though the rates varied considerably. The ERG considers this approach acceptable in view of the limited data available, though they note that the greatest impact on quality of life comes from severe hypoglycaemic episodes.

Two RCTs involving both glucagon-like peptide-1 (GLP-1) analogues and intensive diet regimes were excluded. The rationale for these exclusions was that the intervention resulted in a much greater weight loss than it would be expected with the use of a GLP-1 analogue alone, and so the addition of an intensive dietary component to the drug intervention rendered these trials not comparable to other studies in the network. The ERG agrees with this.

Sulphonylureas (SUs) were excluded from the 24 week metformin add-on NMA, except for the analysis of systolic blood pressure (SBP), due to an unstable effect size at the duration of follow-up (attributed by the manufacturer to a possible J-curve effect of the drug over time and due to the fact that it may take up to 18 weeks for titration of SUs). The ERG thought that it was uncommon to exclude just one class of drug from the meta-analyses for the above reasons and would have liked to have seen greater justification for this exclusion. However, in practice, SUs would not be a comparator to dapagliflozin, but a precursor.

In the insulin add-on NMA, RCTs were deemed suitable for inclusion if they reported outcomes at 24 weeks (± eight weeks). The time window around 24 weeks was widened *ad hoc* from six to eight weeks to allow for the inclusion of a thiazolidinedione (TZD) trial. Three RCTs which compared TZDs to placebo were excluded on the basis that they allowed

thiazolidinedione (TZD) trial. Three RCTs which compared TZDs to placebo were excluded on the basis that they allowed up-titration of insulin in order to maintain glycaemic control. In response to an ERG query, the manufacturer explained that they thought that this was the best strategy to maintain the consistency assumption in the mixed treatment comparison (MTC) model, as up-titration of insulin was considered to modify the treatment effect. Even though exclusion of these trials meant that insulin was not being used to its best clinical effect in the remaining trial, the ERG considers this revised eligibility criterion to be acceptable as the decision to exclude trials which consent to up-titration of insulin appears to have been a pragmatic choice to allow a comparison to be made between dapagliflozin and TZDs.

RCTs involving metformin as a comparator in the insulin add-on NMA were also excluded at this stage. The manufacturer maintained that as metformin is not a comparator of interest in the UK for the insulin add-on indication since it would usually be used in combination with insulin, before dapagliflozin.

*Triple Therapy*

Overall, the ERG considers the methodology of the triple therapy review as less robust as that of the main submission. It is worth noting, however, that this was submitted as an addendum to the main submission following a request by NICE. The manufacturer did not initially intend to provide findings of the use of dapagliflozin in the triple therapy setting as an important triple therapy RCT is currently ongoing. Trials since 2009 that resulted in oral antidiabetic drugs getting a triple therapy license were added (saxagliptin and linagliptin). The two dapagliflozin studies that were included were subsets of larger studies and only included patients with cardiovascular disease that were older and might be expected to have poorer outcome than other patient groups taking dapagliflozin. The results presented appear to be derived from simple pooling of these subgroups.

See Section 4 of the ERG report (see the "Availability of Companion Documents" field) for additional information.

**Cost-Effectiveness**

**Summary and Critique of Manufacturer's Submitted Economic Evaluation by the ERG**

See Table 8 of the ERG report (see the "Availability of Companion Documents" field) for the NICE reference case checklist comparing the economic submission with NICE reference case.

*Model Structure*

The Dapagliflozin Cost Effectiveness Model (DCEM) is a discrete event simulation model with an Excel front end and an intermediary visual basic coding, but with the main calculations being performed by compiled C++ programming. As submitted for this assessment, patients are assumed to have none of the following 7 complications of type 2 diabetes mellitus (T2DM) at baseline:

- Ischaemic heart disease
- Myocardial infarction
- Congestive heart failure
- Stroke
- Amputation
- Blindness
- End stage renal disease

The DCEM simulates the possibility of a first event of each of the above complications of T2DM as a function of the evolution of the following risk factors:

- Glycosylated haemoglobin (HbA1c)
- Systolic blood pressure (SBP)
- Total cholesterol to high density lipoprotein (HDL) cholesterol ratio (TC:HDL)
- Body mass index (BMI)

During the incident year for any of: myocardial infarction, congestive heart failure, stroke, amputation or renal failure, these events may be fatal. Other deaths are modelled as a function of life table entries.

