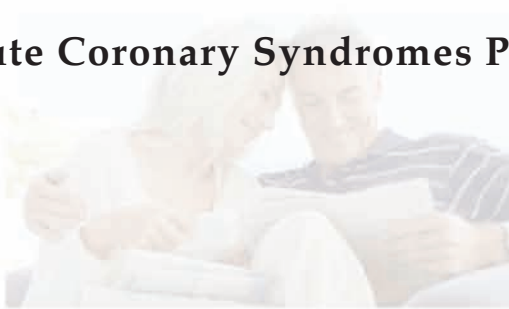


## The Big Question



## The Future of Acute Coronary Syndromes Patient Outcomes Report



Activity initiated and sponsored by AstraZeneca UK

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## Foreword

Acute coronary syndromes (ACS) are characterised by sudden blockage of a coronary artery which provides vital blood supply to the heart and include myocardial infarction (MI) and unstable angina.

They are important causes of premature mortality, morbidity and hospital admissions in the UK. **Someone is admitted to hospital suffering from chest pain or an MI every 4 minutes in the UK and each day over 90 people die from an MI<sup>1</sup>.**

The financial impact, both on the NHS and the wider economy, is significant. Figures from 2009/10 suggest that, when direct healthcare expenditure is added to economic losses, the burden of ACS is approximately £3.6 billion per year<sup>1</sup>.

There is an associated societal burden with ACS patients experiencing losses in both the length and the quality of their lives. The investment needed to reduce this burden has been estimated at £9.8 billion<sup>1</sup>.

At a time when all areas of the NHS are vying for additional support to protect their frontline services, it is acknowledged that these substantial, additional investments simply cannot be made. Therefore, in collaboration with HEART UK, the British Association for Cardiovascular Prevention and Rehabilitation (BACPR) and AntiCoagulation Europe, AstraZeneca has investigated how existing services can best be utilised to reduce the current burden of ACS, both on the healthcare professionals involved, the health system and perhaps more importantly – the patient.

The National Service Framework (NSF) for Coronary Heart Disease, published in 2000, has undoubtedly led to better management of Coronary Heart Disease (CHD)<sup>2</sup>. It has helped raise standards for the detection, treatment and management of all heart disease and has delivered improvements in most areas of cardiac services<sup>3</sup>.

The end of the decade of implementation associated with the NSF comes as the NHS faces a new set of challenges: both financial and organisational. By 2013 the NHS in England will have seen what is arguably the most radical structural overhaul in its history. Primary care trusts and strategic health authorities are to disappear – with GP consortia taking over control of 80% of the NHS budget overseen by a new NHS Commissioning Board. This presents a challenge for all NHS specialties but a particular one for the care of patients with ACS.

By the 20<sup>th</sup> anniversary of the launch of the NSF, in the year 2020, we believe the NHS could have spent the previous 10 years building on the considerable progress made and continued to improve the outcomes of ACS patients and the quality of their lives spent after a cardiac event.

While it is acknowledged that heart disease will always remain a significant burden to society as a consequence of our ageing population, we endeavour to identify ways to improve the care received by those patients and the support offered to their healthcare professionals and carers. By looking ahead at what the care and treatment of ACS patients in the year 2020 should look like, we can address those pertinent issues today, which might impact on this level of care being achieved.

A special thanks goes to Dr Alan Rees (Chairman, HEART UK), Dr Susan Connolly (Consultant Cardiologist and BACPR Council) and Eve Knight (Chief Executive, AntiCoagulation Europe) for their role in the development of the report and editorial direction. This report has also benefited from contributions and review by Judith Edwards, Imperial Healthcare NHS Trust and Dr Marcus Flather, Royal Brompton & Harefield NHS Foundation Trust.

## Executive summary

The management of patients has to be tailored to their individual needs and the availability of resources, but it is widely accepted that patients with ACS need high standards of early care as this has a major impact on short and long-term prognosis<sup>4</sup>.

