



Surveillance report 2017 – Atrial fibrillation: management (2014) NICE guideline CG180

Surveillance report

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Surveillance decision

We will plan an update of the guideline on [atrial fibrillation](#) (AF). The update will focus on:

- diagnosis and assessment
- assessment of stroke and bleeding risks
- interventions to prevent stroke
- rate and rhythm control
- prevention and management of postoperative atrial fibrillation.

An extension to the scope will be needed to incorporate:

- case detection of atrial fibrillation
- short term use of antiarrhythmic drugs following ablation
- the use of statins to prevent postoperative atrial fibrillation.

During surveillance editorial or factual corrections were identified. Details are included in [appendix A](#): summary of evidence from surveillance.

Reason for the decision

Assessing the evidence

We found 250 studies through surveillance of this guideline.

Evidence that could affect recommendations was identified. Topic experts, including those who helped to develop the guideline, advised us about whether the following sections of the guideline should be updated and any new sections added:

Diagnosis and assessment

- Identification and assessment: presenting symptoms/pulse palpitation

Population screening falls within the remit of the National Screening committee (NSC); the NSC considered AF in 2014 and did not recommend screening although this is scheduled for review in 2018.

Evidence from a systematic review identified during the surveillance review indicates that case detection in high risk AF patients, using an opportunistic approach, is as effective as population screening but at a significantly lower cost. Topic experts and NSC feedback indicated that detection of AF in high risk patients is potentially within the remit of NICE and that a new question in the guideline could be appropriate to include multiple components. These include:

- Targeting at risk individuals with other pathologies predisposing to AF, such as related cardiovascular conditions.
- The optimal means of detection including new technological developments, such as through pulse rhythm checks and with the use of the new handheld ECG monitors.
- Monitoring for secondary prevention in patients who have already had a stroke. New evidence indicates that insertable cardiac monitors (ICMs), including loop recorders, are a cost-effective diagnostic tool for the prevention of recurrent stroke in patients with cryptogenic stroke. The guideline does not make recommendations for the use of ICMs.

There is therefore a potential impact on the guideline to consider detection of AF based on high risk assessment.

Decision: This review question should be added.

- In patients with suspected AF based on an irregular pulse, how accurate is an ECG in diagnosing AF?

NICE's guideline on AF does not make recommendations on ECG-interpreting software. The new systematic review evidence indicates that the use of automated ECG-interpreting software may enable GPs to more accurately interpret 12 lead ECGs and to rule out AF in primary care. However, its sensitivity appears to be similar to interpretation by healthcare professionals and further evidence may therefore be required to establish a definite impact on the guideline. The lack of conclusive evidence was also confirmed by topic expert feedback.

Decision: This question should not be updated.

- In patients with suspected intermittent AF, how effective is ambulatory ECG rather than event ECG in diagnosing AF?

New evidence and topic expert feedback highlighted that ICMs, including loop recorders, are a cost-effective diagnostic tool for the prevention of recurrent stroke in patients with cryptogenic stroke. The guideline does not make recommendations for the use of ICMs. Topic experts advised

that the potential impact lies in the question on detection and that this question does not require updating.

Decision: This question should not be updated.

Assessment of stroke and bleeding risks

- What is the most clinically and cost-effective risk stratification tool for stroke or thromboembolic events in people with AF?

The guideline recommends the use of CHA₂DS₂-VASc stroke risk score to assess stroke risk in AF, atrial flutter, or a continuing risk of arrhythmia recurrence after cardioversion back to sinus rhythm. The collective new evidence and topic expert feedback indicates that other new and emerging risk scores including Atria, ABC, and QStroke may perform more accurately than CHA₂DS₂-VASc and that all risk scores should be reviewed.

The review of these tools should take into account the following factors as indicated by new evidence and topic expert feedback:

Decision: This review question should be updated.

- What is the clinical and cost effectiveness of HAS-BLED compared to other tools in assessing bleeding risk in people with AF?

