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# What have our patients learnt after being hospitalised for an acute myocardial infarction?

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#### ABSTRACT

*Background:* Education for hospitalised patients is an important aspect of care for people who have an acute cardiovascular event.

*Objective:* To investigate the cardiovascular risk factor behaviours of patients together with their acute coronary syndrome (ACS) knowledge, attitudes and beliefs following admission to hospital for an acute myocardial infarction.

*Methods:* Patients diagnosed with an acute myocardial infarction participated in an observational study. Patients completed a questionnaire consisting of cardiovascular risk factor behaviour questions and the ACS Response Index prior to discharge and at follow-up 10 weeks later.

*Results*: Of the 135 participants enrolled, 114 (84%) completed follow-up, 70% were males; mean age was 63 (±11.6) years. The median length of hospital stay was 3 days (IQR 1) and the time to follow-up after discharge was 10 weeks. Self-reported risk factor behaviours improved significantly for diet (p < 0.001) and smoking cessation (p = 0.023) following discharge. At discharge 39% of patients had inadequate knowledge of ACS symptoms. The ACS Response Index improved significantly after discharge for attitudes (p = 0.004) and beliefs (p = 0.008). Despite 85% of patients indicating they would attend cardiac rehabilitation only 30% had commenced a programme at follow-up.

*Conclusion:* Patients reported implementing a number of healthy lifestyle changes following discharge including smoking cessation and healthy eating. Attitudes and beliefs regarding ACS showed a significant improvement following discharge. More than one third of patients had inadequate knowledge at discharge, suggesting current education practices may not be meeting the needs of patients with a myocardial infarction.

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#### 1. Introduction

Cardiovascular disease (CVD) remains one of the most prevalent causes of death in Australia<sup>1</sup> and accounts for 33% and 29% of male and female deaths, respectively.<sup>2</sup> CVD affects an estimated 17% of the Australian population, over 3.4 million people.<sup>1</sup> Secondary prevention focusing on behaviour modification is an important aspect

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of care for people who survive a myocardial infarction<sup>3,4</sup> decreasing mortality and hospital admissions.<sup>5</sup> Patients with CVD are still not achieving the lifestyle and risk factor goals recommended by clinical practice guidelines.<sup>4,6,7</sup> There are varying opinions regarding the relationship between knowledge and compliance,<sup>7</sup> however knowledge is still considered an essential first step to promote appropriate self-care behaviours.<sup>8,9</sup> Knowledge of risk factors has been correlated to compliance with some lifestyle changes, such as weight loss, increased physical activity, stress management and dietary changes.<sup>7</sup> For patients with diagnosed CVD, recognition of ACS symptoms assists with appropriate responses and reduces prehospital delay to treatment.<sup>9</sup> However even for those who have experienced an acute cardiac event, knowledge levels are generally poor.<sup>8,10</sup> Over the last decade changes in our health care delivery have resulted in decreased lengths of hospital stay,<sup>11</sup> with less time available for education of patients with a diagnosis of ACS admitted to cardiac units. While the importance of patient education is well recognised many patients do not receive adequate education prior to discharge<sup>8,12</sup> and patients have reported receiving less information than they wanted from health care professionals.<sup>13</sup>

It appears that the information needs of patients with CVD remain largely unmet at discharge from hospital.<sup>12,14</sup> The theory of adult learning or andragogy recognises that identifying learning needs is an important component of learning.<sup>15</sup> Adults need to know why they need to learn something, so it is important to assist learners to identify the gaps in their knowledge.<sup>15</sup> Another key aspect of adult learning is that adults become ready to learn when they need the knowledge in order to cope effectively with their real-life situation. Adults are motivated to learn when they perceive that learning will help them deal with the problems they are confronted with in their life. A recent review of education strategies for hospitalised CVD patients found that only 20% of studies reported that a theoretical framework guided the educational intervention.<sup>14</sup> There is little evidence that the principles of adragogy have been effectively utilised to guide education for hospitalised CVD patients.

