

NCAT - The National Centre for Anticoagulation Training

NCAT is based at the Department of Primary Care within the School of Health and Population Sciences.

NCAT was established in 2005 as a training and education resource for health care professionals involved in cardiovascular, thrombosis and anticoagulation management.



The screenshot shows the NCAT website interface. At the top left is the University of Birmingham logo. A search bar is located at the top right. Below the logo is a navigation menu with links for University, Alumni, Giving, Working here, News, Events, and Visit. A secondary menu includes Undergraduate, Postgraduate, Research, International, and Business. The breadcrumb trail reads: Home / Research / Research activity / Anticoagulation. The main heading is 'National Centre for Anticoagulation Training (NCAT)' in green. Below this is the large 'NCAT' logo, where the 'A' is pink, and a pink map of the United Kingdom to the right. Underneath the logo is the text 'National Centre for Anticoagulation Training' and a green double arrow icon. A sidebar on the left contains a list of links: About, Courses, Research, Hot topics, Events, Resources, BAP-PC, and Contact. Below the main heading, a paragraph states: 'NCAT has been developed to meet the educational needs of all health care professionals involved in anticoagulation management'. There are three main content blocks: 1. 'What do we do?' with a photo of a university building. 2. 'Upcoming courses' listing: 'An Introduction to Oral Anticoagulation Management - 18 November', 'Anticoagulation Management in Primary Care - 2 - 4 December', 'Understanding Haematology tests - when to refer - 11 February 2014', and 'Oral Anticoagulation Management for Health Care Assistants - 5 March 2014', with a 'View all courses' link. 3. 'Hot topics' with sub-sections for 'Events' and 'Resources'. The 'Resources' section features 'Atrial Fibrillation Management and Stroke Prevention 10 - 13 March 2014' with a description: 'This module will provide theoretical and practical knowledge of the condition of Atrial Fibrillation. Diagnosis will be examined, treatment (both surgical and medical) explained and evidence based management to include anticoagulation for stroke prevention.'

We have web site attached to the university website for educational resources. It is updated monthly with current topics of interest or relevant guidelines. It is also used to access the material used on the course electronically and to advertise all CPD undertaken within the department.

What does the NCAT website offer?

1. Training courses
2. Research
3. Hot topics
4. Events
5. Resources

1. Training courses

A number of accredited training courses and continued professional development courses have been offered to provide appropriate knowledge and skills.

The training courses are aimed at a wide range of health care professionals including General Practitioners, Practice nurses, specialist nurses, nurse practitioners, district nurses, pharmacists and dieticians.

The courses are linked to research undertaken in the Department of Primary Care, for example an RCT of primary care, management of oral anticoagulation utilising near patient testing and computerised decision support software. ⁱ

As a result of this research, we devised a study day with the specific aim of increasing primary care knowledge of and involvement in anticoagulation management and run this course every four months. The course was based upon the 'Birmingham Model' of primary care anticoagulation management, comprising computerised decision support software (CDSS) and near patient testing (NPT) within a practice nurse run clinic. The primary aim of the study day was to promote safe and effective practice for those already involved in running an anticoagulant clinic and to provide support for practices wishing to develop a service.

The training day was PGEA approved, and ran three to four times a year. It was the only course of its kind in the UK.

We evaluated the impact of the course on the practice of primary care personnel who attended the course in 1998. The results of our evaluation demonstrated significant changes to practice in all the measured parameters; the number of personnel involved in

anticoagulation clinics rose, the use of near patient testing and computerised decision support quality control procedures all showed improvement. The results confirmed that the course was providing useful training for primary care personnel by both increasing involvement in anticoagulation management and the use of systems such as CDSS and quality control procedures that encourage safe practice.

Whilst those findings were encouraging, it was clear that the training issue was not resolved. It was still possible for practitioners to develop services without reference to training. It was clear that primary oral anticoagulation services were expanding and there was a need for certification or accreditation. This could only occur through the expansion of training courses, in a similar way to existing accreditation processes for diabetes or asthma management.

We therefore developed an MSc accredited course encompassing the development of minimum competence criteria, which was ratified by haematologists, primary care practitioners and funding bodies such as Primary Care Groups and Health Authorities. Given that oral anticoagulation (in the presence of atrial fibrillation) is one of the most effective interventions for stroke prevention it was time for these training and accreditation issues to be addressed seriously.

The MSc module in Anticoagulation management is one of the optional clinical modules within the MSc Clinical Primary and Community care. It can be studied as part of the MSc or as a stand alone module. As such it has proved to be extremely popular with large cohorts attending from CCGs across the UK as well as students from Europe.

The advantages of this course are:

1. It is open to multidisciplinary health care professionals, therefore offers opportunity for individuals to learn/inform other specialties.
2. It offers clinical placements, supervision and mentoring from expert in the field
3. It has different teaching methods ranging from didactic lectures from experts to group work encouraging cross fertilisation of ideas among multi-disciplines.
4. It offers a high quality of teaching for a broad faculty of external and internal lecturers all experts in their field.

The module has been running since January 2000 with waiting lists of up to 6 months at times. It is currently run four times a year but has been run seven times due to demand.

From January 2007 to September 2013, 893 people have attended the course comprising 233 general practitioners, 400 nurses, 29 biomedical scientists, 47 pharmaceutical personnel, 122 pharmacists and 1 haematologist.

In addition to this module we also offer a wide palette of courses within the field of anticoagulation, thrombosis and cardiovascular disease. Some are accredited at MSc Level and are offered as stand alone or as a 20 credit module within the MSc Clinical Primary and Community Care. Others are one or two day CPD courses.

