

# openheart Room for standardisation: the secondary prevention of coronary artery disease

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The prevention of future ischaemic events is a core part of the management of patients with coronary artery disease and is known to contribute to patient quality of life as well as longevity. The iASPIRE Study,<sup>1</sup> published in *Open Heart*, demonstrates, as did the prior EUROASPIRE Surveys,<sup>2</sup> that optimal, guideline-based targets for secondary prevention are frequently not met. Uniquely, it shows that how a patient presents, whether it be a stable chronic coronary syndrome (CCS) or an acute coronary syndrome (ACS), has a great deal of influence on whether these targets are met and, in addition, that the hospital that treats you also has an impact. While this multicentre, cross-sectional study was done in Ireland, it is highly probable that the findings are relevant to other nations with similar health systems.

While the targets themselves have been refined over the years, the modifiable risk factors for the progression of coronary arteries are not in doubt. The European Society of Cardiology (ESC) suggests that patients with known cardiovascular disease live a healthy lifestyle with a diet low in saturated fat and rich in wholegrains, vegetables, fruit and fish and take at least 150 minutes per week of moderate aerobic exercise.<sup>3</sup> They target a body mass index of 20–25 g and no consumption of tobacco in any form. High-intensity statin therapy as well as an antiplatelet agent such as aspirin is advised, and low-density lipoprotein should be targeted at <1.8 mmol/L, with the addition of further licensed medications if this target is not achieved. The blood pressure should be maintained at less than 140/90 mm Hg, and those that are diabetic should aim for a HbA1c of less than 7% (53 mmol). Comprehensive cardiac rehabilitation programmes can simultaneously address these targets over the course of a programme.

None of the above is news to any cardiology team, and yet, iASPIRE demonstrates marked variation as to whether these aims are met depending on whether a patient has stable CCS or a recent ACS. The ESC classifies all

these patients as very high risk and has the same respective targets. While the majority of patients were advised to attend cardiac rehabilitation and attended most of the sessions, both were more likely in patients with recent ACS. Over half of patients with stable CCS were not on a high-intensity statin, and over one-quarter were not on a statin at all. Large numbers of patients were not on target with their blood pressure, and while most patients reported favourable changes to their diet, no improvement in weight was seen over time.

iASPIRE worryingly demonstrates large variations in practice depending on the hospital site where a patient was managed. Whether a patient attended cardiac rehabilitation or not varied between 97% at the high end and 34% at the low end. Whether a patient who smoked continue to do so varied between 71% and 10%. Whether an obese patient was advised to lose weight varied between 60% and 17%.

Some may argue that while the ESC targets are admirable, the low overall achievement of them in this and previous studies demonstrates that they are too ambitious and perhaps not realistic. iASPIRE addresses this hypothesis by showing that some patients are treated more intensely than others and that some institutions manage some targets well while others do not. Reducing these variations in care by addressing the deficits seen in some places and with some classes of patients provides a practical way forward for a cardiology team to improve their standards of care and therefore the lives of their patients.

Such an approach will require data, and whether it is in global health or in local quality improvement, the oft-repeated maxim applies that when you measure something, it tends to improve. The iASPIRE authors suggest national programmes to measure and address variability in preventive cardiovascular care. There are already well-established examples of such national programmes to measure, identify and feed back data on variations in care for ACSs,<sup>4</sup> percutaneous



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coronary intervention<sup>5</sup> and cardiac surgery,<sup>6</sup> so it is not too much of a stretch to suggest the same can be done in secondary prevention. Importantly, the study shows the importance of assessing patient management after a period of time rather than at discharge so that clinicians have time to establish treatments and to demonstrate improvements. It also shows how a metric measuring the difference in what is achieved with patients with stable CCS and patients with ACS will help institutions to identify where they can improve quickly.

Some reflection is also needed on why there appears to be less enthusiasm for risk reduction than for other treatments in the cardiology community. The potential improvements in patient outcomes with comprehensive risk factor management are certainly equivalent or even better than many interventional and surgical treatments in cardiology. Yet, the mechanical empathy associated with opening a narrowed coronary artery or reperfusing an area of the myocardium with a graft appears to retain a greater share of our clinical attention. The emerging abundance of imaging data on how risk factor management can improve a patient's coronary plaque burden<sup>7</sup><sup>8</sup> may help us to visualise and communicate the impact these interventions have.

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