Topic experts noted that there was considerable debate about the use of the HAS-BLED score to assess the risk of intervention for stroke prevention during the development of the guideline.

Subsequent clinical education experience has indicated that recommendation 1.4.2 has not been well implemented and in some areas seems to be obstructing appropriate intervention to reduce stroke risk. Topic experts highlighted uncertainty around the usefulness of HAS-BLED, referring to recent European Society of Cardiology guidelines on AF, which list bleeding risk factors that are considered to be more inclusive than HAS-BLED. Consequently it was felt that HAS-BLED's position in the guideline should be reviewed.

However, additional topic expert feedback stated that HAS-BLED has value as a simple score for bleeding risk assessment which also focuses on identification of high risk patients for review and follow-up, and which highlights the potentially reversible bleeding risk factors.

New evidence and topic expert feedback indicates that HAS-BLED may not be superior to other bleeding risk scores, including Atria, ABC, and Qbleed. There is therefore a potential impact on recommendation 1.4.2 to review the different risk scores, taking into account the following factors emerging from the collective evidence and topic expert feedback:

Decision: This review question should be updated.

Interventions to prevent stroke

- What is the most clinical and cost-effective antithrombotic therapy for stroke prevention in people with AF?

Since the publication of the guideline, another anticoagulant has become available, edoxaban. Although this is covered by NICE technology appraisal guidance 355 on [edoxaban for preventing stroke and systemic embolism in people with non-valvular atrial fibrillation](#) (September 2015), it is not included in the guideline. Topic experts advised that the recommendations from the technology appraisal should be incorporated into the guideline.

Topic expert feedback highlighted the need to provide contextual guidance on NOACs covered by the NICE technology appraisals that have been incorporated into NICE's guideline on AF. This was considered necessary to aid decision making on the choice of anticoagulant in specific patient groups, and on switching between warfarin and NOAC treatments. However, the highly diverse range of factors informing the choice of anticoagulant, including heterogeneous patient groups, are beyond the scope of the guideline. NICE implementation teams will explore methods and tools to aid treatment choices.

In the light of safety concerns about the use of warfarin in patients with AF who experience a head injury, topic experts indicated that the guideline should cross refer to NICE guideline on [head injury](#). Additionally, topic expert feedback advised that the recommendation should be broadened from warfarin to incorporate any anticoagulant.

Topic experts noted that the course of action in the context of AF and an indication for dual antiplatelet therapy is frequently encountered in clinical practice. This includes people who have had a myocardial infarction and who also have AF, for whom anticoagulation is needed in addition to dual antiplatelet therapy. This issue is only briefly considered in the full version of the guideline, because most of the applicable studies had already been considered in NICE's guideline on myocardial infarction. However, topic experts stressed that, given the importance of this issue, it should be addressed in an update of the guideline. A cross reference to NICE's guideline on [myocardial infarction](#) will be incorporated.

Decision: This review question should be updated.

- What is the clinical and cost effectiveness of left atrial appendage occlusion (LAAO) compared to anti-thrombotic therapy in the prevention of stroke in people with AF?

New systematic review and randomised controlled trial (RCT) evidence indicates that LAAO is non-inferior to oral anticoagulation without LAAO, with comparable efficacy and safety.

Topic expert feedback indicated that, although the guideline recommends LAAO in situations where other forms of anticoagulation were contraindicated, there was no formal cost effectiveness assessment as part of the guideline development. Topic experts noted that in recent years, provision has been made for a limited number of patients to undergo LAAO through NHS England's Commissioning through Evaluation scheme. This finished in November 2016 and there is no longer a funding source for this procedure. A clearer identification of patients in whom the procedure is thought to be cost effective was considered to be important in an update of the question.

