Break free from CVD

A toolkit to rethink and react to the challenge of cardiovascular disease (CVD)

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November 2023

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Cardiovascular disease (CVD) is a group of disabling and potentially fatal conditions affecting the heart and blood vessels. As a leading cause of ill health, disability and mortality in England, CVD touches us all, causing a quarter of all deaths.[1]

Great strides have been made over recent decades: CVD mortality rates have almost halved.[2] However, there are worrying signs this progress is not being sustained. Increases in life expectancy in England began to slow from 2011, with CVD being a major contributor because reductions in mortality from CVD plateaued, and mortality has actually increased since COVID-19 disrupted the care of CVD and exacerbated its risk factors.[2,3,4,5]

Although CVD has similar outcomes to cancer, the current approach for CVD lags behind and receives comparatively less focus. This is further complicated by systemic issues, including overreliance on the NHS, disjointed working, prioritisation of other therapeutic areas and broader NHS challenges such as workforce, resource allocation and healthcare inequities.

A longstanding NHS priority, with enormous potential health and economic benefits, CVD features heavily in both The NHS Long Term Plan (2019)[6] and the forthcoming Major Conditions Strategy.[7] Yet despite a history abundant with CVD targets, initiatives, plans and objectives, progress has never caught up with ambition. CVD still has us in a chokehold.

We want fewer British families to suffer the heartache and tragedy of CVD. That's why we want to enable the NHS's vision to finally **break free from CVD**. through a collaborative joined-up approach.

It's time for a Rethink.

6.8 million people living with CVD in England[1]

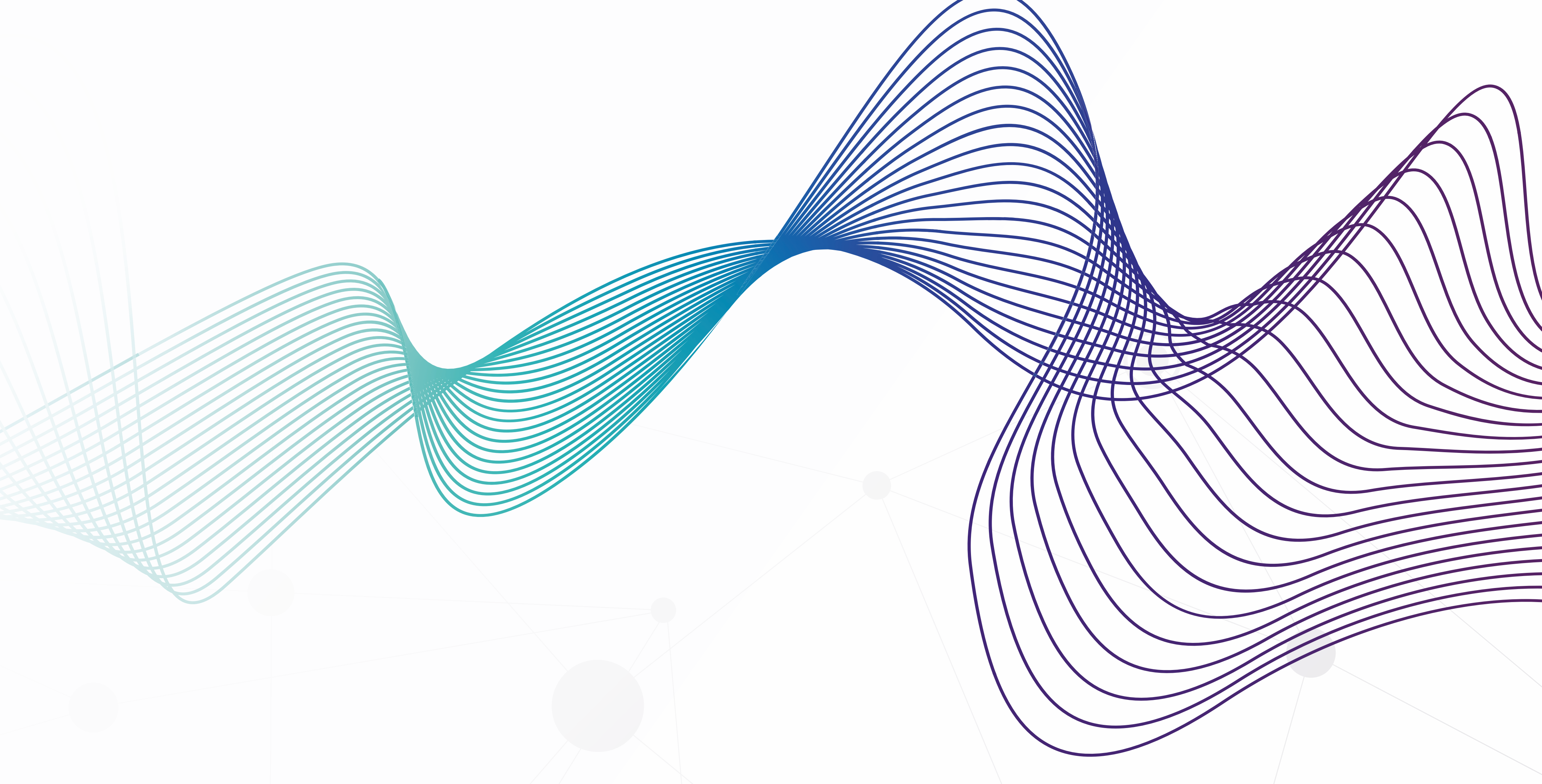
136,000 deaths caused by CVD in England each year[2]

