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ORIGINAL ARTICLE

Rapid Access Cardiology (RAC) Services Within a Large Tertiary Referral Centre—First Year in Review

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Background Rapid Access Cardiology (RAC) services are hospital co-located cardiologist-led outpatient clinics providing prompt assessment and management of chest pain. This service model is part of chest pain management in the United Kingdom. However, little data exists on RAC services in Australia. Our aim was to describe the introduction of RAC services to an Australian tertiary centre (utility, safety, and acceptability).

Methods Referrals were accepted for low-intermediate risk chest pain. Referrer and patient clinical data was collected prospectively in the first year of RAC – 4 February 2015 to 4 February 2016. Data was linked to hospital presentations/admissions to identify readmissions/mortality data.

Results Among 520 patients (55.0% male, mean age 55.2 years), 87.6% were referred from emergency and 68.4% assessed within 5 days. The final diagnosis was new coronary artery disease (CAD) in 7.9%, and 81.3% had ≥2 cardiovascular risk factors (diabetes, hyperlipidaemia, hypertension, overweight/obesity, smoker, pre-existing CAD, and chronic renal failure). On average, 0.8 cardiac tests were ordered per person. In total, 35 (6.7%) had invasive coronary angiograms, with 51.4% having obstructive CAD. Patients reported in surveys (82.8% response rate) that 93.0% ''strongly agreed'' RAC services were useful to the community. Referrers were also ''very satisfied'' with RAC (7/17) or ''satisfied'' (9/17). Furthermore, of 336 referrals, referrers reported without RAC they would admit the patient in 11.3% of cases. There were 4.8% (25/520) unplanned cardiovascular readmissions and 0.6% (3/520) of these were for acute coronary syndromes and no deaths.

Conclusions Outpatient RAC services are an accepted, effective and safe pathway for management of low-intermediate risk chest pain.

Keywords Rapid access • Chest pain • Risk assessment • Cardiology clinic • Integrated care

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Introduction

Chest pain is one of the most common causes of presentation to emergency departments [1,2], and while the incidence of acute coronary syndrome (ACS) should be falling in high-income countries such as Australia, both the number and age-standardised rate of hospitalisations for chest pain (both ACS and non-ACS causes) have substantially increased [3].

A recent study demonstrated that, while a high proportion (96%) of chest pain presentations to the emergency departments were admitted, only a small percentage (11%) were diagnosed with ACS and the 30-day event rates were low in patients with low (0%) and intermediate risk (2%), compared with a 20% event rate in high-risk patients [1]. This suggests some of these admissions may be avoidable. Unnecessary hospitalisations attract large direct and indirect costs as well as potential risks in exposing patients to nosocomial infections and psychosocial stresses. Alternative pathways such as accelerated chest pain pathways may decrease the length of stay of chest pain patients in hospital [4]. Outpatient pathways with the use of rapid access chest pain clinics may also be a means of effectively managing low-intermediate risk chest pain [5–8], but there is little data on how this model of care could work in Australia.

Rapid Access Cardiology (RAC) services are hospital co-located cardiologist-led outpatient clinics providing prompt assessment, risk stratification, and management of acute chest pain. RAC services are now the model of choice for assessment of suspected angina in the United Kingdom (UK) [9]. A recent review of 21 studies has shown that early assessment in RAC clinics of patients with low-intermediate risk chest pain is safe, reduces hospitalisations, is cost effective and has good acceptability amongst referrers and patients, but the majority of evidence is from the UK [10].

As part of the Western Sydney Integrated Care Program (WSICP) [11] and through partnerships with the Sydney Health Partners Advance Translation centre, we are examining the role of RAC as part of health services. The aim of the current paper was to describe the first year of introducing a new RAC model of care to a tertiary centre in Sydney, in particular to address the questions of utility, safety, and acceptability.

Methods

The Western Sydney Local Health District (WSLHD) encompasses Westmead, Blacktown, Auburn, and Mount Druitt Hospitals and serves a population of approximately 876,500. The WSICP aims to implement an innovative, system-wide, sustainable service model for providing coordinated and integrated care services to manage chronic diseases including cardiovascular disease [11] and to achieve: 1) Improved health outcomes and quality of life; 2) Reduction in unnecessary hospitalisations; and 3) Improved patient experience of the health system. Providing rapid access to specialist services was identified as a key enabler of the WSICP strategy, and within this context we developed RAC services.

The RAC Clinic

The goal of RAC was to provide rapid specialist review of patients requiring rapid cardiology assessment facilitated by a central contact point (Box 1). The service model was designed in consultation with the departments of cardiology, emergency and integrated care (involving community and general practice consultation) through a series of workshops and meetings during 2014. The RAC model was staffed and led by a cardiology specialist team and its access optimised by incorporating business rules of not providing long-term follow-up but to work in partnership with the patients' cardiologists, general practitioners (GPs) or other health care providers who would manage patients in the longer term.

There was a phased introduction to commencement of our RAC service. The clinics opened on 4 February 2015 initially on one afternoon per week, with an eventual Monday to Friday morning service and capacity for eight patients each day by 27 July 2015. The RAC team consisted of a cardiologist, cardiology registrar, resident medical officer, cardiology clinical nurse consultant, enrolled nurse, and administrative assistant.

Referral Criteria

The criteria for referral to RAC services were suspected cardiac chest pain of low-intermediate risk. We excluded patients with high risk ACS, and patients with very low pre-test probability of having coronary artery disease (CAD) as these would be suitable for GP follow-up. Referrals were discussed with the RAC cardiology registrar to determine appropriateness. Referrals were accepted from emergency departments, hospital physicians and GPs.

Data Collection

In the first year of RAC – 4 February 2015 to 4 February 2016 – all patients had blood pressure, heart rate, body mass index

Box 1

Rapid Access Cardiology (RAC) Clinic
"Philosophy"

- Provision of rapid specialist review of patients requiring rapid cardiology assessment facilitated by a single central contact point.
- To optimise access by discharging patients to existing services and general practice following resolution of their presenting problem.
- To liaise with the patient's cardiologists, GPs, other health care providers and in-patient services as required.

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