Research shows that those European countries with higher health care expenditure on ACS tend to have lower case-fatality rates<sup>5</sup>. Although health service spending is protected, the NHS like other publicly funded organisations is facing the need to use its resources as effectively as possible and the recent announcement that the Department of Health (DH) is moving to “value-based pricing” will put a greater than ever emphasis on use of the most effective therapies.

The utilisation of evolving invasive procedures such as coronary angioplasty and revascularisation are becoming more common in an attempt to treat the underlying lesions that may cause ongoing ischemia and trigger future events<sup>6</sup>. In England and Wales, in the third quarter of 2008, 58% of patients who received any reperfusion treatment were treated with thrombolysis and 42% were treated with primary percutaneous coronary intervention (pPCI)<sup>7</sup>. By the end of the first quarter of 2010, the proportion treated with pPCI had risen to 73% and the proportion treated with thrombolysis had fallen to 27%<sup>7</sup>.

This has meant length of stay in hospital has fallen and so aftercare, once a patient is discharged, assumes even greater importance.

Cardioprotective drug therapies with proven outcome benefits in these patients include the following and should be given routinely: oral antiplatelet drugs, beta-blockers, ACE inhibitors and statins<sup>8</sup>.

It is not only pharmacological interventions that need to be addressed once a patient is discharged from hospital.

There is good evidence that cardiac rehabilitation improves survival and quality of life after an ACS event, thus may reduce the chances of readmission<sup>9</sup> and also promote an earlier return to work. Traditionally physical activity was the principal component of cardiac rehabilitation but it is now well recognised that an effective programme should also include education and behaviour change strategies to promote smoking cessation, healthy food choices and psychological health<sup>9</sup>. It should also include the proactive management of medical risk factors such as blood pressure and lipid control to national targets and also maximise adherence to secondary prevention drug regimens<sup>8</sup>.

Research into secondary prevention cardiovascular interventions has shown that cardiac rehabilitation is second only to aspirin and beta-blockers in terms of cost effectiveness (£1,957 per life year gained compared to <£1,000 per life year gained with aspirin and beta-blockers)<sup>10</sup>.

# Opportunities to improve the care of ACS patients

## 1. Building on the success of the National Service Framework for Coronary Heart Disease

In March 2000 the NSF for Coronary Heart Disease was launched with an ambitious series of targets to transform cardiac care in the next decade<sup>2</sup>.

Much of that has been achieved. In fact, the aim to reduce CHD and stroke-related deaths in people under the age of 75 by 40% by March 2010, was met five years ahead of schedule<sup>3</sup>.

The NSF gave clinicians, NHS managers and policymakers the impetus to redesign services, evaluate and introduce evidence-based medicine and streamline the care of patients, including those with ACS.

Not all the aims were achieved though. Cardiac rehabilitation and the treatment of heart failure, for example, are areas that have developed more slowly than others and we need to understand why<sup>3</sup>.

One of its goals was for 85% of patients discharged from hospital after a heart attack or revascularisation procedure to be offered cardiac rehabilitation<sup>2</sup>.

The latest National Audit of Cardiac Rehabilitation (2010) showed that in 2008/09, although excellent progress had been made, that target was still being missed, with only 43% of patients in the target groups of MI, bypass surgery and angioplasty taking part in cardiac rehabilitation<sup>11</sup>.

March 2010 should not mark the end of the NSF's implementation. Much of what was set in the NSF is as relevant now as it was nearly 11 years ago, and will still be relevant in 10 years' time.

The challenge now is to maintain the gains made and make further progress, especially in areas that have missed out, such as cardiac rehabilitation.

## 2. Promoting the use of an evidence-based, effective patient pathway

ACS is an umbrella term that encompasses a spectrum of unstable coronary artery disease from unstable angina to transmural myocardial infarction.

This makes it a condition that could benefit more than most from an evidence-based, effective clinical pathway designed to provide optimal patient care for this group of patients.



The NHS Heart Improvement Programme was introduced with the aim of improving existing cardiac pathways to meet the national 18 week waiting time target<sup>12</sup>.