New evidence and topic expert feedback indicates that LAAO with the Watchman device is a non-inferior alternative to warfarin for stroke prevention in patients with AF, but cautious use is essential given safety concerns over complications. Further expert feedback highlighted that surgical closure should be considered as an alternative intervention, using a thoracoscopic technique with the AtriClip exclusion system, which is always occlusive. A review of the comparable efficacy between the LAAO devices, surgical closure and NOACs is therefore necessary, including a cost effectiveness analysis.

Decision: This review question should be updated.

- What is the clinical and cost effectiveness of using different rate control drug strategies in the pharmacological management of atrial fibrillation?

New evidence and topic expert feedback indicates that in patients with concomitant heart failure and AF, beta-blocker therapy may not reduce all-cause mortality. NICE's guideline on AF advises that the choice of drug, either a beta-blocker or calcium channel blocker, should be based on the person's symptoms, heart rate, comorbidities and preferences. The new evidence is broadly consistent with basing the choice on comorbidities, but the recommendation may need to be revised to omit beta-blockers as an option for initial monotherapy in patients with comorbid AF and heart failure. The new evidence is stronger than the single trial reviewed by the guideline committee relating to beta-blockers in this sub-population. There is therefore a potential impact on the guideline to amend the recommendation.

Decision: This review question should be updated.

Rate and rhythm control

- What is the clinical and cost effectiveness of catheter ablation compared to non-ablation therapies in people with atrial fibrillation?

The collective new evidence indicates that radiofrequency catheter ablation in particular, and possibly cryoballoon ablation, may be more effective than anti-arrhythmic drug (AAD) management in reducing AF in both paroxysmal and persistent AF. The evidence also suggests that the acute complication rate of catheter ablation may have decreased over time and could be comparable to that of medical therapy.

NICE's guideline on AF advises that left atrial catheter ablation should be offered to people with paroxysmal AF, and considered for people with persistent AF, if drug treatment has failed to control symptoms of AF or is unsuitable. It was unclear at the time of guideline development whether there was a difference between left atrial catheter ablation and medical therapies in reducing mortality, stroke, hospitalisation for heart failure and embolic complications in AF patients. However, the new evidence indicates that the incidence rates of all-cause mortality and stroke may be comparable between catheter ablation and AAD therapy, and there is therefore a potential impact on the recommendation. Topic experts noted that the review should also include a comparison between surgical and catheter ablation, and cryoablation as an alternative to radiofrequency ablation.

Topic expert feedback further highlighted that there is increasing evidence for a staged hybrid approach for people with long standing persistent AF, which is the subject of the ongoing trials [CASA AF](#), [CEASE AF](#) and [DEEP](#). These will be monitored by the surveillance team for consideration in a future review of the guideline.

Decision: This review question should be updated.

Prevention and management of postoperative atrial fibrillation

- What is the best treatment strategy (rate or rhythm control or no treatment) for patients with postoperative AF?

New evidence and topic expert feedback indicates that strategies for rate control and rhythm control achieved similar outcomes in treating postoperative AF (POAF) and that neither treatment strategy showed a net clinical advantage over the other. There is a potential impact on the guideline

to review the advice to offer a rhythm-control strategy as the initial management option for the treatment of POAF following cardiothoracic surgery, unless contraindicated.

Decision: This review question should be updated.

- New review question – What is the effectiveness of statins in the prevention of postoperative atrial fibrillation?

New systematic review evidence indicates that perioperative statin therapy, particularly atorvastatin, may decrease the risk of POAF in patients undergoing cardiac surgery. The evidence appears to be strongest in patients undergoing isolated coronary artery bypass grafting. Topic expert feedback noted that statins are used in most patients undergoing cardiac surgery and that their anti-inflammatory effects are considered to be beneficial for preventing POAF and the inflammatory responses to cardiopulmonary bypass. The guideline does not make recommendations on the use of statins, and there is therefore a potential need to include the new question in an update of the guideline. Expert feedback also advised a cross referral from the guideline to NICE's guideline on [cardiovascular disease: risk assessment and reduction, including lipid modification](#), to assess cardiovascular risk as advised, before discussing with patients the use of statins for the prevention of POAF.

