

Atrial fibrillation—so what? Changing clinical practice

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The arrhythmia nurse practitioner's role has many different titles, from specialist nurse to arrhythmia care co coordinator, with the different titles comes the diverse yet rewarding workload. The role of the British Heart Foundation (BHF) arrhythmia nurse is underpinned with three key elements

- ♦ Ensuring that all patients with arrhythmias receive an effective and holistic assessment and a package of care, to ensure that all the patients' medical and emotional needs are discussed.
- ♦ All those who are included in the care pathways including patients, families and carers receive education and support as needed.
- ♦ Ongoing monitoring and auditing of the arrhythmia service takes place. These elements ensure that the quality requirements of chapter 8 of the National Service Framework (NSF) for Coronary Heart Disease (CHD) (Department of Health, 2005) and the Welsh equivalent standard 5 of the Welsh NSF (Welsh Assembly Government, 2008) are met.

Arrhythmia nurse practitioners service

In October 2006 two experienced cardiac nurses were appointed to the arrhythmia nurse practitioners (ANPs) service based in a district general hospital, one with additional experience in primary care with knowledge of the local area. These roles had been created to develop a service that would bridge the gap between primary, secondary and tertiary care for patients who suffer from arrhythmias.

The day-to-day work load now is very varied and can include answering telephone enquires from the advice line, pre-assessing patients for procedures such as elective direct current cardioversion, permanent pacemaker implants, educating other health professionals about the management of patients with arrhythmias, visiting patients, families or carers at home or in hospital to discuss arrhythmias and their management, liaising with other health professionals to improve patient care, audit, and developing patient pathways to improve access to services. Nevertheless the majority of our work load centres around the management of patients with atrial fibrillation (AF).

Atrial fibrillation

Atrial fibrillation (AF) is the most common sustained cardiac arrhythmia, if left untreated it is a significant risk

factor for stroke and other morbidities (National Collaborating Centre for Chronic Conditions (NCC-CC), 2006). The annual risk of stroke increases by around 4-5% for patients with atrial fibrillation, however this is not relative and the risk increases with age and other co-morbidities. This risk can be reduced with appropriate and timely thromboprophylaxis (NCC-CC, 2006). The effects of AF on the patient can range from none to many side effects such as reduced quality of life, breathlessness, fatigue, palpitations, and angina. The screening for atrial fibrillation in the elderly (SAFE) study (Hobbs et al, 2005) identified that when GPs record manual pulses during routine consultations the incidence of AF diagnosis is significantly increased, ultimately leading to a reduction in the incidence of stroke.

Based on experience as a practice nurse prior to taking the post as an arrhythmia nurse practitioner, it was felt that GP surgeries and practice nurses play a vital role in the care of patients with chronic diseases and are therefore

ABSTRACT

Atrial fibrillation (AF) is the most common sustained cardiac arrhythmia, if left untreated it is a significant risk factor for stroke and other morbidities. Approximately 12 500 strokes each year are attributable to AF and the annual cost to the NHS and personal social services budget is estimated to be around £148 million. The SAFE study identified that when GPs record manual pulses during routine consultations the incidence of AF diagnosis is significantly increased, ultimately leading to a reduction in the incidence of stroke.

On 1 May 2007 the Wrexham primary care AF model pilot was launched. Working in partnership across organizational boundaries, changes were made to existing templates in some GP surgeries. A manual pulse check was added to all chronic disease management templates, and a stroke risk stratification tool was added to AF templates to ensure patients are correctly stratified for appropriate use of a thromboprophylactic agent, which in turn would reduce the incidence of stroke. Seven new AF patients were found by opportunistic checks during the pilot and 68 patients found to be on inappropriate or no thromboprophylaxis, which prompted further review by the GPs.

KEY WORDS

- ♦ Manual pulse checks
- ♦ Atrial fibrillation
- ♦ Screening
- ♦ Stroke risk assessment

Submitted for review 30 March 2009. Accepted for publication 23 April 2009.
Conflict of interest: None.

ideally situated to initiate a screening service for atrial fibrillation within local primary care settings.

The hospital is based on the borders of Wales and England, serving patients from both countries, and the same region is also served by two other hospitals. To reduce inequalities in services between the different hospital that serve the local area, we chose to facilitate other health care professionals in the community to undertake screening for AF by integrating manual pulse checks into routine clinical assessments i.e. chronic disease management in GP surgeries, district nurse assessments, community matron or long-term condition nurse assessments.

Facilitating AF screening in GP surgeries

The model for screening is not complex, nor ingenious, quite the opposite. It is simple, requires no funding, and can be adapted into any general practice setting that conducts chronic disease management reviews. The model aims for each individual to be assessed, to create a treatment plan that is centred on their own exclusive needs.

Before piloting the model we delivered several educational workshops for local practitioners (including GPs, practice nurses and district nurses) to reach as many health professionals in primary care as possible in order to highlight the implications of AF. Emphasis was placed on the need for manual pulse and blood pressures monitoring, as the use of automated machines can give inaccurate readings for patients with irregular pulses.

The arrhythmia nurse practitioner service worked in partnership across organizational boundaries and made changes to existing templates in some GP surgeries (who volunteered to take part). These included the addition of a manual pulse check to all chronic disease management templates, which instigates opportunistic and routine screening not only for those who are at high risk for AF but also for the wider population.

In addition, the model used a stroke risk stratification tool—CHADS₂ (Valentin et al, 2006)—and recorded the results using the read code 388I in an AF template to ensure patients were correctly stratified for the appropriate thromboprophylactic agent, which in turn would reduce the incidence of stroke.