People with CVD should receive comprehensive rehabilitation that includes patient education.<sup>16</sup> However, providing education to hospitalised patients can be challenging. Patients may be physically and psychologically not ready for learning due to the acuity of their illness, anxiety, fatigue, cognitive function and health literacy.<sup>14</sup> Healthcare staff barriers that negatively impact on patient education include paternalistic teaching style, lack of counselling skills and knowledge deficit about adult learning and education principles.<sup>17</sup> Health care system barriers may include decreased length of hospital stay with decreased opportunities and time for teaching inpatients.<sup>18</sup> Misunderstandings can arise when health care professionals use curative language to describe outcomes of proceedings, particularly for ACS patients who have had a percutaneous coronary intervention.<sup>19</sup> For patients with CVD the adoption and maintenance of the appropriate risk-reducing behaviours can be difficult.<sup>14</sup> Despite Phase 1 cardiac rehabilitation (CR) occurring in hospital, patients often remain unaware of how to implement appropriate risk factor behaviours and manage their ACS symptoms on discharge.<sup>19</sup> Behaviour change is a complex and multi-faceted process and providing patient education to promote adherence to recommendations is challenging for health care professionals.<sup>19</sup> While clinical practice guidelines indicate that patient education is an essential element of care for the management of ACS, it remains unclear which educational strategies are most effective for hospitalised CVD patients. Additionally, determining how best to present cardiovascular risk effectively to patients, to facilitate decisions to reduce their risks, also remains unclear.<sup>20</sup> Patient education prior to discharge has been found to place the patient in a state of readiness to successfully manage their care and continuing recovery at home.<sup>21</sup> It remains unclear whether patients have the opportunity to develop their knowledge during hospitalisation for an acute cardiac event.

The purpose of this research was to investigate knowledge and CVD risk factor behaviours in patients with a diagnosed acute myocardial infarction prior to discharge and at 10 weeks postdischarge.

#### 2. Methods

#### 2.1. Setting

This study was undertaken in a cardiology unit at a tertiary referral hospital in Brisbane, Australia. This acute clinical unit comprises a 14 bed Cardiology Ward, an 8 bed Coronary Care Unit and a 6 bed Procedural Unit. Acute patients with CVD including ACS, arrhythmias and heart failure are cared for in this unit. A range of cardiac procedures including percutaneous coronary intervention, implantation of pacemakers and defibrillators, electrophysiology studies and ablation are provided.

#### 2.2. Participants

All patients admitted to this unit with a diagnosis of ST elevation myocardial infarction (STEMI) or non-ST elevation myocardial infarction (NSTEMI) were screened for eligibility for this study. Inclusion criteria were:

- $\geq$  18 years
- Able to read and write English
- Living independently
- Access to a telephone
- Aware of their diagnosis

Patients were excluded for the following reasons:

- Documented cognitive impairment
- Documented psychological compromise
- · Being listed for immediate cardiac surgery

#### 2.3. Study design

Participants were recruited during their initial admission for an acute myocardial infarction and completed a questionnaire to assess CVD risk factor behaviours and ACS symptom knowledge, beliefs, attitudes. The participants were contacted by telephone to complete the same questionnaire 10 weeks after discharge to assess changes. A follow-up of 10 weeks was selected to coincide with anticipated completion of the CR programme. One of the researchers audited each patient chart for written documentation to confirm the delivery of patient education. Patients were asked if they recalled receiving information about their heart disease and whether they had received a written information booklet.

#### 2.4. Questionnaire

The first section of the questionnaire focuses on cardiac risk factor behaviours with questions about behaviours known to be associated with increased risk for CVD specifically diet, exercise, smoking, and knowledge of blood pressure and cholesterol levels. Participants were also asked questions about their follow-up care, for example if they were advised to visit their own doctor after discharge and if they intended to enrol in a CR programme. At follow-up participants were asked if they had visited a doctor and commenced a CR programme. These questions were developed Download English Version:

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