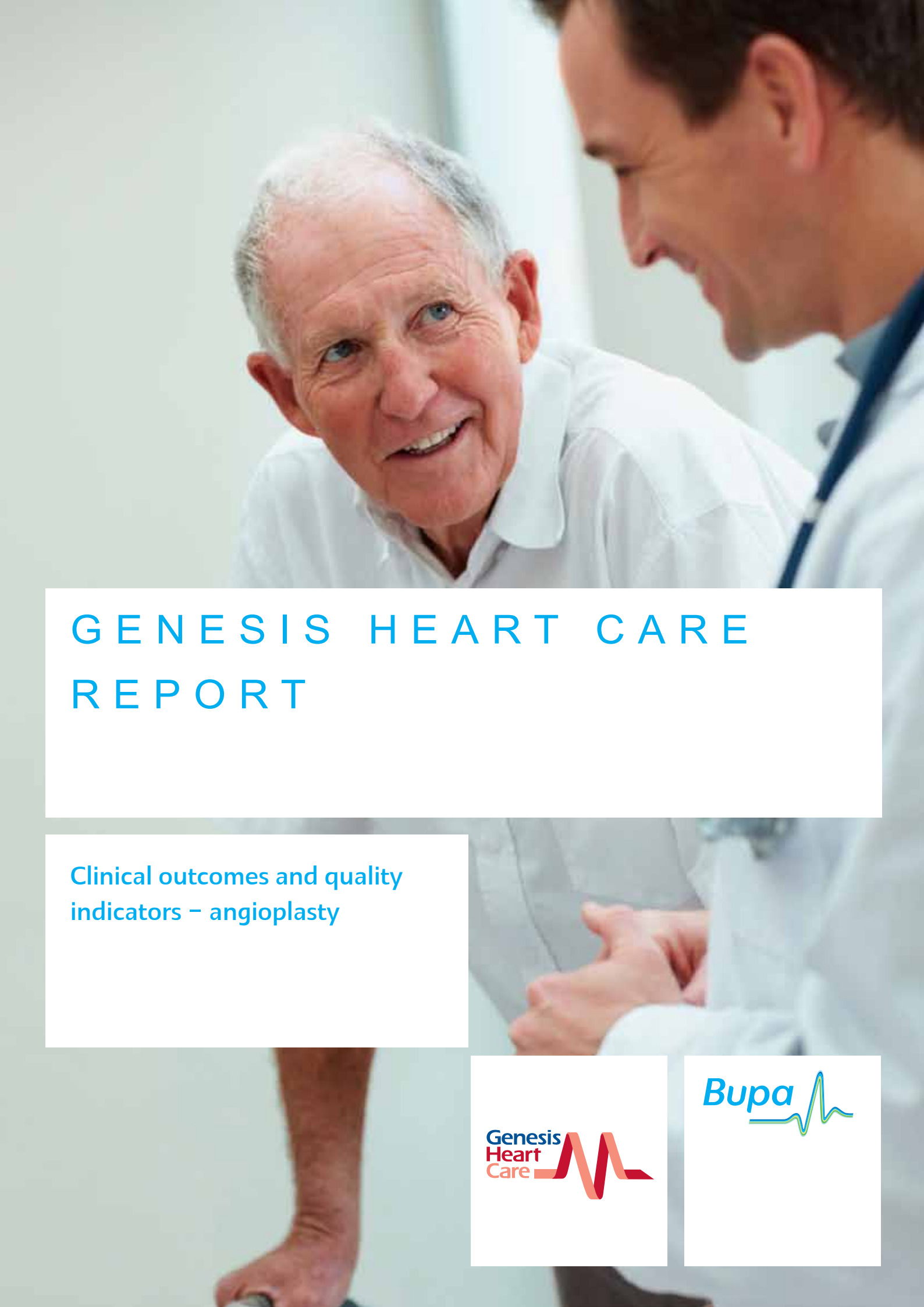


GENESIS HEART CARE REPORT

Clinical outcomes and quality indicators – angioplasty

Genesis Heart Care

Bupa

FOREWORD

Every 10 minutes an Australian dies as a result of heart disease - our nation's leading cause of death. Heart disease is also one of the most common and costly health issues in Australia, affecting one in five adults.