The CHADS₂ stroke risk stratification is a clinical prediction tool used for estimating the risk of stroke in patients with nonrheumatic, or nonvalvular, AF. Points are assigned for chronic heart failure (C), hypertension (H), age 75 years or over (A), diabetes mellitus (D) and history of stroke or transient ischaemic attack (S—2 points). The higher a person's CHADS₂ score, the greater the risk of stroke.

An annual diary date was created to prompt annual review, which is a component missing from the clinical indicators of the quality outcome framework (QOF) for atrial fibrillation (British Medical Association/NHS Employers 2006).

Implementing the tool and annual check was supported by the development of internet-based guidelines and cardiac network guidelines that GPs can access.

AF primary care pilot

The Wrexham primary care AF model pilot launched on 1st May 2007 in four general practice surgeries under the local health boards, and ran for six months with positive results and findings. The audit of the pilot evaluated the review of existing patient on the AF registers in the surgeries as well as those patients that were identified through the routine screening using the manual pulse check. Seven new AF patients were found during opportunistic checks as part of the pilot and 68 patients were found to be on inappropriate or no thromboprophylaxis, which prompted further review by the GPs.

Nearly two years since the start of the pilot the team are still reaping the benefits of the work undertaken in primary care. Although four practices were initially recruited into the pilot, the arrhythmia nurse practitioners wrote to every practice in the catchment area and asked to set up a meeting to discuss the basis of the pilot.

It seems a key reason that practices were not keen to take part in the pilot was that the pilot scheme used paper audit forms, whereas most GP surgeries operate a paperless policy. This appeared to be an obstacle that could not be overcome at the time, and the additional time needed to complete the form was seen to be problematic.

In one surgery one of the ANPs personally performed an audit of all the patients on the AF register, highlighting any patients that appeared to be on inappropriate therapy or thromboprophylaxis. This allowed her to gain a better understanding of the extent of problems that could be discovered, and appreciate the time it took to perform this audit and the impact it would have on GP and practice nurses' workload. This method of auditing patients was also used in other surgeries by GPs and practice nurses, whereas some practices chose to invite all patients on the AF register in for a review.

The ANP service now see on many referral letters that the patient was found to be in AF during a routine blood pressure check or during an annual chronic disease management review. Hopefully, this is a direct effect of the educational events the service continues to provide and also a result of those surgeries that made the changes to their chronic disease management templates.

Award winning service.

In April 2008 the team's work in this area was recognized nationally with an award at the Cardiac Nursing Awards in London for 'Excellence or innovation in arrhythmia management'. This award would not have been possible if it were not for the continued support of our manager, consultants, GPs, practice nurses, cardiac lead nurses in the community and last but not least the BHF. Our idea was simple but has proved to be effective.

The future

Other initiatives undertaken by the team include a collaboration with the local health board lead nurse for cardiovascular disease on developing part of a cardiology local enhanced service (LES) for GPs (DH, 2008)).

The option in the LES relating to AF included raising awareness of AF, the significance of taking a manual pulse and the importance of using the stroke risk stratification tool to identify those who needed interventions to reduce the risk of stroke. GP practices agreeing to take part in this option were asked to attend an ECG study day on arrhythmias and an AF study session provided by the two ANPs. The session included the importance of the stroke risk stratification tool and thromboprophylaxis. Following this, the practices involved were encouraged to adapt all their chronic disease management computer templates to include taking a manual pulse.

It is recognized that ongoing education is required in primary care and working closely with local health boards the ANP service aims to provide further education.

In addition, the service is in the process of organizing a 'Know your Pulse' educational event for Arrhythmia Awareness Week 2009. The event is to be hosted with the support of the occupational health department of a large local employer who has approximately 8500 permanent and contract staff. The event will start with an internal television campaign highlighting the importance of 'know your pulse' followed by site tours educating staff on how to check their own pulse and the importance of seeking medical advice if an abnormal pulse is found. Due to the enormity of the site three days have been scheduled for this event over the summer months, alongside night visits to ensure night staff benefit from this event.

KEY POINTS

- ◆ Atrial fibrillation is the most common arrhythmia and if left untreated can lead to an increased risk of stroke
- ◆ Undetected AF cannot be treated, making screening important
- ◆ Studies have shown that when GPs record manual pulses during routine consultations the incidence of AF diagnosis is significantly increased
- ◆ By providing education and support to primary care colleagues to assist them in identifying and appropriately treating patients with AF, future complications may be reduced

British Medical Association/NHS Employers (2006) *Revisions to the GMS Contract 2006/07*. Annex 1: Quality and Outcomes Framework guidance 2006/07 <http://tinyurl.com/d6zmlr> (accessed 27 April 2009)

Department of Health (2005) *National Service Framework for Coronary Heart Disease. Chapter 8 Arrhythmia and Sudden Cardiac Death*. DH, London

Department of Health (2008) Enhanced services. <http://tinyurl.com/cj38gh> (accessed 27 April 2009)

National Collaborating Centre for Chronic Conditions (2006) *Atrial Fibrillation. National Clinical Guideline for Management in Primary and Secondary Care*. [Full version of NICE Clinical Guideline 36] Royal College of Physicians, London.

Welsh Assembly Government (WAG) (2007) *Interim Update of Original National Service Framework. Tackling Coronary Heart disease and Arrhythmias in Wales*. WAG