1/5 of the life expectancy gap is caused by CVD[2]

£7.4 billion estimated annual cost to the health system[7]

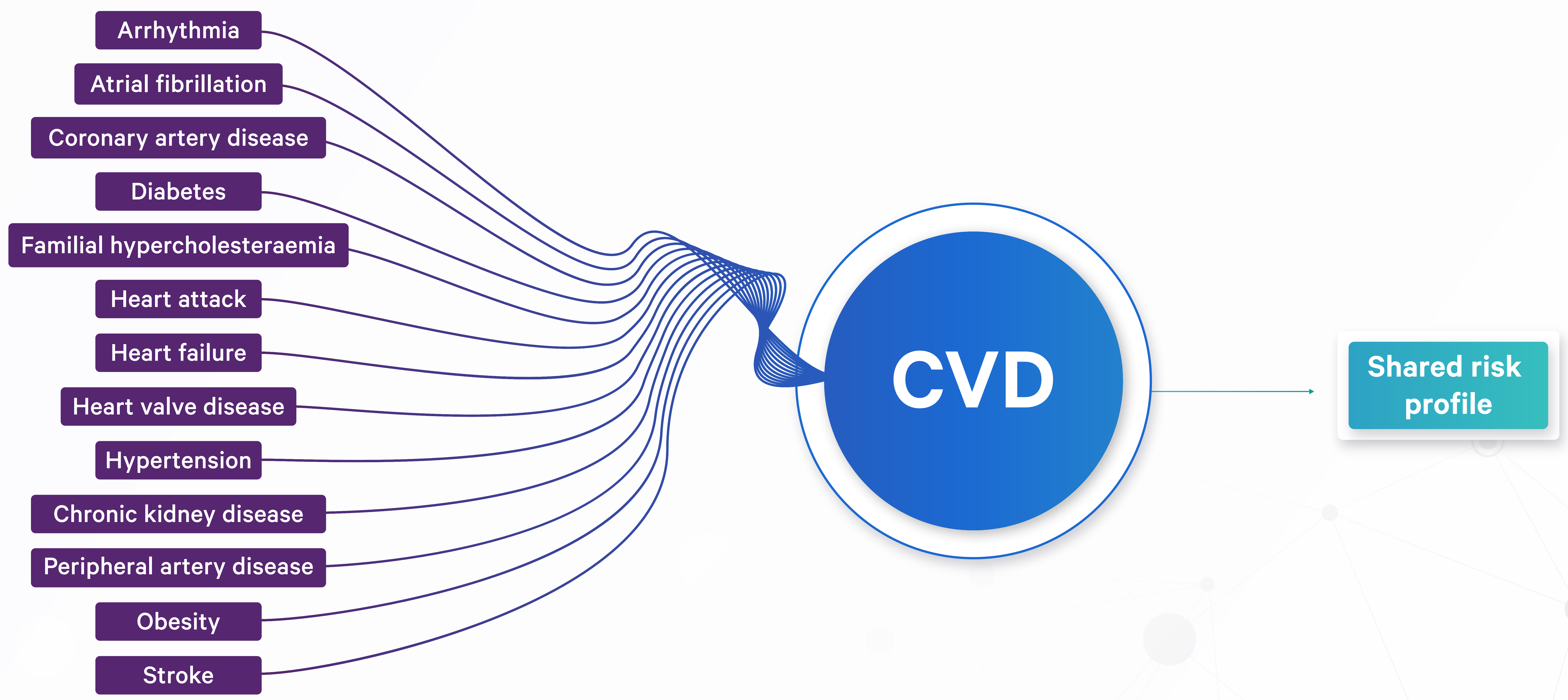
Rethink **CVD**

We need to refine our understanding of CVD risk. This means a culture shift to start thinking of it as a singular health threat rather than as an awkward collection of conditions. This will open up new opportunities to **break free from CVD**. Drawing on insight from cancer care, we argue