Heart disease is complex and the decisions around treatment are often not straight forward. Six years ago, the Genesis Heart Care cardiologists commenced a pioneering journey to improve their systems for monitoring the care and outcomes of their patients as part of their commitment to evidence-based care.

Recognising, and sharing, Genesis Heart Care's ambitious objective, in 2009 Bupa became an active partner in a joint quest to support patients with heart disease to better understand their condition, the treatment and care choices available, and how they can make lifestyle decisions to improve their health.

December 2010 sees the first groundbreaking step in this journey with Bupa supporting Genesis Heart Care publishing its first clinical outcomes and quality indicators report. The report has the dual aim of providing patients with crucial information to help them better understand their condition, as well as supporting and encouraging them to engage in effective conversations with their cardiologists and other members of their healthcare team.

The partnership between Genesis Heart Care and Bupa demonstrates what can be achieved when visionary organisations have a shared commitment to improve patient outcomes. This is also a tangible example of how the private sector can innovate and show leadership in Australia's health reform agenda.

As a patient we encourage you to discuss this report with your treating practitioner so you can be as informed as possible about your condition, treatment and associated risks.

In closing, we would like to acknowledge the extensive and outstanding work undertaken by the clinicians from our respective organisations in collecting, analysing, interpreting and reporting on the data to present this first landmark report.

Dr Christine Bennett
Chief Medical Officer
Bupa Australia

Dr Geoff Holt
Medical Director
Genesis Heart Care

HOW INFORMATION IMPROVES HEALTH

Making informed decisions – for both doctors and patients – starts with good information. Unfortunately, although there is a lot of evidence about what causes heart disease and how to treat it, there is surprisingly little up to date information about the prevalence of risk factors in the Australian population, how often Australians with high risk factors for heart disease receive treatment that is consistent with the evidence, and what the results of treatments are, both in the short and long term. Knowing this information can help doctors improve advice to patients, leading to better decisions about their treatment options and, in turn, better patient health outcomes.

AN AUSTRALIAN FIRST

In the first program of its kind in Australia, Bupa has partnered with the largest group of privately practising Australian cardiologists who are dedicated to achieving better health outcomes for patients – Genesis Heart Care (GHC). GHC practices include Heart Care Partners (QLD), Adelaide Cardiology, Heart Care Victoria and Heart Care Western Australia.

GHC cardiologists have a quality program to collect, analyse and report important information about GHC's clinical practice which Bupa is contributing to via a strategic partnership. Importantly, the program aims to improve clinical practice and to make information available to the public so that people with heart conditions can discuss their treatment and care with their cardiologist with a greater understanding of potential outcomes, regardless of whether or not they are a patient of GHC.

FIRST STEPS IN A LONG JOURNEY

This report is a ground-breaking step in a long journey. It starts with coronary artery disease: firstly, because it remains Australia's number one cause of death; secondly, because it has a significant impact on the lives of thousands of Australians; and thirdly, and most importantly, because it is a disease that, if well treated, can have its impact dramatically reduced. In the future, GHC intends to collect and report more information to continually improve the care for their patients as part of evidence-based cardiac care.

KEY FACTS FROM THE REPORT

The following are some of the key facts identified in the report with additional information to help you use these facts to discuss your treatment with your own cardiologist and improve your health outcome and quality of life.

The data were collected from patients undergoing treatment to open up narrowed or blocked coronary arteries by balloons and/or stents between 1 November 2008 and 30 June 2010.

THE PREVALENCE OF RISK FACTORS

Elevated low density lipoprotein (LDL) cholesterol, high blood pressure, smoking and diabetes are all risk factors for coronary artery disease (CAD). These data relate to GHC's patients and confirm that there is a high prevalence of risk factors in people needing treatment for CAD in Australia.

THE RESULTS FROM GHC

Risk factors before treatment include:

92.8% → LDL cholesterol greater than 2 mmol per litre

Only 7% of over 1300 patients had cholesterol levels that met National Heart Foundation recommendations for patients with CAD.

44.9% → Elevated blood pressure (more than 140/85 mmHg)

Nearly half of the patients had abnormally high blood pressure. Only a third of people had normal blood pressure when they presented for their procedure and many of the patients were already on treatment and were being managed for their blood pressure problem.

23.9% → Diabetes

One quarter of the patients had diabetes. This is almost four times the number of diabetics in the community (Australian Institute of Health and Welfare). A quarter of these patients controlled their diabetes with diet and were not on medications or insulin for their glucose control.