Decision: This review question should be added.

Short term use of antiarrhythmic drugs following ablation

- New review question – What is the effectiveness of short term antiarrhythmic drugs following ablation for the prevention of AF recurrence?

New evidence indicates that the use of AADs following catheter ablation may reduce the incidence of early recurrent atrial tachyarrhythmias within 3 months, but did not prevent late recurrence of AF beyond 3 months of ablation. NICE's guideline on AF advises against the use of amiodarone for long term rate control but does not make specific recommendations relating to AADs post ablation. There is a potential need to include the new question in an update of the guideline.

Decision: This review question should be added.

We also found evidence that supports current recommendations on:

- echocardiography

- educational and behavioural interventions
- referral for specialised management
- systematic monitoring
- transoesophageal echocardiography (TOE)-guided cardioversion
- drug treatment for long-term rhythm control
- surgical ablation compared to catheter ablation
- antiarrhythmic drugs to prevent postoperative AF.

We did not find any evidence related to the recommendations on:

- clinical and cost-effective means of (excluding ablation) restoring sinus rhythm
- surgical ablation compared to non-ablation.

For any evidence relating to published or ongoing NICE technology appraisals, the guideline surveillance review deferred to the technology appraisal decision. This included technology appraisals on [apixaban](#) (TA275), [dabigatran](#) (TA249), [rivaroxaban](#) (TA256) and [dronedarone](#) (TA197). A technology appraisal of [edoxaban](#) (TA355) has been published more recently and is currently not incorporated into the guideline.

Equalities

Topic experts highlighted the following potential equality issues:

- Inequality of treatment for frail and older people in residential care who may not be receiving anticoagulation.
- Specific ethnic minority groups most at risk or affected by AF and with related comorbidities may not be receiving equality of diagnosis and treatment. Differing risk profiles may have implications for the management of risk.

Overall decision

After considering all the evidence and views of topic experts, we decided that a partial update with modified scope is necessary for this guideline.

See [how we made the decision](#) for further information.

Commentary on selected evidence

With advice from topic experts we selected 3 studies for further commentary.

Rate and rhythm control

We selected the individual patient data (IPD) meta-analysis by [Kotecha et al. \(2014\)](#) for a full commentary because it provides stronger evidence than the single randomised controlled trial (RCT) reviewed by the guideline committee for this question in NICE's guideline on atrial fibrillation (AF), and has a potential impact on recommendations.

What the guideline recommends

The guideline recommends either a standard beta-blocker (that is, a beta-blocker other than sotalol) or a rate-limiting calcium-channel blocker as initial monotherapy to people with atrial fibrillation who need drug treatment as part of a rate control strategy. It advises that the choice of drug should be based on the person's symptoms, heart rate, comorbidities and preferences when considering drug treatment.

Methods

Kotecha et al. (2014) conducted an IPD meta-analysis to assess the efficacy and safety of beta-blockers in patients with heart failure and concomitant atrial fibrillation. Trials which were not head to head trials were excluded, as were those with less than 300 participants or a planned follow up of 6 months or less. Data were obtained from 11 studies and included data from a total of 18,254 patients. Risk of bias was assessed for the included studies according to the Cochrane handbook. The primary outcome was all-cause mortality. Where deaths occurred after early study termination or following a fixed censor point, these were included in the analysis.

Results

In total, 13,946 (76%) participants had sinus rhythm and 3,066 (17%) had AF at baseline. All-cause mortality was significantly reduced in patients with sinus rhythm receiving beta-blocker therapy (hazard ratio [HR] 0.73, 95% confidence interval [CI] 0.67 to 0.80, $p < 0.001$). However, all-cause mortality was not significantly reduced in patients with AF (HR 0.97, 95% CI 0.83 to 1.14, $p = 0.73$).