the only way to truly gain ground will be a coordinated strategy centred on collaboration.



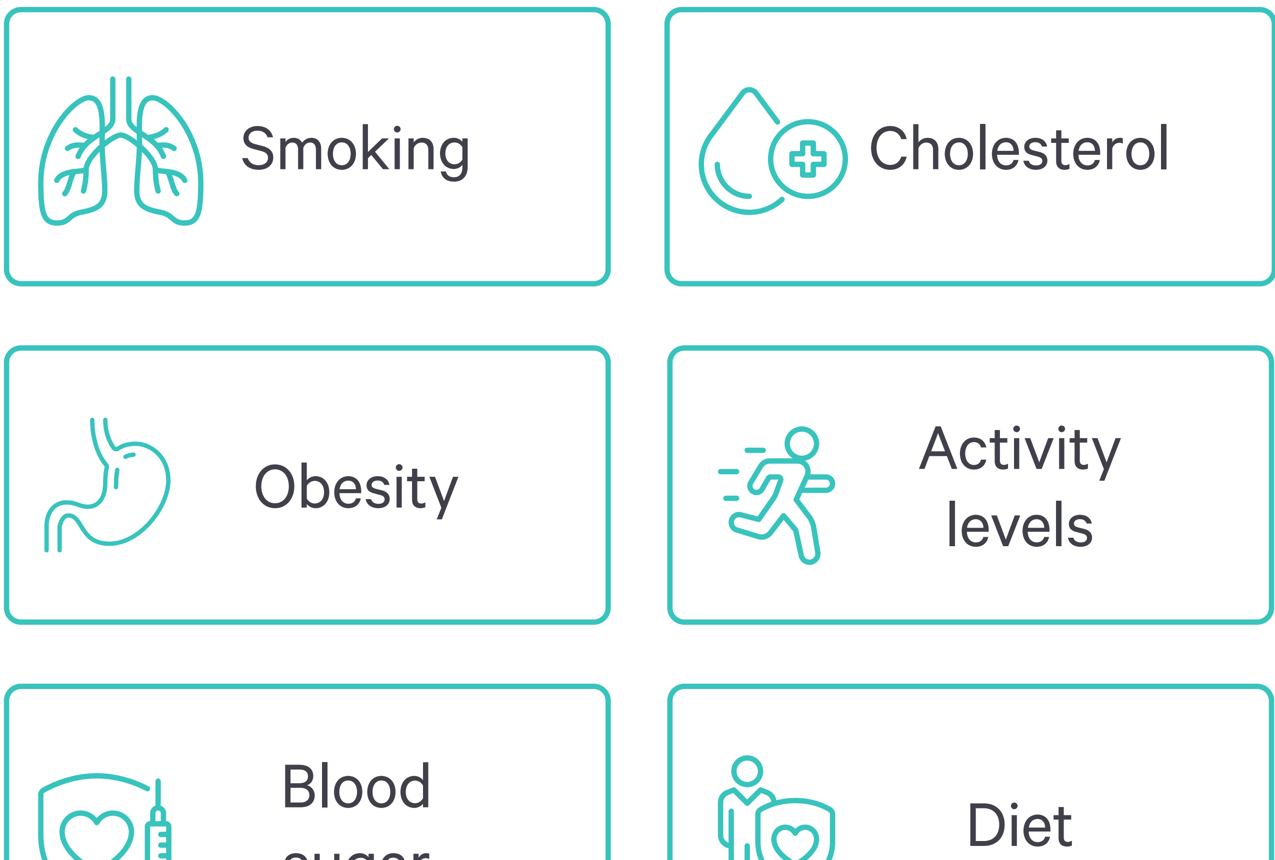
Simplify a complex picture

CVD is the umbrella term for a spectrum of interrelated conditions brought about by the same underlying problem. It's a long list of potentially fatal health consequences that all boil down to a shared risk profile. To **break free from CVD**, this common thread has to be the the main focus.