WHAT IS THE EVIDENCE BASED TREATMENT?

- Treatment usually consists of statin therapy plus lifestyle modification. Reduce weight, lower alcohol consumption and consider blood pressure lowering medications.
- Note that two thirds of patients already on treatment had elevated blood pressure readings, highlighting the importance of regular monitoring.
- With diabetes the first step is lifestyle modification and additional treatment options may include medications or insulin. One quarter of people with diabetes were able to control it with lifestyle modification alone.

HOW THIS CAN BE APPLIED TO YOUR OWN CONDITION

- If you have CAD or have been identified to have high risk factors, there are many ways you can lower your risk and stop or slow the deterioration of your condition.
- Lifestyle modification, including stopping smoking, losing weight, increasing physical activity and modifying your diet to lower your cholesterol, are all key to controlling your CAD in the long term, but most people will benefit from medication to reduce their risks, and some will require further intervention.

QUESTIONS TO ASK YOUR CARDIOLOGIST

- Are my cholesterol and blood pressure within recommended levels?

  The National Heart Foundation recommends:

  - LDL cholesterol levels <2 mmol per litre in patients with known CAD
  - blood pressure <130/80 mmHg.

- If no, what should I do to get it under control in the short and long term?
- Do I have diabetes or am I at increased risk of diabetes?

EVIDENCE-BASED TREATMENT

Billions of dollars have been spent on research to determine the best ways to combat disease, reduce risk and to give the best chance of a person having a good quality of life despite living with a long-term health problem. Around the world, one of the ways that people look at quality of health care is to see whether the treatment follows the recommended guidelines. Unfortunately, sometimes it doesn't.

THE RESULTS FROM GHC

Treatment

92.6%	➔ Prescribing of statins at hospital discharge
98.3%	➔ Prescribing of statins at 12 months after GHC cardiologist review
99.2%	➔ Anti-platelet agents prescribed at the time of coronary event or procedure by GHC cardiologist
98%	➔ Anti-platelet agents after 12 months for GHC cardiologist

WHAT IS THE EVIDENCE BASED TREATMENT?

- ➔ Statin therapy in conjunction with diet and exercise is the most commonly recommended way of lowering cholesterol.
- ➔ It is recommended that statins be considered in all patients with CAD. They are not suitable for a minority of patients.
- ➔ Anti-platelet agents are drugs that lessen the tendency of blood to clot (like aspirin). This reduces the risk of subsequent heart attack or other unwanted consequences. It is recommended that all patients should be prescribed an anti-platelet agent unless there are valid reasons otherwise (contraindications).

The results show that immediately and even after 12 months, optimal therapy can be achieved and maintained in a high proportion of patients. These outcomes for GHC patients compare well with figures worldwide. This high percentage suggests that the practices in place are effective at delivering care that matches the evidence for what works best in patients with CAD. In a small minority of patients, this medication would not be appropriate to prescribe due to factors such as allergies, side effects or drug interactions.

HOW THIS CAN BE APPLIED TO YOUR OWN CONDITION

- If you have high LDL cholesterol you should be prescribed a statin unless there is a reason why your individual condition indicates otherwise (called a contraindication).
- If you have CAD you should be prescribed an anti-platelet agent unless there is a reason why your individual condition indicates otherwise (called a contraindication).
- Lifestyle modification is also an important treatment and the evidence suggests that it complements medication in lowering your risk of heart attack in the long term.

QUESTIONS TO ASK YOUR CARDIOLOGIST

- If you have elevated LDL and are not on a statin, ask your cardiologist why they think it is not appropriate for you. It is important that you are aware of any contraindications you have in the event of hospitalisation or an emergency.
- If you are at increased risk, or already have, CAD and are not taking an anti-platelet agent, ask your cardiologist why they think it is not appropriate for you. It is important that you are aware of any contraindications you have in the event of hospitalisation or an emergency.

COMPLICATIONS FROM ANGIOPLASTY

Medications are very effective in the treatment and prevention of heart attacks but sometimes more active interventions are needed and one of the most common is angioplasty. Angioplasty is a procedure that opens up the narrowed or blocked coronary artery that feeds blood, and therefore oxygen and glucose, to your heart. It is sometimes performed as an emergency when you are having, or are at immediate risk of having, a heart attack. It is also done as an elective (scheduled) procedure, when your symptoms are not sudden. Such symptoms include increasing chest pain on exertion. Angioplasty can open up the artery to prevent chest pain.

