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The benefits of active management of coronary heart disease (CHD) in Wales: how the use of routinely collected administrative data can drive efficiency and encourage best practices in condition management.

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Objectives

Previous work highlighted the benefits of measuring the effectiveness of cardiac interventions on subsequent health resource usage by analysing patient pathways. We aimed to determine if earlier planned services could reduce overall costs and more accurately reflect the financial benefits of early intervention. Could this approach better direct investment?

Methods

We analysed the impact on subsequent costs based on the setting of the first contact for CHD patients in Wales. Health events were categorised as proactive (general practice interactions, elective hospital bed days, outpatient attendances) or reactive (accident and emergency attendances, emergency hospital bed days). Standard costs were applied to obtain annualised costs per patient. A regression analysis measured which patient factor affected cost and an odds ratio analysis identified which patient groups were more likely to have their first event in an emergency setting.

Results

We identified 41,384 CHD events from 2015-2019: 18,222 proactive and 23,162 reactive first events. Reactive first events resulted in three times more events and 14 times higher costs, with annual costs being £5,631 higher. Females were 32% and individuals from the most deprived areas 14% more likely to have their first event in an emergency setting. Costs, but not risks of an emergency first event, increased with age. The risk of an emergency first event and associated costs rose with the number of comorbidities. Risks and costs varied between health providers in Wales. Access to primary care data was crucial for this analysis.

Conclusion

The setting of the first contact is key to controlling health resource usage. This study highlights the power of using anonymised, population-scale, linked individual-level data and suggests potential health resource usage reductions from improved primary care management.