The model permits two therapies to be compared. Given a baseline set of patient characteristics, including the baseline prevalence of the complications of T2DM, each therapy is associated with an initial effect upon each of the risk factors coupled with the duration of the effect after which the UK prospective Diabetes Study (UKPDS 68) risk factor evolution equations are applied. The duration of effect prior to the UKPDS 68 risk factor evolution equations being applied is assumed to be one year for the base case, with the exception of BMI.

All the submitted models have a therapy switch from 1st line to 2nd line. A further switch to a 3rd line therapy can also be specified. See Figure 8 of the ERG report (see the "Availability of Companion Documents" field).

See Section 5 of the ERG report for additional information on cost-effectiveness analysis (see the "Availability of Companion Documents" field).

## Methods Used to Formulate the Recommendations

Expert Consensus

## Description of Methods Used to Formulate the Recommendations

### Considerations

Technology appraisal recommendations are based on a review of clinical and economic evidence.

### Technology Appraisal Process

The National Institute for Health and Care Excellence (NICE) invites 'consultee' and 'commentator' organisations to take part in the appraisal process. Consultee organisations include national groups representing patients and carers, the bodies representing health professionals, and the manufacturers of the technology under review. Consultees are invited to submit evidence during the appraisal and to comment on the appraisal documents.

Commentator organisations include manufacturers of the products with which the technology is being compared, the National Health Service (NHS) Quality Improvement Scotland and research groups working in the area. They can comment on the evidence and other documents but are not asked to submit evidence themselves.

NICE then commissions an independent academic centre to review published evidence on the technology and prepare an 'assessment report'. Consultees and commentators are invited to comment on the report. The assessment report and the comments on it are then drawn together in a document called the evaluation report.

An independent Appraisal Committee then considers the evaluation report. It holds a meeting where it hears direct, spoken evidence from nominated clinical experts, patients and carers. The Committee uses all the evidence to make its first recommendations, in a document called the 'appraisal consultation document' (ACD). NICE sends all the consultees and commentators a copy of this document and posts it on the NICE Web site. Further comments are invited from everyone taking part.

When the Committee meets again it considers any comments submitted on the ACD; then it prepares its final recommendations in a document called the 'final appraisal determination' (FAD). This is submitted to NICE for approval.

Consultees have a chance to appeal against the final recommendations in the FAD. If there are no appeals, the final recommendations become the basis of the guidance that NICE issues.

**Who Is on the Appraisal Committee?**

NICE technology appraisal recommendations are prepared by an independent committee. This includes health professionals working in the NHS and people who are familiar with the issues affecting patients and carers. Although the Appraisal Committee seeks the views of organisations representing health professionals, patients, carers, manufacturers and government, its advice is independent of any vested interests.

## Rating Scheme for the Strength of the Recommendations

Not applicable

## Cost Analysis

**Summary of Appraisal Committee's Key Conclusions**

**Availability and Nature of Evidence**

The manufacturers had provided a revised economic model in order to address concerns raised by the Decision Support Unit (DSU) about the original model and the DSU considered that their concerns had been addressed. However, the DSU and the Evidence Review Group (ERG) had identified a number of errors in the revised model which were subsequently addressed by the DSU in its exploratory analyses. The Committee concluded that the manufacturers' revised economic model with the subsequent amendments made by the DSU was acceptable for assessing the cost effectiveness of dapagliflozin in combination therapy for treating type 2 diabetes. The Committee concluded that the results of the validation exercise with the CORE diabetes model provided reassurance about the integrity of the results obtained from the manufacturers' revised economic model.

**Uncertainties Around and Plausibility of Assumptions and Inputs in the Economic Model**

In terms of the clinical-effectiveness data that were applied in the economic models, the Committee considered that it was more appropriate to use a single source as was available in the 52-week network meta-analysis, but was aware of the limited number of trials informing this analysis. It also noted that the 24-week network meta-analysis only excluded sulfonylureas, and that the evidence from the clinical specialists suggested that dapagliflozin would be used where a sulfonylurea was not appropriate. On this basis the 24-week network meta-analysis data were appropriate.