There are risks, as with most procedures, even when there is time to prepare. One of the most significant risks is the small chance of having a heart attack during or after the procedure. This will depend on a combination of the following: the degree of damage to the coronary arteries, risk factors such as smoking and age, and the competency of the cardiologists and their team conducting the procedure. Good preparation can lower the risks but they can never be reduced completely.

THE RESULTS FROM GHC

Complications of treatment

1%	→ Myocardial infarction (heart attack) around the time of an elective angioplasty procedure for GHC
0%	→ Age- and condition-adjusted death rates (mortality) during elective angioplasty
0%	→ Age- and condition-adjusted death rates (mortality) 12 months after elective angioplasty

WHAT IS THE EVIDENCE BASED TREATMENT?

- → One of the most significant risks is the small risk of having a heart attack during or after the procedure.
- → Death is also a risk of most heart procedures and with angioplasty there is a small but significant risk. Different patients are at different risk, so it is best to consider the risk of a particular procedure for each individual patient.

HOW THIS CAN BE APPLIED TO YOUR OWN CONDITION

- If you require angioplasty, make sure you prepare well for the procedure. This may include:
  - closely monitoring or modifying your medications
  - lifestyle modifications like stopping smoking
  - taking preventative action like limiting activities that increase your risk of a heart attack until after the procedure.

QUESTIONS TO ASK YOUR CARDIOLOGIST

- Are there any alternatives to my treatment?
- What will happen if I do not receive treatment? How does the procedure change my outcome or the risk?
- How urgently do I require treatment?
- What are the risks associated with the procedure?
- What do I need to do to prepare for angioplasty to lower my risk and enhance my recovery?
- What can I do to reduce my risk of needing repeat angioplasty in the future?

CHOICE OF CORONARY STENT

The decision to undergo coronary angioplasty and stenting requires careful discussion with your cardiologist to help you understand the risks and benefits of undergoing angioplasty and the choice of stent used.

The choice of which type of stent to use is made together with your cardiologist after review of your individual clinical circumstances. One of the major aims is to avoid the artery blocking again (re-stenosis).

THE RESULTS FROM GHC

56.6% → Patients receiving a drug-eluting stent during angioplasty

WHAT IS THE EVIDENCE BASED TREATMENT?

- There is a risk of re-stenosis over the 6-9 months following angioplasty.
- Following angioplasty without stenting, re-stenosis has been observed in up to 30% of patients.[1]
- The risk of re-stenosis is improved with the use of stents. There are two main types: bare-metal stents and coated stents (drug-eluting).
- Bare-metal stents reduce the risk of re-stenosis to approximately 20%.
- Drug-eluting stents have proven to be effective in reducing re-stenosis to less than 10%. There were, however, some reports indicating that drug-eluting stents, when compared to bare-metal stents, may be associated with a slightly higher risk of stent thrombosis (clotting) and blockage but no increase in the risk of death. More recent and comprehensive reports suggest there is no increase in thrombosis risk.[2-6]

HOW THIS CAN BE APPLIED TO YOUR OWN CONDITION

- In general, factors that increase the risk of re-stenosis include those related to the patient and the affected artery.
- Factors related to the patient include:
  - age
  - smoking
  - history of diabetes or renal failure
  - reduced heart function
  - previous bypass grafts or failed angioplasty
  - multi-vessel disease.
- Factors related to the artery include:
  - size and length of the narrowed segment of artery
  - narrowing at the origin of the artery
  - the patient is clinically unstable, e.g. during a heart attack
  - whether the stent is to be placed into a graft or another stent.
- Other factors may need to be considered when making the final choice of stent in any given individual.

