How to...

How to run low-cost high-impact AF screening at flu clinics

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A simple but effective scheme to detect patients at risk of stroke is proving a success. Dr Shane Gordon explains how it works

It takes about 30 seconds to take a pulse and 30 seconds to code the results. Yet that minute could be all that is needed to prevent a stroke – avoiding major morbidity or death, not to mention an episode of acute care costing about £3,000.

Some studies suggest that up to 50% of patients with atrial fibrillation (AF) are undiagnosed, so there could be a lot of people walking around with no obvious symptoms. About 4% of people aged over 65 have AF and nearly 9% of those aged over 80 have it.

Stroke is the third leading cause of death in the UK and the largest single cause of severe disability. AF is a key risk factor – on average 5% of people with untreated AF will go on to have a stroke within a year[1].

	60-second summary
Initiative	Opportunistic screening for atrial fibrillation during flu immunisation clinics by inviting patients over 65 to have pulse palpation
Policy link	National Stroke Strategy and National Stroke Improvement Initiative
Start-up costs	£60,000 including practice payments of £2 per patient screened
Preparation time	Four weeks
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Yet interventions such as cardioversion or rate control and warfarin can have a huge impact in reducing the risk for these patients – if only they can be identified[2].

It was my colleague Dr Max Hickman, chair of the Colchester PBC Group, who developed this idea. He wanted to use the annual flu vaccination campaign as an opportunity to screen patients for AF. Nurses running clinics would simply take the pulse of patients who attended for vaccination.

The clinician carries out pulse palpation for at least 30 seconds and records whether the pulse is irregular or regular. If the patient has an irregular pulse, further investigation and clinical assessment can be organised. Any risk factors identified, including AF, can then be managed appropriately.

Dr Hickman’s idea met with enthusiasm from the rest of the Colchester PBC group.

It seemed like a sensible and easy thing to do. We discussed the plan with our neighbouring PBC cluster, Tendring Clinical Commissioning Group, who readily agreed to take part.

A business case covering both clusters was prepared for North East Essex PCT and was swiftly approved

at the end of August. The project fits neatly into local priorities for stroke prevention.

Tackling health inequalities

The area has a high incidence of stroke – 18.5% of patients in the PCT are on the disease registers for stroke, coronary heart disease and hypertension. Tendring, which covers Clacton on Sea, has the highest average age in Europe.

The population covered by the PCT is expanding by about 3% a year and there are areas of significant deprivation. Life expectancy varies by up to 13 years between council wards – in Alresford the average person lives more than 83 years, in Pier just 70. There is a clear link between deprivation and stroke, with practices in the most deprived areas having twice the rate of hospital admissions for the condition.

This scheme offers us a way to engage with health inequalities. It targets the most vulnerable who rarely bother the doctor but do attend the surgery for flu vaccination.

The project was adopted by most practices in North East Essex PCT ahead of this year's flu vaccination campaign. There are 44 practices in our area, with a population of 320,000. Patients aged over 65 with no known pulse irregularity or AF were offered the check.

Further investigations included:

• resting 12-lead ECG
• blood tests for lipid profile, renal function, fasting glucose, full blood count, thyroid function
• body mass index
• urinalysis
• clinical assessment of cardiovascular system
• overall evaluation of cardiovascular risk.

Management options included:

• warfarin (or antiplatelet agents if warfarin contraindicated)
• pulse rate control
• consideration of referral for cardioversion.

Resources

One of the main factors in gaining swift approval was the low cost of the scheme. The estimated expenditure of £60,000 was well within the £100,000 limit that our cluster has been delegated power to spend.

The project was run as a local enhanced service, with practices paid £2 per patient screened. Funding drew on the freed-up resources we had generated as a PBC group. One aspect that had to be negotiated was the system for reimbursing practices for

the extra time devoted to flu clinics and follow-up. There was some debate about whether to pay per pulse taken or to focus on the resulting investigations, but it was decided that the £2 a head fee was simpler.