Subgroup analysis of patients with AF confirmed this non-significant result across the following variables:

- age
- sex
- left ventricular ejection fraction
- New York Heart Association class
- heart rate
- baseline medical therapy.

Furthermore, there were no significant benefits of beta-blockers in any of the secondary outcomes of cardiovascular death, composite clinical outcomes of death and cardiovascular hospitalisation, or non-fatal stroke.

Strengths and limitations

Strengths

- The study only included data from RCTs with a low risk of bias.
- The study included a very large overall sample size.
- Published and unpublished trials were identified through a comprehensive search of multiple sources.
- The authors provided a detailed description of how IPD were requested, collected, checked and managed.

Limitations

- Patients with AF and atrial flutter were not analysed separately, but the impact of this was lowered due to only a small percentage of patients having atrial flutter.
- The lower than expected rate of incident AF, particularly paroxysmal AF, indicates potential under-reporting.
- The authors were unable to specify the type, duration and persistence of AF, which may have yielded additional subgroup data.
- The authors did not report any quality assurance of study selection or risk of bias assessment.

Impact on guideline

This new evidence indicates that in patients with comorbid heart failure and AF, beta-blocker therapy may not reduce all-cause mortality. This is broadly consistent with the guideline advice to base the choice of treatment on comorbidities, amongst other factors. However, it may need to omit beta-blockers as one of the stated options for initial monotherapy in patients with comorbid AF and heart failure. The new evidence is considerably stronger than the single trial included in the evidence review for the guideline relating to beta-blockers in this context.

Topic experts also noted the uncertainty about the value of beta-blockers in people with both conditions, and considered the new evidence to have an impact on the recommendations.

Prevention and management of postoperative atrial fibrillation

We selected the RCT by [Gillinov et al. \(2016\)](#) for a full commentary because it had a large sample size, is directly relevant to the guideline review question on the best treatment strategy for postoperative AF (POAF), and has a potential impact. It was also highlighted by topic expert feedback as a pivotal study in reviewing the recommendation on rhythm control.

What the guideline recommends

NICE's guideline on AF recommends that, unless contraindicated, a rhythm-control strategy should be offered as the initial management option for the treatment of postoperative atrial fibrillation following cardiothoracic surgery.

Methods

The RCT by Gillinov et al. (2016) compared rate control versus rhythm control strategies among 523 haemodynamically stable adults with new-onset AF or atrial flutter after cardiac surgery. The exclusion criteria were:

- patients whose POAF did not persist for more than 60 minutes or
- patients who did not have recurrent episodes of AF during the index hospitalisation (7 days or less after surgery) or
- patients with a history of AF.

The primary outcome was the total number of days in the hospital (including emergency department visits) within 60 days following randomisation.

Secondary outcomes included:

- the duration of the hospital stay from randomisation to the time of eligibility for discharge on the basis of criteria regarding AF
- the length of the index hospitalisation
- the need for readmission
- heart rhythm
- time to conversion to a sustained stable rhythm without AF
- the need for permanent placement of a pacemaker
- the rates of death and adverse events.

Results

Approximately 76% of patients in the rhythm-control group and 73% of patients in the rate control group completed the full course of assigned treatment. The reasons why the majority of patients discontinued treatment were reportedly accounted for in the trial protocol.

There was no significant difference between the rate control and rhythm control groups in terms of the number of hospital days within the first 60 days of randomisation (mean 6.4 days and 7.0 days, respectively, $p=0.76$; median 5.1 days and 5.0 days, respectively).

For the secondary outcomes, there were no significant differences between the groups in terms of:

- The rates of death (3 in the rate control group, 2 in the rhythm control group $p=0.64$).
- Overall serious adverse events, including thromboembolic and bleeding events (24.8 per 100 patient-months in the rate-control group and 26.4 per 100 patient-months in the rhythm-control group, $p=0.61$).
- Overall rates of cerebrovascular thromboembolism (0.8 per 100 patient-months in the rate-control group and 0.4 per 100 patient-months in the rhythm control group, $p=0.40$).
- Non-cerebral thromboembolism (0.6 per 100 patient-months and 0.2 per 100 patient-months, $p=0.31$).