QUESTIONS TO ASK YOUR CARDIOLOGIST

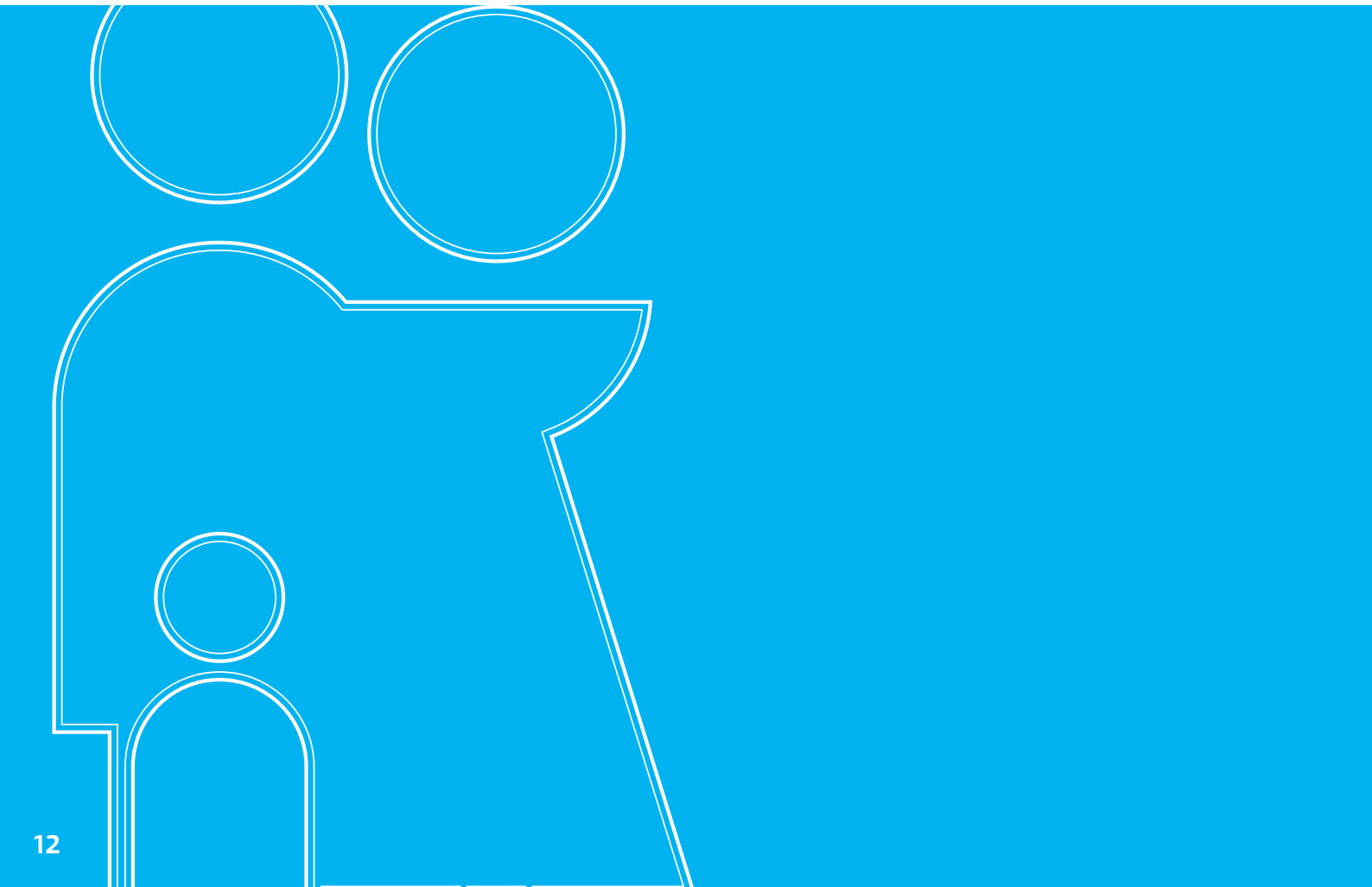
- If I need a stent what would make you consider if I should have a bare-metal or drug-eluting stent?
- What are the factors favouring the indication of a particular stent?
- If my cardiologist advises that I need a stent, have I been prescribed blood thinning medication, i.e.: aspirin and clopidogrel?
- Am I at risk of increased bleeding with the blood thinning medication?

LOOKING AT QUALITY, CARE AND OUTCOMES

How healthy you are and how well you feel, even when you have a chronic condition like CAD, may depend on a number of things. Some of these are not related to the health care you receive, such as your mood (i.e. whether you feel low or depressed) and how well you are able to adapt to the limitations of your condition while still maintaining a good quality of life. There are a number of elements of your health care that can, and do, affect your long term health and quality of life. Understanding each of these elements will help you make better decisions about treatments, and understand the risks that are within your control.