This led to the development of a number of different ACS patient pathways, from those used in urban centres like the West Middlesex University NHS Hospitals ACS pathway<sup>13</sup>, to those developed for quite different, rural settings, such as that developed by NHS Orkney<sup>14</sup>.

It is vital that these pathways are not only developed and used across all settings, but that they are robust and fit for local purpose. A good place to start is with an ACS pathway template, that can be adapted to local needs and services. The pathway outlined in the DH cardiac rehabilitation commissioning pack provides an ideal basis for developing and consolidating a local arrangement for cardiac rehabilitation<sup>9</sup>.

### 3. Ensuring all relevant healthcare professionals are aware of their roles in the pathway

**Paramedics** - see section 5

**Ward staff** - senior ward nurses use their influence not only to ensure the best care for patients when they are admitted, but to maximise the chances of patients receiving optimal care once they are discharged. Pathways should not only include appropriate formal discharge but also ways for ward nurses to refer patients into cardiac rehabilitation programmes.

**Consultant cardiologists /cardiothoracic surgeons** - should actively recommend cardiac rehabilitation to their patients as this has been shown to improve uptake.

**GPs** - when GPs take over the care of a patient who has been treated for ACS, they should ensure the relevant medication is prescribed and the patient is monitored appropriately. They must also check the patient has been told of, has access to and, if necessary, is encouraged to attend cardiac rehabilitation.

### 4. Effective commissioning of services

The next few years will see another huge reorganisation of health services in England which, against a backdrop of public spending austerity, means delivering high quality care while at the same time delivering it much more efficiently. This, as Professor Roger Boyle, the National Director for Heart Disease and Stroke has said, is the biggest challenge the NHS has faced.

Central to this, in terms of the care of ACS patients, is to engage commissioning bodies, (and in England the PCT successors - the new GP consortia) about the commissioning of effective services, and this is especially true of cardiac rehabilitation.



**Late last year (2010) the Department of Health launched one of the first of its commissioning packs, designed to increase the provision and uptake of cardiac rehabilitation<sup>9</sup>.**

The pack aims to support commissioners to develop services which improve access, equity of provision and better uptake to quality cardiac rehabilitation for heart attack, angioplasty and coronary artery bypass graft patients. The NICE guidelines on secondary prevention following a myocardial infarction, the NICE commissioning guide on cardiac rehabilitation and the British Association of Cardiovascular Prevention and Rehabilitation Standards and Core Components (2007) were used as a basis for the pack<sup>8,15,16</sup>.

Along with a service template describing an effective cardiac rehabilitation programme, it specifies the range of health professionals and managers who need to be involved to optimise patient enrolment and engagement with cardiac rehabilitation. NHS Improvement is committed to rolling out and implementing the advice in the pack, with the hope that it will go some way towards improving provision of cardiac rehabilitation, which will be dealt with in more detail below.

### 5. Promoting best practice to paramedics

It is estimated that one-third of all patients with acute MI die before arrival at hospital<sup>17</sup>.

While developments in treatment introduced over the last two decades have significantly reduced in-hospital mortality and improved long-term survival for patients who survive long enough to reach hospital, attempts to reduce out-of-hospital mortality in the early stages of acute MI have met with only marginal success<sup>18</sup>.

The effectiveness of pre-hospital thrombolysis (PHT) in reducing mortality following ST-segment elevation myocardial infarction (STEMI) is well established. Figures from 2009 suggest that in England, PHT was provided to around 17% of STEMI patients, and responsibility for treatment rested largely with paramedics rather than physicians, as in some other countries<sup>19</sup>. Research suggests paramedics are able to deliver PHT promptly and safely and the vast majority view PHT as a positive step towards providing patient care that is evidence based<sup>20</sup>.

Any attempt to boost the 17% should therefore be met with enthusiasm by the profession and could make a significant difference to patient outcomes.