- Serious bleeding rates (2.2 per 100 patient-months in the rate-control group and 1.2 per 100 patient-months in the rhythm-control group, $p=0.21$).
- Major infections (9.3 per 100 patient-months in the rate-control group and 6.6 per 100 patient-months in the rhythm-control group, $p=0.13$).
- Cardiac arrhythmias (4.7 and 6.2 per 100 patient-months, for rate-control and rhythm-control groups, respectively, $p=0.30$).
- Pleural effusions (3.0 and 4.8 per 100 patient-months, for rate-control and rhythm-control groups, respectively, $p=0.16$).

Strengths and limitations

Strengths

- The RCT had a larger sample size and duration than the studies reviewed for this area in the guideline.
- Intention to treat analysis was conducted to preserve the randomisation and to give a measure of effectiveness under realistic conditions.

Limitations

- The authors acknowledged that the primary outcome of total number of days of hospitalisation within 60 days after randomisation was only an indicator of important clinical outcomes, such as stroke and serious bleeding. The RCT was not sufficiently powered to detect differences in these outcomes.
- The results only related to patients with new-onset POAF, and did not consider those with previous or existing POAF. The authors did not include information regarding the 1,414 patients who remained free of POAF, particularly preoperative medication. A secondary analysis of this data could inform the use of preoperative preventative therapy.
- Treatment discontinuation was high. Intention to treat analysis partially addressed this but the high rate of switching reduced any real difference between the groups.
- The duration of the trial was too short to include important outcomes of quality of life and longer term POAF occurrence.

Impact on guideline

The RCT by Gillonov et al. provides stronger evidence than the smaller studies reviewed for the guideline, which also included relatively short follow-up periods (ranging from less than 1 hour to 30 days). The new evidence indicates that initial strategies for rate control and rhythm control in treating POAF do not differ significantly and that neither treatment strategy has superiority over the other. There is a potential impact on NICE's guideline on AF to review the advice to offer a rhythm-control strategy as the initial management option for the treatment of POAF following cardiothoracic surgery, unless contraindicated. Topic experts also highlighted the importance of the study and its potential impact in common clinical practice.

Short-term use of antiarrhythmic drugs following ablation

We selected the systematic review and meta-analysis by [Chen et al. \(2016\)](#) for a full commentary because it has a potential impact on the guideline to introduce new recommendations for the short term use of antiarrhythmic drugs (AADs) post ablation. The review also includes a sequential analysis of RCTs to assess whether further studies are required to demonstrate a sufficient effect size.

What the guideline recommends

NICE's guideline on AF advises against the use of amiodarone for long term rate control but does not make specific recommendations relating to AADs post ablation.

Methods

The systematic review and meta-analysis by Chen et al. (2016) assessed the efficacy of short term AADs use compared with no-AADs after catheter ablation of AF in preventing atrial arrhythmia recurrence.

Inclusion criteria were published RCTs that included:

- AF patient undergoing catheter ablation with pulmonary vein isolation (PVI)-based strategy.
- The intervention of short-term administration of AADs within 3 months following ablation of AF.
- The comparison intervention of no-AADs prescription after ablation procedure.

- The primary outcomes of early recurrence of atrial arrhythmia lasting more than 30 days within the first 3 months after ablation.
- The secondary outcome of late recurrence of atrial arrhythmia lasting more than 30 days post-3 months after ablation.

Results

The 7 studies included in the meta-analysis provided data from 6 RCTs and a total of 2,667 patients, with sample sizes ranging from 74 to 2,038.

Application of GRADE categorised evidence for short term AADs versus no AADs post ablation as very low for the primary outcome, and as moderate for the secondary outcome. The evidence was partly downgraded because of the high risk of bias in the majority of trials. The lack of blinding of participants and personnel was the major contributor to the high risk of bias.