Preparation

"Our PBC cluster turned a bright idea into a business case and a whole service in just a few weeks."

There was no real resistance to this idea as it was so simple. It only took a few weeks to set up in advance of the annual flu jab campaign. In fact preparation took just four weeks, and the project itself ran for a month during the flu vaccination campaign.

There was some discussion about logistics – a few of our colleagues in smaller, singlehanded practices felt unable to take on the extra work of allowing more time for flu vaccination and follow-up clinics but most found it fairly straightforward.

The necessary investigations do not have to be carried out on the same day as the flu vaccination, so practices can adjust the project to fit their own individual needs.

PBC gave the scheme clinical ownership from the start. It was a very clinically focused project with clear benefits that we could communicate to our colleagues.

It was PBC that allowed us to identify the opportunity to improve patient care and connect that with the mechanisms for achieving the changes to deliver the outcomes. So the cluster was able to turn a bright idea into a business case and deliver a whole new service in just a few weeks.

The local picture

The Colchester PBC group was formed in January 2006 and is a not-for-profit company limited by guarantee. We control an indicative budget of £144m and an organisational budget of £170,000.

Our sole purpose is commissioning. We don't do any provision through the cluster as to avoid conflicts of interest we wanted a clear distance between commissioning and provision. Procurement is carried out under a separate process by the PCT. The system has allowed us to overcome some of the problems that have held back many PBC clusters.

We had already made some major improvements to cardiovascular provision, including 24-hour, seven-day ECG in the community. We are also planning to train six to 10 GPSIs in cardiology over the next two years.

North East Essex PCT has been highly supportive of PBC, although reconfiguration in 2006 caused delays. Having spent a year developing good relationships with Colchester PCT, we then had a whole set of new relationships to build – it has taken us time to do that.

It was important to get to know the new team and show them that the PBC cluster has good judgment and is competent to do its job. Change only happens through trust between individuals.

Senior people in the organisation have been very supportive and that has helped us to develop. For instance, we have been able to secure funding from the PCT to employ four members of staff on behalf of both Colchester and Tendring PBC clusters.

The PBC and PCT boards hold regular joint workshops and there is a weekly meeting between PBC leads and Carolyn Larsen, the PCT assistant director of primary and mental health commissioning. This helps to make sure that we are keeping what we are doing aligned with the PCT's overall strategy so we don't run into any significant barriers.

There is nothing more disheartening than to spend a lot of time working on something only to discover that there are unforeseen hurdles somewhere in the PCT, so we are working together at a much earlier stage to try to manage any issues.

Benefits to patients

Although we are still crunching the figures, we are confident the scheme has been effective. At my own practice in Tiptree, for example, 1,000 people had flu vaccinations in a clinic that ran for four hours one Saturday. There were 500 patients who met the criteria for screening; aged over 65 with no prior diagnosis of AF or other pulse irregularities that had been investigated.

Of these patients, 48 were found to have irregular pulses that required further investigation. The surgery added two extra nurse-led clinics to follow up the patients and carry out investigations.

If just half of these patients have AF, with a number needed to treat of 37, that means at least one life will be saved in the next two years from my practice alone. That's an immediate and measurable benefit. Preventing just one stroke will pay for the entire service if you look at the costs of acute and continuing care. It's a significant potential saving that improves the quality of life for patients – high impact, low cost.

Future plans

The scheme has also been taken up by other PBC clusters, in Telford and the Wrekin in Shropshire and Whitstable in Kent. They have found a similar proportion of people with an irregular pulse after investigation – in Telford, 19 patients per practice, in Whitstable 18.

The project offered a real opportunity to educate GPs and practice nurses about stroke. We have been able to put out the key facts, an educational message about the incidence of undiagnosed AF and the consequences, so everyone who engaged in the scheme knows about the importance of the issue.

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