## 6. Improving discharge information

Recommendations for rehabilitation and discharge planning are as important as the acute management of ACS.

As mentioned previously, reduced in-patient stays for patients admitted with ACS make what happens once a patient is discharged more important than ever.

According to NICE, before discharge any patient admitted with ACS should have advice and information about:

- Their diagnosis and arrangements for follow-up<sup>8</sup>
- Cardiac rehabilitation<sup>8</sup>
- Management of cardiovascular risk factors and drug therapy for secondary prevention<sup>8,21</sup>
- Lifestyle changes<sup>8</sup>

It is also vital that ongoing care is consistent once a patient leaves hospital by providing comprehensive, accurate information on medication, which should be sent to GPs as soon as a patient is discharged.

The NHS Alliance's fourth national survey on hospital discharge data – released last year – found 70% of the GPs surveyed admitted that patient safety has been put at risk in the previous last year due to poor discharge information<sup>22</sup>.

Discharge information should arrive within 24 hours of a patient leaving hospital. In a 2009 report the Care Quality Commission raised concerns around the timeliness of discharge summaries. Only 53% of practices in the primary care trusts the commission visited reported that discharge summaries were received in enough time to be useful either “all of the time” or “most of the time”<sup>23</sup>.

**Again, GP practices reported particular concerns with the quality of discharge summaries: 81% of practices reported that details of prescribed medicines were incomplete or inaccurate on discharge summaries “all of the time” or “most of the time”<sup>23</sup>.**

A new standard contract for NHS-funded hospital care came into force in April 2008 that sets out specific mandatory obligations relating to discharge arrangements. This includes the requirements for discharge summaries to be shared with patients and issued to the patient's GP within 72 hours of discharge. It also stipulates that the discharge summary should include<sup>23</sup>:

- A summary of the key diagnosis made during the patient's admission
- Details of any medication prescribed at the time of the patient's discharge
- Any adverse reactions or allergies to medications or treatments experienced by the patient during admission
- Any planned follow-up arrangements

The CQC report found providers were sometimes falling far short of their discharge obligations and most PCTs were not monitoring the situation effectively.

Commissioning bodies must ensure the new standard is met, enforced and monitored effectively.

## 7. Maximising adherence to medication

A combination of factors is known to minimise the risk of another event occurring in patients who have been treated for ACS: cardiac rehabilitation<sup>15</sup>, lifestyle modification and medication<sup>8</sup>.

The UK guidelines currently recommend aspirin, clopidogrel (for 12 months for most patients but one month for those with a STEMI), beta-blockers, angiotensin-converting enzyme (ACE) inhibitors and statins<sup>8</sup>. NICE has also approved a newer antiplatelet drug prasugrel for some PCI patients<sup>24</sup> and is currently developing guidance on another, ticagrelor<sup>25</sup>.

Many studies demonstrate high rates of non-adherence to secondary prevention measures. For example, the majority of patients for whom statins are prescribed in clinical practice either stop taking the drug altogether or take less than the prescribed dose within one year<sup>26</sup>.

**Adherence to medication is generally poor in ACS patients with one study suggesting between 8% and 20% of ACS patients stop treatment within six months of starting<sup>27</sup>.**

Adherence is vital and recent research suggests that, after revascularisation, adherence to clopidogrel and statins have the biggest impact on mortality six months after a patient with ACS has been discharged<sup>28</sup>.

Some providers are making real efforts to engage patients and emphasise the importance of medicines adherence. For instance NHS Stockport are working with AstraZeneca on a programme to

use text messaging, emails, the web and possibly phone calls from nurses to promote the use of medicines to ACS patients. That programme is due to start in May this year and may provide a blueprint for other providers.

## 8. Addressing psychosocial health

Anxiety and depressive symptoms are very common in patients who have suffered an ACS event. Depression in particular increases the patient's risk of another cardiac event if not identified and addressed<sup>29,30</sup>.