For the primary outcome, short-term use of AADs after AF ablation, compared to no AADs, significantly reduced the risk of early recurrence of atrial arrhythmia (Relative Risk [RR] 0.68, 95% CI 0.52 to 0.87, $p=0.003$).

A sensitivity analysis was performed to address moderate heterogeneity. This comprised the consecutive exclusion of one single trial each time, but did not affect the direction or significance of the results.

A further trial sequential analysis was conducted, in order to assess whether sufficient cumulative evidence was included to demonstrate a conclusive effect size. The results indicated that an adequate number of studies were synthesised to demonstrate a 25% reduction in the relative risk of early AF recurrence with short-term AADs after ablation.

For the secondary outcome of late recurrence of atrial arrhythmia, short-term use of AADs after AF ablation, compared to no AADs, did not significantly reduce the risk of late recurrence of atrial arrhythmia (RR 0.92, 95% CI 0.83 to 1.03; $p=0.15$).

Strengths and limitations

Strengths

- Only randomised controlled trials were included, which reduced the risk of bias among included studies.

- Quality assurance was undertaken for study selection, data extraction and risk of bias assessment, involving independent reviewers. The quality of evidence for primary and secondary outcomes was independently evaluated by two reviewers according to the GRADE methodology, and the review reporting complied with established guidelines.
- A trial sequential analysis was conducted to assess whether the included evidence was conclusive.

Limitations

- The authors acknowledged that heterogeneity of ablation procedures, follow-up periods, physician experience, and antiarrhythmic drugs used among the included studies was not fully addressed in the systematic review.
- Most included trials were not blinded, which may have introduced performance and detection bias. However, this risk was mitigated by the predefined objective outcomes.
- Only published studies were included. Harbord and Peters tests were used to analyse publication bias, and this was detected. It is possible that if unpublished studies were included in the review they may have influenced the results.

Impact on guideline

The new evidence indicates that the use of AADs following catheter ablation may reduce the incidence of early recurrent AF within 3 months, but did not find evidence of preventing late recurrence of AF beyond 3 months of ablation. The guideline did not review evidence for AADs post ablation and does not include specific recommendations in this area. There is therefore a potential impact to consider a new recommendation for the short term use of AADs following ablation. This was confirmed by the majority of topic experts, who also indicated the need to standardise the approach in clinical practice. It was further noted by topic experts that clinicians are likely to use AADs in the early post ablation period regardless of whether or not they reduce long-term recurrence of AF.

How we made the decision

We check our guidelines regularly to ensure they remain up to date. We based the decision on surveillance 4 years after the publication of NICE's guideline on [atrial fibrillation](#) (NICE guideline CG180) in 2014.

For details of the process and update decisions that are available, see [ensuring that published guidelines are current and accurate](#) in developing NICE guidelines: the manual.

Evidence

We found 238 studies in a search for RCTs and systematic reviews published between 3 October 2013 and 22 December 2016. We also included 7 relevant studies from a total of 32 identified by members of the guideline committee who originally worked on this guideline. A further 5 studies were identified through post-publication communications.

From all sources, we considered 250 studies to be relevant to the guideline.

We also checked for relevant ongoing research, which will be evaluated again at the next surveillance review of the guideline.

See [appendix A](#): summary of evidence from surveillance for details of all evidence considered, and references.

Views of topic experts

We considered the views of topic experts, including those who helped to develop the guideline and other correspondence we have received since the publication of the guideline. This included a meeting with experts to discuss potential areas for update.

Views of stakeholders

Stakeholders are consulted only if we decide not to update the guideline following checks at 4 and 8 years after publication. Because this was a 4-year surveillance review, and the decision was to update, we did not consult on the decision.

See [ensuring that published guidelines are current and accurate](#) in developing NICE guidelines: the manual for more details on our consultation processes.

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