They include:

1. Oral anticoagulation management for health care assistants and assistant practitioners. We have trained 390 people on this course since 2007 including 23 phlebotomists, 38 nurses, 8 pharmacists, 1 dentist, 1 biomedical scientist and 13 administrators.
2. Management of DVT and pulmonary embolism in primary care, 101 people trained since 2007 including 11 GPs, 68 nurses, 6 pharmacists, 5 pharmaceutical representatives and 1 biomedical scientist.
3. Anticoagulation update day – run once a year for all graduates of the MSc module. Since 2007 614 people have attended.
4. Patient self management ‘Train the trainer ‘course; 40 delegates since 2007.
5. One day overview of oral anticoagulation management over 80 delegates since October 2012.
6. Atrial Fibrillation management in primary care – from 2014
7. Thrombosis management within primary care – from 2014

Finally our flag ship conference Anticoagulation in practice is run on an annual basis in collaboration with other anticoagulation specialist groups. We attract up to 200 delegates to the 2 day conference as well as healthy sponsorship from a number of pharmaceutical companies and specialist interest groups



2. Research

Within this section of the website we describe the current research projects progressing within the Anticoagulation/Cardiovascular research group including:

- NHIR programme grant 'Improving the prevention and treatment of Venous Thromboembolism in Hospital and the Community'
- Prospective, multicentre, international registry of male and female patients newly diagnosed with atrial fibrillation.
- The development of a registry for people who self monitor and manage their own oral anticoagulation
- A prospective cohort observational study to determine the incidence of venous thromboembolism among care home residents (VTEC)

3. Hot topics

This section is updated monthly with new guidelines or items of interest to those people undertaking anticoagulation management.

E.g. The Task Force for the Management of Atrial Fibrillation of the The European Society of Cardiology (ESC) have produced new guidelines for Atrial Fibrillation (AF) the most common sustained cardiac arrhythmia, occurring in 1–2% of the general population.

Home / Research / Research activity / Anticoagulation / Hot topics

- National Centre for Anticoagulation Training (NCAT)
- About
- Courses
- Research

Hot topics

- Events
- Resources
- BAP-PC
- Contact

Hot topics



A new UK study showing we are still not managing our AF patients very well

The use of anticoagulants in the management of atrial fibrillation among general practices in England

Cowan C, Healion R, Robson I, Long WR, Barrett J, Fay M, Tyndall K, Gale CP

Abstract

Objectives: To investigate the use of oral anticoagulants (AC) and antiplatelet agents (AP) in the management of atrial fibrillation (AF) among patients in primary care in England.

Design: Epidemiological study

Setting: 1857 general practices in England representing a practice population of 13.1 million registered patients.

Patients: 231, 833 patients with a history of AF.

Main outcome measures: The primary outcome was AC and AP use by CHADS2 score and age groups < 30 years, 30-49 years, 50-64 years, 65-79 years and >79 years.

Results: 231, 833 patients with a history of FA were identified, giving a prevalence among uploading practices of 1.78%. Prevalence of AF varied markedly between practices, related to differing practice age profiles. The total number of patients with AF in a practice was strongly predicted by the number of patients aged 65 years and over in the practice. 57.0% of the AF population had a CHADS2 score ≥ 2 and 63.7% ≥ 1 . 114, 212 (49.3%) patients received AC therapy. AC uptake increased with increasing CHADS2 score up to a score of 3, but thereafter reached a plateau. Among 132,099 patients with a CHADS2 score ≥ 2 , 72,211 (54.7%) received an AC, 14,567 (11.3%) were recorded as having a contraindication or having declined AC therapy, leaving 44,901 (34.0%) not on AC therapy and without a recorded contraindication or recorded refusal. Among patients not prescribed an AC, 79.9% were prescribed an AP. The use of AC declined in the elderly (for CHADS2 ≥ 2 , 47.4% of patients ≥ 80 years, compared with 64.5% for patients aged <80 years, $p < 0.001$). By contrast, AP uptake was more prevalent among elderly patients.

Conclusions: Over one-third of patients with AF and known risk factors who are eligible for AC do not receive them. There is a high use of AP among patients not receiving AC. Uptake of AC is particularly poor among patients aged 80 years and over.

Cowan C, Healion R, Robson I, Long WR, Barrett J, Fay M, Tyndall K, Gale CP 'The use of anticoagulants in the management of atrial fibrillation among general practices in England' *Heart* 2013 99: 1166-1172 (originally published online February 7, 2013)

The full article can be viewed [here](#)

4. Events

This section informs of conferences and events both international and national that are relevant to anticoagulation.

5. Resources

This section gives access to electronic versions of handouts used on all the courses including the lectures.

- National Centre for Anticoagulation Training (NCAT)
 - About
 - Courses
 - Research
 - Hot topics
 - Events
- Resources
- BAP-PC
 - Contact

Resources



-  [Print this page](#)
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Below are links to useful anticoagulation management resources, in the form of authoritative guidelines, recent papers, books and links to third party websites. We endeavour to keep the information on this page as up-to-date as possible, so keep calling back to remain informed.

Books...

[Open all sections](#) 

Selected papers...



Reference materials...



NCAT Resource Materials (authentication required)...



- [3 Day ACM course materials](#)
- [Understanding Haematology tests](#)
- [Managing Hypertension in primary care](#)
- [Managing Heart Failure in primary care](#)
- [Anticoagulation in Practice conference 2013](#)
- [Management of Gynaecology in the community](#)
- [An Introduction to Oral Anticoagulation Management](#)
- [Management of DVT and Pulmonary Embolism within primary care](#)
- [An Introduction to Oral Anticoagulation Management Sept 2013](#)
- [Patient self-monitoring of Oral Anticoagulation Sept 2013](#)
- [Anticoagulation Management Update Day 2013](#)

So welcome to NCAT, we hope you use this useful resource and please feed back if there are any changes you would like or additions to what is currently offered