In addition, psychological ill health makes it more difficult for the patient to make healthy lifestyle changes and is also associated with reduced adherence to secondary prevention medications. Cardiac rehabilitation programmes with dedicated psychological support and appropriately trained staff can be an effective way to tackle this<sup>9</sup>.

Any attempts to improve adherence must include a comprehensive assessment of the psychological impact of an ACS event. Cardiac rehabilitation programmes must provide psychosocial support to patients, as outlined in both the British Association of Cardiovascular Prevention and Rehabilitation Standards and Core Components<sup>16</sup> and in the new DH cardiac rehabilitation commissioning pack<sup>9</sup>.

## 9. Getting more patients onto cardiac rehabilitation programmes

As mentioned previously, cardiac rehabilitation is an essential part of the care of ACS patients to ensure optimal recovery. It also helps patients return to work, improves their functional capacity, physical activity status and quality of life<sup>10</sup>.

It is second only to aspirin and beta-blockers in terms of cost effectiveness<sup>10</sup>. The NSF set a goal of offering cardiac rehabilitation to 85% of patients who have been discharged from hospital after an MI or revascularisation procedure<sup>2</sup>.

Latest figures suggest that target is still being missed with only 41% of ACS patients taking part in such a programme<sup>11</sup>.

That target is still achievable and there are a number of initiatives that can help.

- The BACPR published its Standards and Core components for Cardiac Rehabilitation in 2007. It clearly sets out the minimum standards for an effective programme. These standards are currently being reviewed and due to be published later this year<sup>16</sup>.
- Recognising the failure to achieve that target, the DH's Strategic Commissioning Development Unit published a commissioning pack for cardiac rehabilitation last year<sup>9</sup>. It sets out a clear, evidence-based service specification, supported by procurement and contracting tools, to help commissioners and providers set up effective, accessible programmes<sup>9</sup>.
- There are a number of local initiatives which could help patients. For instance, the North-West London Cardiac and Stroke Network have developed information to be given to patients undergoing PSI, telling them what they can expect from a cardiac rehabilitation service. The availability of that information is built into their pathway, since the beginning of this project uptake of cardiac rehabilitation services increased from 26% to 78%<sup>31</sup>.



**As Professor Patrick Doherty, National Clinical Lead for Cardiac Rehabilitation said: "There is no doubt that saving life is key but repeatedly saving the same life is not best practice. Cardiac rehabilitation is a proven clinical and cost effective addition to care that leads to a reduction in premature cardiac death by actively promoting and supporting change towards sustained health-related behaviours."**

## 10. Encouraging GPs to take an active role in ongoing management of ACS patients after discharge

Guidelines, including NICE guidance on post-MI care, set out measures to optimise secondary prevention after MI, and GPs may find it useful to use them to structure management plans for individual patients.

Lifestyle changes include dietary measures such as a Mediterranean-style diet, increasing oily fish consumption, physical activity, stopping smoking and reducing obesity<sup>8</sup>.

If patients are not consuming sufficient oily fish to amount to 7g omega-3 fatty acids per week within three months of an acute MI, then omega-3 acid ethyl ester supplements of at least 1g daily should be considered for up to four years<sup>8</sup>.

Cardiac rehabilitation should be started before discharge, but GPs should be aware of the arrangements and encourage their patients to attend.

GPs also have a vital role in ensuring patients adhere to secondary prevention drug regimens as recommended by the patient's cardiologist. This advice, reinforced at every consultation and in conjunction with advice patients receive from cardiac rehabilitation nurses, should go a long way towards improving adherence rates.

# Barriers to maintaining the current standard of care for ACS patients

## 1. Moves to cut length of stay

NHS reforms give real incentives for hospitals to reduce the length of time their patients spend in hospital.

In the current challenging economic climate and likely reduced NHS growth, productivity and efficiency are paramount. Cash in the NHS will need to be spent more wisely. Considering the average cost for a patient to stay in an NHS surgical ward is up to £400 per day, the financial benefits of reducing length of stay are significant.

