



Healthcare
Improvement
Scotland

SHTG
Advice on health
technologies

Plain Language Summary

Electrocardiogram (ECG) patch monitoring for the detection of cardiac rhythm abnormalities | July 2025

What are electrocardiogram (ECG) patch monitors?

ECG patch monitors are small, wireless devices that stick to the chest and record the heart's electrical activity. They are designed to detect irregular heart rhythms, especially in people who may not show symptoms all the time.

ECG patches are discreet and water resistant, allowing people to wear them during daily activities.

What is ECG patch monitoring?

ECG patch monitoring is a way of using an ECG patch monitor to track heart rhythms continuously for up to 14 days. The monitoring period for traditional Holter monitors is usually between 24 and 48 hours.

The patches collect data while the person goes about their normal life. After the monitoring period, the data is reviewed by healthcare professionals to check for any signs of heart rhythm problems.

Why is this important?

Atrial fibrillation (AF) affects about 2% of adults and is responsible for around 1 in 5 strokes. Many people with AF do not have symptoms. Early detection is important because untreated AF increases the risk of stroke, heart failure and death.

Traditional Holter monitors, used for a shorter time, often miss these irregular heartbeats. With their longer wear time, ECG patch monitors can improve detection, especially in people who have had a stroke or have symptoms like palpitations or dizziness.

What we did

We looked for the latest evidence on ECG patch monitors, focusing on studies that tell us how well they detect heart rhythm problems compared with traditional Holter monitors. We also looked at how safe they are, patients' experience of using them and whether they offer good value for money.

We developed a model to estimate the impact of using ECG patch monitors in NHSScotland.

What we found

We found studies that suggest that ECG patch monitors detect more cases of irregular heart rhythms than Holter monitors. They provide continuous monitoring for longer periods (up to 14 days) compared with Holter monitors (between 24 and 48 hours).

Most people found ECG patch monitors more comfortable and easier to use than Holter monitors.

We found that ECG patch monitors are generally safe. Minor skin irritation was the most common issue associated with ECG patch monitors.

We estimate that using ECG patches in NHSScotland to monitor people who have had a stroke could save up to £14.6 million over 5 years and £12.1 million in people with symptoms of AF. These savings come from preventing strokes.

What is our conclusion

ECG patch monitors provide an alternative to traditional Holter monitors for people with irregular heart rhythms that require continuous ECG monitoring. They are more comfortable and detect more cases of AF. They can help prevent strokes and can save NHS resources. More research is needed to confirm their long-term benefits and ensure they work well for all patient groups.

What next?

This report will be shared with the Accelerated National Innovation Adoption collaborative to inform their value case and decisions regarding the use of ECG patch monitors in NHSScotland.

This plain language summary has been produced based on SHTG Assessment of electrocardiogram (ECG) patch monitoring for the detection of cardiac rhythm abnormalities. July 2025.