Silent risk is the killer

The shared risk profile for CVD revolves around a constellation of factors. Although risk factors like age, gender, ethnicity and family history cannot be changed, and socioeconomic status may be difficult to change, other risk factors are modifiable:



Each factor in the risk profile plays a role within the development of CVD, by inducing changes to the blood vessels and heart that bring about CVD in the future.

The danger is most people carrying this risk are invisible. During the silent risk phase people don't normally experience noticeable problems, often for a long period of time, until it causes devastating illness or sudden death.

Silent risk, and the unpredictable nature of CVD, is the reason it is a big killer.

90% **of CVD incidence is explained by modifiable risk factors**[8]

Window of opportunity

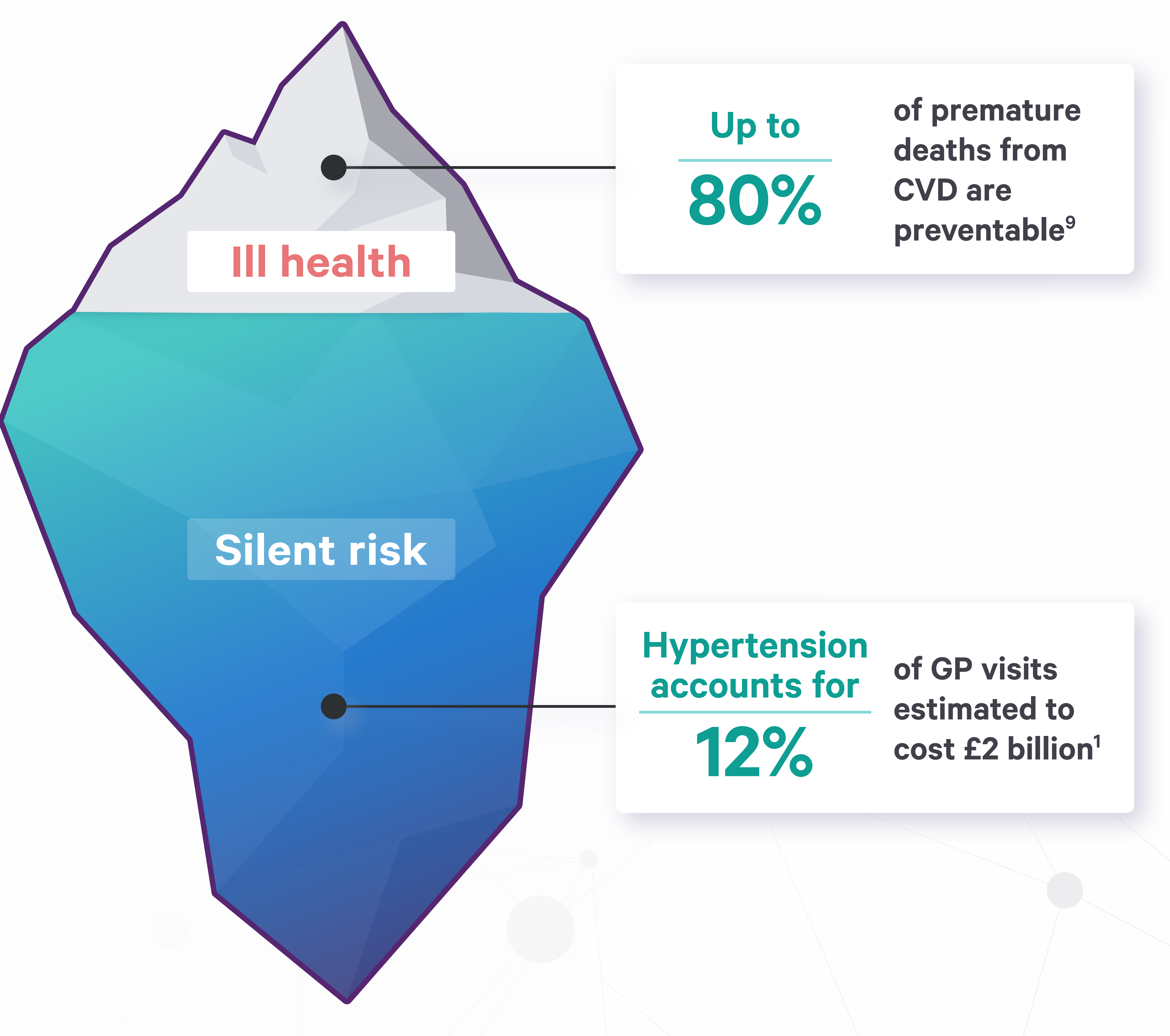
CVD is deadly, but not inevitable. The silent risk of CVD is acquired over time and highly amenable to intervention.