There is emerging evidence that the latest round of reforms will make reducing bed days an even more stringent goal, with programmes under development to reduce length of stay by a further 25% by the end of 2013<sup>32</sup>.



## 2. Poor continuity of care between secondary and primary care

Good communication among healthcare professionals ensures continuity of care and follow-up. Communication between healthcare professionals and patients should include information on cardiac rehabilitation programmes.

As can be seen from the previous section, the level of communication between secondary and primary care is far from ideal, and without improvement might well jeopardise the improvements made in the care of patients with ACS.

It is vital that in accordance with NICE guidance on post-MI care, that trusts should do the following:

- Review communication arrangements to ensure sharing of information between the ward discharging the patient, the cardiac rehabilitation service and the patient's GP and practice nurses.
- Consider using a template discharge plan to include: diagnosis, details of medications, cardiac rehabilitation plan, procedures performed (such as an echocardiogram) and any follow-up appointments.

## 3. A failure to empower patients to actively participate in their care

The recent White Paper on health states that patients should be in charge of their own care and that decisions should be made in partnership with clinicians rather than by clinicians alone. Shared decision-making has the potential to improve health outcomes and patient satisfaction and to save costs<sup>33</sup>.

ACS patients can only proactively be involved in their care if they are informed of, and involved in, their care plan. In 2009 the British Cardiac Patients' Association produced a cardiovascular patients' bill of rights<sup>34</sup>. It clearly sets out what cardiovascular patients have the right to expect from the NHS, as well as their obligations to help themselves and contribute to the management of their own condition.

It is based on five fundamental rights:

1. The right to effective primary care management – green light not blue light
2. The right to early intervention – acting fast, to make the most difference
3. The right to the best treatment – effective therapy for all
4. The right to joined-up support and care – care designed around the patient, not the organisation
5. The right to holistic risk assessment – treat the patient, not just their symptoms

This document is invaluable in setting out the basis for what patients can expect from the NHS and should be as widely disseminated as possible. If the DH is committed enough to the principle of shared decision-making to make “no decision about me without me” become the norm, then this could have a particularly dramatic impact on the care of ACS patients.

#### 4. The switch to generic medications

The push to increase the rate of generic medicines prescribed and dispensed in the NHS has clear benefits. The money saved can be used elsewhere to fund frontline services.

The UK currently ranks amongst the lowest in Europe in the uptake of innovative medicines,

despite having the lowest prices, suggesting the NHS is yet to strike the right balance between spending on new, innovative medicines and promoting generic substitution<sup>35</sup>.

It is vital to ensure that generic medicines are equivalent to their brand-name counterparts. It is also important to recognise that within a drug class there are generic compounds and others that are still on-patent.

It should not be assumed that a patient can necessarily be effectively managed on a generic drug within a class, in preference to another. This needs to be emphasised to commissioning bodies and those involved in medicines management.

#### Call to action

We believe the progress made in the care of patients with ACS in the 10 years since the publication of the NSF on Coronary Heart Disease has been substantial and valuable. There are, however, factors which could not only threaten further progress being made, but risk losing what has been achieved.

So we call for key stakeholders involved in the management of ACS patients and the development of ACS services to:

1. Not forget those NSF targets which have been missed and enable momentum to be maintained in order to achieve them in the coming years, especially with regard to cardiac rehabilitation.
2. Ensure ACS remains a high clinical priority in the new commissioning environment
3. Ensure every healthcare professional in the ACS care pathway is aware of their key roles in optimising care, from paramedics through to A&E staff, cardiologists, ward staff, cardiology nurses, GPs and pharmacists.
4. Put processes in place to ensure trusts fulfil their mandatory obligations on discharge arrangements and promote better, clearer communication between primary and secondary care.
5. Emphasise to GPs, community pharmacists and, perhaps most importantly patients themselves, how vital post-discharge care of ACS patients is, especially with regard to medication adherence, lifestyle change and attendance at cardiac rehabilitation.

and encourage GP consortia to use the DH cardiac rehabilitation commissioning pack as a template for service development.

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