The Committee heard from the DSU that the results from the revised model were sensitive to the timing of treatment switching in the model which was dependent on the relationship between glycosylated hemoglobin (HbA1c) at the start of treatment, treatment-related changes in HbA1c levels and the HbA1c threshold levels for switching treatment.

The Committee considered that uncertainty remained about the effects of stopping treatment with dapagliflozin and the impact on weight gain. Therefore, it concluded that the scenario analysis conducted by the DSU, which involved the convergence of differences in weight profiles between treatment groups at the time of switching to the last line of treatment, was more appropriate for decision-making.

**Incorporation of Health-Related Quality-of-Life Benefits and Utility Values/Have Any Potential Significant and Substantial Health-Related Benefits Been Identified That Were Not Included in the Economic Model, and How Have They Been Considered?**

The Committee considered the utility values applied in the model, noting that the majority of the quality-adjusted life-year (QALY) gains associated with dapagliflozin arose from the direct impact of weight change on health-related quality of life rather than a reduction of diabetic complications and other adverse events. The Committee concluded that the utility values associated with changes in weight may have been too large and that the values applied in the manufacturers' scenario analyses and DSU analyses were more reasonable.

The Committee noted that the DSU had completed analyses that included both the higher and lower estimates of loss of utility associated with hypoglycaemic events, and that these had made small differences to the estimates of the incremental cost-effectiveness ratio (ICER).

The Committee concluded that, although the loss in utility associated with urinary tract and genital infections was likely to be greater than that proposed by the manufacturers, it was satisfied that this did not significantly impact on the relative cost-effectiveness of dapagliflozin as dual therapy or add-on to insulin.

**What Are the Key Drivers of Cost-Effectiveness?**

The Committee noted that in all settings the majority of the QALY gains associated with dapagliflozin arose from the direct impact of weight change on health-related quality of life rather than from a reduction of diabetic complications and other adverse events.

**Most Likely Cost-Effectiveness Estimate (Given as an ICER)**

For dapagliflozin as dual therapy in combination with metformin, the Committee considered the DSU deterministic analysis and scenario analyses, which included the convergence of differences in weight between treatment groups at the time of switching to the last line of treatment. It noted that these showed that dipeptidyl peptidase-4 (DPP-4) inhibitors were associated with higher costs and QALYs than dapagliflozin, but that these differences were small. It noted further that in the DSU probabilistic sensitivity analysis these differences were even smaller.

For dapagliflozin as add-on to insulin, the Committee noted that in all the analyses conducted by the DSU the estimate of the ICER for dapagliflozin compared with DPP-4 inhibitors was below £20,000 per QALY.

See Sections 3 and 4 of the original guideline document for a detailed discussion of the cost-effectiveness analysis.

### Method of Guideline Validation

External Peer Review

### Description of Method of Guideline Validation

Consultee organisations from the following groups were invited to comment on the draft scope, Assessment Report and the Appraisal Consultation Document (ACD) and were provided with the opportunity to appeal against the Final Appraisal Determination.

- Manufacturer/sponsors
- Professional/specialist and patient/carer groups
- Commentator organisations (without the right of appeal)

In addition, individuals selected from clinical expert and patient advocate nominations from the professional/specialist and patient/carer groups were also invited to comment on the ACD.

## Recommendations

### Major Recommendations

Dapagliflozin in a dual therapy regimen in combination with metformin is recommended as an option for treating type 2 diabetes, only if it is used as described for dipeptidyl peptidase-4 (DPP-4) inhibitors in the National Guideline Clearinghouse (NGC) summary of the National Institute for Health and Care Excellence (NICE) guideline Type 2 diabetes: the management of type 2 diabetes (NICE clinical guideline 87).

Dapagliflozin in combination with insulin with or without other antidiabetic drugs is recommended as an option for treating type 2 diabetes.

Dapagliflozin in a triple therapy regimen in combination with metformin and a sulfonylurea is not recommended for treating type 2 diabetes, except as part of a clinical trial.