To date treatment and management interventions have seen vast improvements in both survival and quality of life for people with CVD. These interventions however have mostly been focused on the phase of ill health when CVD is already presenting itself.

The silent risk phase of CVD is an under-utilised window of opportunity. To **break free from CVD** the dial needs to shift to silent risk, with more interventions focused on prevention and early detection that reach people with modifiable risk factors.

A quarter of people in England with hypertension are estimated to be undiagnosed.[7] That's 4.2 million people[7] living with silent risk and waiting for action.

We will never get a handle on CVD unless we can start doing a better job of tapping into these invisible populations to ensure that the effective interventions we already have get where they're needed.



Unified approach

A host of prevention and early detection programmes have been implemented that have stimulated significant improvements in priority areas. There has been successful progress on hypertension, cholesterol, atrial fibrillation and smoking – the latter of which is now at an all-time low.[7]

Diligent focus on disparate individual objectives can make it easy to lose sight of the overarching goal. These are related priorities that trace back to CVD.

To comprehensively combat CVD, programmes of work need to be integrated with a unified approach. That means making the entire silent risk profile the single priority and linking the good work already taking place together with other CVD risk factors to deliver a coordinated attack on CVD. Integrated tactics on CVD will serve to amplify and enhance the effect of existing objectives.

The NHS operational planning guidance[10] has made a big difference in setting out the risk factors and how to address them. Now it's time for an integrated prevention programme with a powerful holistic strategy to link up separate priorities concentrated on one all-encompassing goal: **breaking free.**

Collaboration is power

Collaboration is vital to a unified approach on CVD. Unfortunately the NHS acknowledges that the current system suffers from fragmentation. There is a lack of oversight and collective approach for CVD with care for different conditions commissioned in different ways. Disjointed care gives CVD the upperhand and has devastating real life consequences.

The new NHS landscape offers an opportunity for CVD silent risk to emerge as a single priority and bring together CVD commissioning in a unified plan. Collaborating with the wider community and embracing the new integrated care landscape is very important.

The Major Conditions Strategy[7] highlights the importance of integration and the continued evolution towards a model encompassing whole-person care that departs from single disease strategies and workforce specialism. CVD needs a holistic pathway approach to unite everyone on the frontline of CVD, including teams across cardiology, diabetology, nephrology and geriatrics working together and connecting their care objectives.