LIVING HEALTHILY

The evidence shows that modifying your lifestyle to lower your risk factors can be complementary to taking medication to reduce your long term risk of coronary heart disease. Stopping smoking, managing your weight, reducing your intake of high cholesterol foods, not drinking excessive alcohol and increasing physical activity can all have a significant impact on improving your health and your quality of life. It is well recognised that most people will require help to make these changes and your cardiologist can assist in a range of ways from providing information to referring you to a dietitian or relevant social support groups.



MANAGING OTHER HEALTH CONDITIONS

Other conditions that pose a risk, such as diabetes, high blood pressure, high cholesterol or obesity, can increase your likelihood of developing CAD or impact on your outcome if you already have the condition. This detailed report demonstrates that people with CAD do have these conditions and should try to reduce their influence on their health. Check with your doctor if you don't know if you have any of these conditions, or seek advice on how to ramp up your shared efforts to keep them under control.

CHOOSING EVIDENCE-BASED TREATMENTS

National and internationally relevant guidelines provide guidance on treatment choices to deliver improved health outcomes that are based on the best available research evidence. It is important that your treatment reflects these widely accepted guidelines.

MAKING INFORMED CHOICES

When you understand the risks and benefits of the treatment being recommended by a cardiologist and also understand the risks when performed by specific cardiologists and hospitals, you are better prepared to make important decisions about treatment.

A BRIGHTER, MORE INFORMED FUTURE

GHC's quality program is centred on a co-operative approach to optimising patient care. Bupa has supported GHC's early reports on quality and outcome indicators to help you make better and informed decisions about your health and health care. We hope to enhance and improve this information as data and comparisons become available.

One of the key messages here is that, while procedures like angioplasty can have dramatic effects, they can never treat the whole person or every artery in their heart. That needs medications and lifestyle changes - those are the things that will transform your life and wellbeing in the long term, according to the best available evidence.

In this report we looked not only at what happens if you need a particular procedure, but also at how well subsequent treatment follows the best available evidence. Your cardiologist can help you reduce your subsequent risks by helping you stay on the right medication, keeping your blood pressure, blood sugar and cholesterol low enough to reduce your risk, and by helping you with your weight if that's a problem. As we collect long-term data we will report these results so that long term treatment can also be improved.

References

1. Fischman DL, Leon MB, Baim DS, et al. A randomized comparison of coronary-stent placement and balloon angioplasty in the treatment of coronary artery disease. *N Engl J Med* 1994; 331: 496-501.
2. Stone GW, Ellis SG, Cox DA, et al. TAXUS-IV Investigators. A polymer-based, paclitaxel-eluting stent in patients with coronary artery disease. *N Engl J Med* 2004; 350: 221-231.
3. Ardissino D, Cavallini C, Bramucci E, et al. SES-SMART Investigators. Sirolimus-eluting vs uncoated stents for prevention of restenosis in small coronary arteries: A randomized trial. *JAMA* 2004; 292: 2727-2734.
4. Pfisterer M, Brunner-La Rocca HP, Buser PT, et al. BASKET-LATE Investigators. Late clinical events after clopidogrel discontinuation may limit the benefit of drug-eluting stents: An observational study of drug-eluting versus bare-metal stents. *J Am Coll Cardiol*. 2006; 48: 2584-2591.
5. Stettler C, Wandel S, Allemann S, et al. Outcomes associated with drug-eluting and bare-metal stents: A collaborative network meta-analysis. *Lancet*. 2007; 370: 937-948.
6. Kaiser C, Pfisterer M for the BASKET-PROVE Study Group. *N Engl J Med* November 16, 2010 (10.1056/NEJMoa1009406).

[1] Genesis Heart Care is a division of Genesis Care Pty Limited (ACN 137 188 464) and is Australia's largest cardiology and cancer care organisation, treating approximately 150,000 patients with cardiovascular disease. Genesis Heart Care practices include Heart Care Partners (QLD), Adelaide Cardiology, Heart Care Victoria and Heart Care Western Australia.

[2] Bupa Australia Pty Ltd (ABN 81 000 057 590) is Australia's largest privately managed health care company. With a presence in every Australian state and territory, the company operates under the brands HBA, MBF and Mutual Community, proudly covering more than three million Australians.

For more information visit
bupa.com.au/heartcare
genesiscare.com.au

BUPSY-005