People currently receiving dapagliflozin in a dual or triple therapy regimen that is not recommended for them in the above paragraphs should be able to continue treatment until they and their clinician consider it appropriate to stop.

### Clinical Algorithm(s)

This guidance has been incorporated into a NICE Pathway for diabetes, available from the National Institute for Health and Care Excellence (NICE) Web site.

## Evidence Supporting the Recommendations

### Type of Evidence Supporting the Recommendations

The type of evidence supporting the recommendations is not specifically stated.

The Appraisal Committee considered clinical and cost-effectiveness evidence submitted by the manufacturer of dapagliflozin and a review of this submission by the Evidence Review Group (ERG). For clinical effectiveness, five randomised controlled trials were the main source of evidence. For cost-effectiveness, the manufacturer's model and the additional economic analysis undertaken by the ERG were considered.

## Benefits/Harms of Implementing the Guideline Recommendations

### Potential Benefits

Appropriate use of dapagliflozin in combination therapy for treating type 2 diabetes

### Potential Harms

The summary of product characteristics lists the following adverse reactions for dapagliflozin: hypoglycaemia (when used with a sulfonylurea or insulin), urinary tract and genital infection, back pain, dysuria, polyuria, dyslipidaemia and elevated haematocrit.

For full details of adverse reactions and contraindications, see the summary of product characteristics available at http://emc.medicines.org.uk/.

### Contraindications

## Contraindications

### Contraindications

Dapagliflozin is not recommended for use in people with moderate to severe renal impairment (patients with a creatinine clearance rate of less than 60 ml/min or an estimated glomerular filtration rate of less than 60 ml/min/1.73 $m^2$) because its efficacy is dependent on renal function. Dapagliflozin is also not recommended for use in combination with pioglitazone.

For full details of adverse reactions and contraindications, see the summary of product characteristics available at http://emc.medicines.org.uk/.

## Qualifying Statements

### Qualifying Statements

- This guidance represents the views of the National Institute for Health and Care Excellence (NICE) and was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.
- Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

## Implementation of the Guideline

### Description of Implementation Strategy

- Section 7(6) of the National Institute for Health and Care Excellence (NICE) (Constitution and Functions) and the Health and Social Care Information Centre (Functions) Regulations 2013 requires clinical commissioning groups, National Health Service (NHS) England and, with respect to their public health functions, local authorities to comply with the recommendations in this appraisal within 3 months of its date of publication.
- When NICE recommends a treatment 'as an option', the NHS must make sure it is available within the period set out in the paragraph above. This means that, if a patient has type 2 diabetes and the doctor responsible for their care thinks that dapagliflozin is the right treatment, it should be available for use, in line with NICE's recommendations.
- NICE has developed tools to help organisations put this guidance into practice (listed below). These are available on the NICE website (http://guidance.nice.org.uk/TA288).
  - Costing template and report to estimate the national and local savings and costs associated with implementation.
  - Audit support for monitoring local practice.

### Implementation Tools

Audit Criteria/Indicators

Clinical Algorithm

Foreign Language Translations

Patient Resources

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

## Institute of Medicine (IOM) National Healthcare Quality Report Categories

### IOM Care Need

Living with Illness

### IOM Domain

Effectiveness

Patient-centeredness

## Identifying Information and Availability

### Bibliographic Source(s)

National Institute for Health and Care Excellence (NICE). Dapagliflozin in combination therapy for treating type 2 diabetes. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. 61 p. (Technology appraisal guidance; no. 288).

### Adaptation

Not applicable: The guideline was not adapted from another source.

### Date Released

2013 Jun

### Guideline Developer(s)

National Institute for Health and Care Excellence (NICE) - National Government Agency [Non-U.S.]