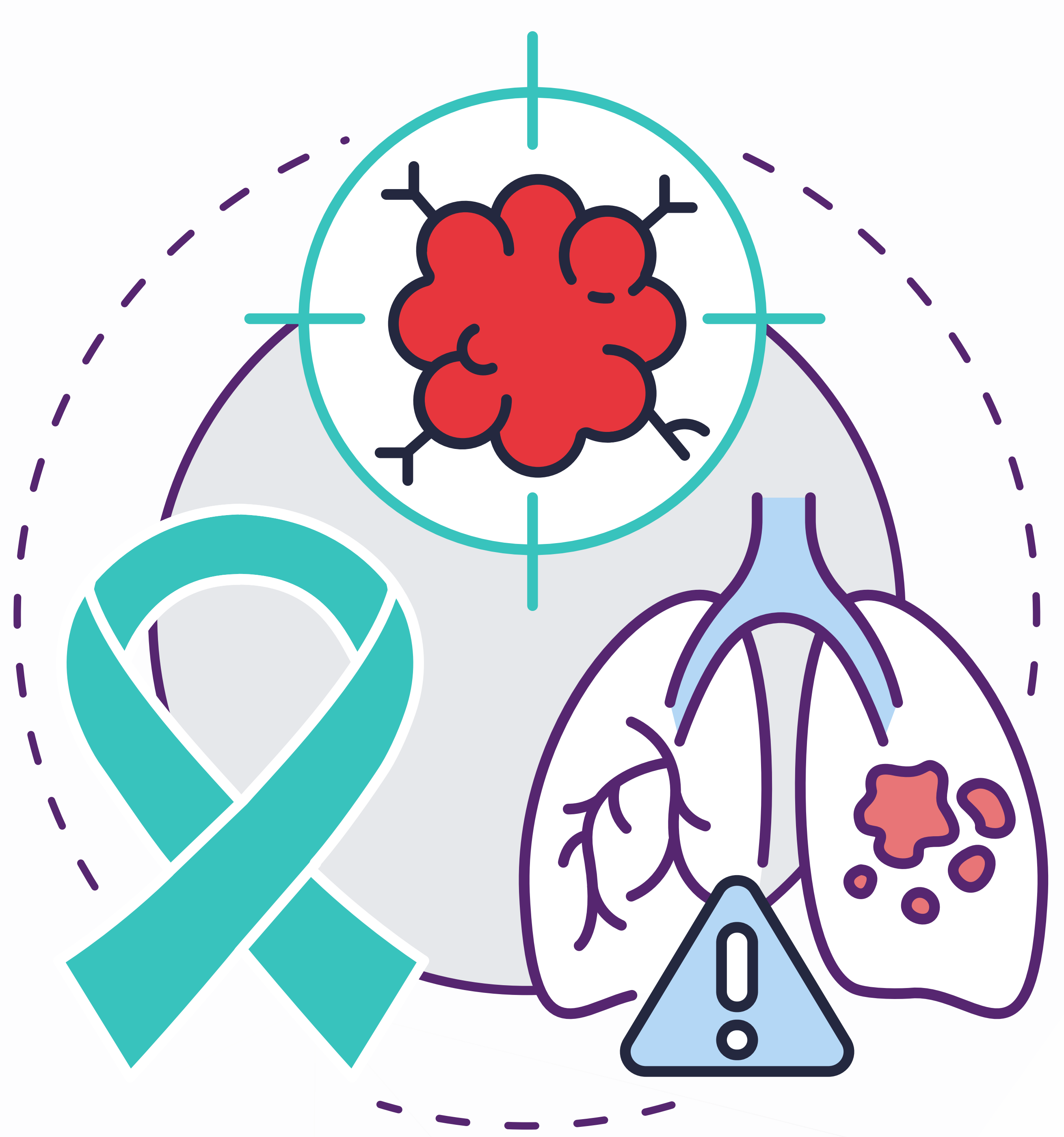
A collective approach involves healthcare services joining forces with external organisations in a coordinated shift to CVD as a single problem. Organisations such as Health Innovation Networks, the Office for Health Improvement and Disparities and Community Pharmacy will each have a role to play in a synergistic system that can develop solutions. Thinking beyond the NHS, collaborating with the wider community and embracing the new integrated landscapes will become increasingly important.

Learn from cancer

There is a lot to be learned from cancer, another diverse group of related diseases brought about by acquired and genetic risk factors.

Organising efforts under one flag has created a powerful collective profile for cancer which has been highly effective in generating momentum. This exceptional focus has unlocked innovation and redefined both outcomes and the subsequent standard of care. Introduction of the two-week wait suspected cancer pathway which has developed into the faster diagnosis standard (28 days between referral and confirmed diagnosis) has successfully delivered meaningful change for people with cancer.

The challenge now is to invigorate CVD with the same dedicated focus and unambiguous solidarity. **Break free from CVD** has to be made a priority, even if that means other areas receive less focus while we take control of this important problem. Of course CVD is affected by wider workforce and resource issues in the NHS, but there is so much cancer can teach us – for example cardiac clinical networks could look at the cancer alliances' working relationship with integrated care boards.



Unlock the benefits

Without a handle on silent risk, CVD will continue to dominate mortality and ill health. Managing and treating CVD and its complications demands vast resources; more effective early intervention would release a heavy weight from the NHS.

And the benefits extend further because CVD's silent risk overlaps significantly with other deadly conditions. The Major Conditions Strategy highlights that CVD, cancer, dementia, chronic respiratory disease, musculoskeletal disorders and mental ill health, account for over 60% of ill health and early death in England.[7] Impacting on working age people, they are a huge contributor to the cost of economic inactivity in England estimated to be in the region of £150 billion per year (7% of GDP).[7]

Intervention to uncover pockets of silent risk in hard-to-reach populations would also be a major step forward for the agenda on tackling health disparities and ensuring more equitable access to diagnosis. The 'big six' conditions are heavily skewed towards deprivation, with cancer, circulatory diseases, respiratory diseases and mental ill health accounting for nearly 60% of the gap in life expectancy between the most and least deprived areas of England (2020 to 2021).[7]

1 million estimated hospital admissions for CVD annually[7]

5.5 million estimated bed days for CVD annually[7]

£7.4 billion estimated annual cost to the health system[7]

£15.8 billion estimated annual cost to the economy[7]

Major conditions strategy

Cancer

Chronic respiratory disease

Cardiovascular disease (including stroke) and diabetes

Mental health

Musculoskeletal

Dementia

Adapted from: DHSC Major conditions strategy

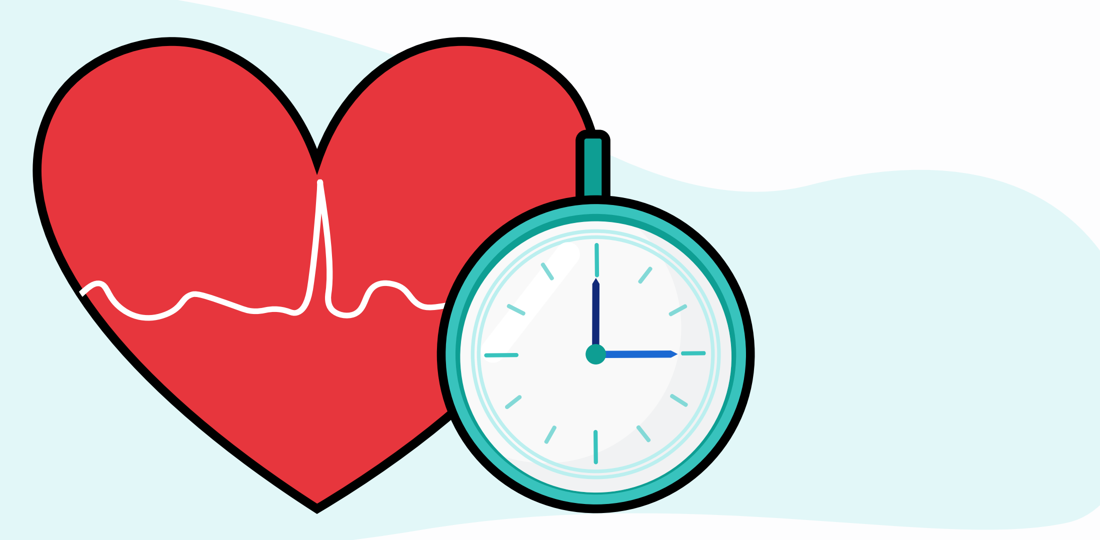
Time to react

The biggest potential gains lie within enhanced primary prevention and early detection of CVD. Silent risk is the challenge – **how will we react?**

CVD conditions present a complicated and deadly problem, but what links them is the same 'silent risk' profile. Although we have the tools to make a difference, currently too many people are invisible. We aren't taking enough advantage of the silent risk phase – the window of opportunity when prevention and early detection have the ability transform outcomes.

Tapping into silent risk has to be the priority. Ongoing CVD-related work such as hypertension and cholesterol objectives have delivered results. These gains could be amplified substantially with a unified approach weaving together a coordinated attack on the full suite of silent risk factors. This integrated approach recognises existing successes while seeking out the gaps that will need to be plugged to address silent risk comprehensively.