### Source(s) of Funding

National Institute for Health and Care Excellence (NICE)

### Guideline Committee

Appraisal Committee

### Composition of Group That Authored the Guideline

*Committee Members*: Dr Jane Adam (*Chair*), Department of Diagnostic Radiology, St George's Hospital; Professor Iain Squire (*Vice Chair*), Consultant Physician, University Hospitals of Leicester; Professor A E Ades, Professor of Public Health Science, Department of Community Based Medicine, University of Bristol; Professor Thanos Athanasiou, Professor of Cardiovascular Sciences and Cardiac Surgery and Consultant Cardiothoracic Surgeon, Imperial College London and Imperial College Healthcare NHS Trust; Dr Jeremy Braybrooke, Consultant Medical Oncologist, University Hospitals Bristol NHS Foundation Trust; Dr Gerardine Bryant, General Practitioner, Heartwood Medical Centre, Derbyshire; Dr Fiona Duncan, Clinical Nurse Specialist, Anaesthetic Department, Blackpool Victoria Hospital, Blackpool; Mr Andrew England, Lecturer in Medical Imaging, NIHR Fellow, University of Liverpool; Professor Jonathan Grigg, Professor of Paediatric Respiratory and Environmental Medicine, Barts and the London School of Medicine and Dentistry, Queen Mary University London; Dr Brian Hawkins, Chief Pharmacist, Cwm Taf Health Board, South Wales; Dr Peter Heywood, Consultant Neurologist, Frenchay Hospital; Dr Sharon Saint Lamont, Head of Quality and Innovation, North East Strategic Health Authority; Dr Ian Lewin, Consultant Endocrinologist, North Devon District Hospital; Dr Louise Longworth, Reader in Health Economics, HERG, Brunel University; Dr Anne McCune, Consultant Hepatologist, University Hospitals Bristol NHS Foundation Trust; Professor John McMurray, Professor of Medical Cardiology, University of Glasgow; Dr Alec Miners, Lecturer in Health Economics, London School of Hygiene and Tropical Medicine; Dr Mohit Misra, General Practitioner, Queen Elizabeth Hospital, London; Ms Sarah Parry, CNS Paediatric Pain Management, Bristol Royal Hospital for Children; Ms Pamela Rees, Lay Member; Dr Ann Richardson, Lay Member; Ms Ellen Rule, Programme Director, NHS Bristol; Mr Stephen Sharp, Senior Statistician, MRC Epidemiology Unit; Dr Peter Sims, General Practitioner, Devon; Dr Eldon Spackman, Research Fellow, Centre for Health Economics, University of York; Mr David Thomson, Lay Member; Dr John Watkins, Clinical Senior Lecturer/Consultant in Public Health Medicine, Cardiff University and National Public Health Service Wales; Dr Olivia Wu, Reader in Health Economics, University of Glasgow

### Financial Disclosures/Conflicts of Interest

Committee members are asked to declare any interests in the technology to be appraised. If it is considered there is a conflict of interest, the member is excluded from participating further in that appraisal.

### Guideline Status

This is the current release of the guideline.

### Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) from the National Institute for Health and Care Excellence Web site.

### Availability of Companion Documents

The following are available:

- Cummins E, Scott N, Rothnie K, Waugh N, Fraser C, Philip S, Brazzelli M. Dapagliflozin for the treatment of type 2 diabetes. Evidence review group report. Aberdeen Health Technology Assessment (HTA) Group; 2012. 130 p. Electronic copies: Available in Portable Document Format (PDF) from the National Institute for Health and Care Excellence (NICE) Web site.
- Dapagliflozin in combination therapy for treating type 2 diabetes. Costing template. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. (Technology appraisal 288). Electronic copies: Available from the NICE Web site.
- Dapagliflozin in combination therapy for treating type 2 diabetes. Clinical audit tool. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. (Technology appraisal 288). Electronic copies: Available from the NICE Web site.
- NICE Pathways. Diabetes overview. London (UK): National Institute for Care Excellence (NICE); 2013 Jun. Electronic copies: Available from the NICE Web site.

### Patient Resources

The following is available:

- Dapagliflozin given in combination with other drugs for diabetes. Information for the public. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. 7 p. (Technology appraisal 288). Electronic copies: Available in Portable Document Format (PDF) from the National Institute for Health and Care Excellence (NICE) Web site. Also available in Welsh from the NICE Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

### NGC Status

This NGC summary was completed by ECRI Institute on September 23, 2013.

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