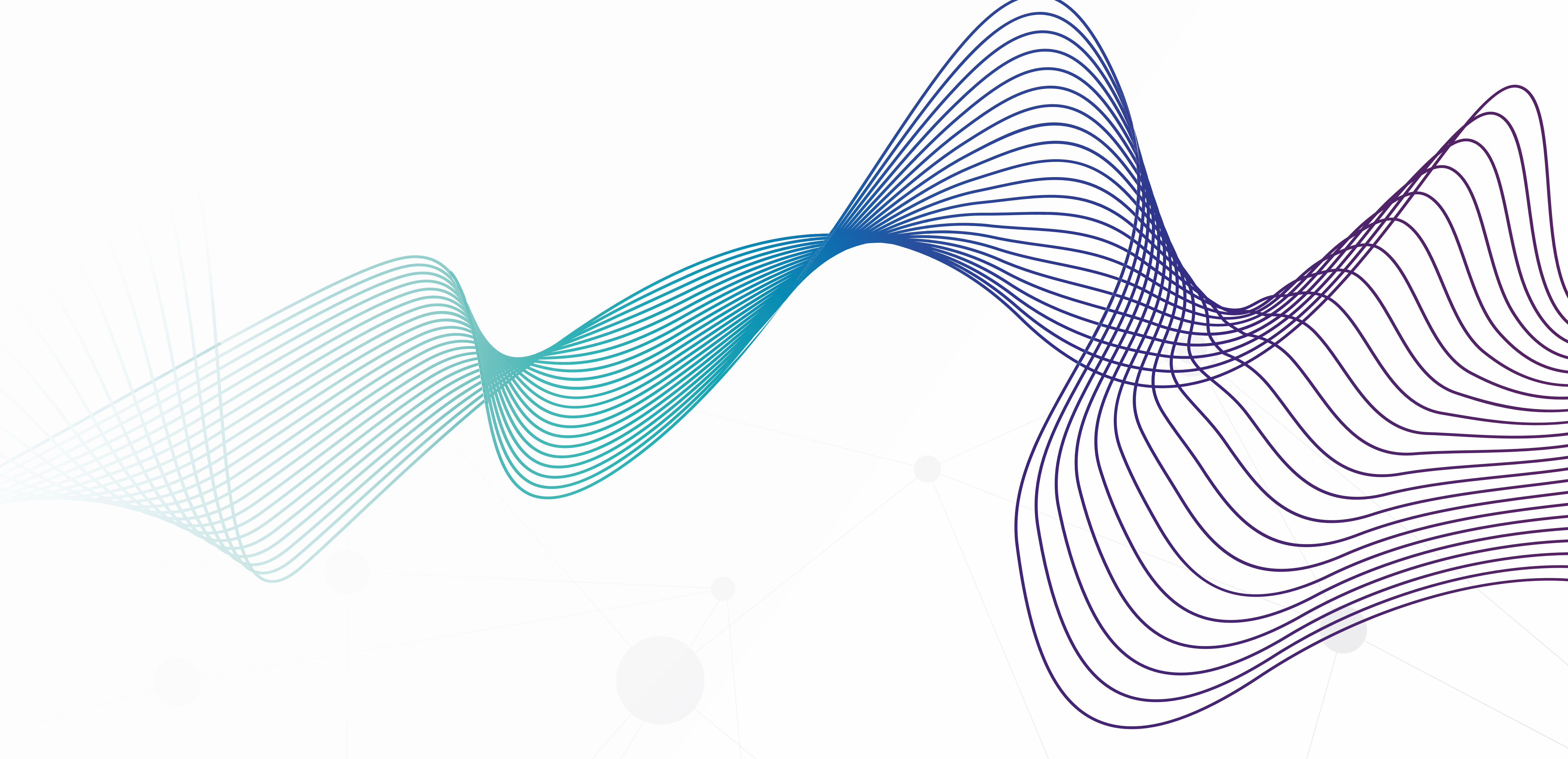
In rethinking CVD, everyone will need to react differently. Systems will need to carefully consider their individual gaps and tailor solutions to the individual needs of their populations. Healthcare systems, professionals, politicians, patient organisations and the public will need to join forces and collaborate in new ways towards this collective goal. Implementing contractual enablers and dedicated leadership are key components to bringing about this change.



The next section is a blueprint of ready-to-action solutions - ideas for a supercharged strategy to **break free from CVD**.

React

Ready to **break free from CVD**? Now what?
Explore this section for a roadmap of next steps.



How to react

This section sets out a blueprint of ready-to-action solutions to spark your imagination on how to react to the silent risk of CVD within your system.

Taking on silent risk means transforming care in four key areas of CVD: prevent, detect, manage and rehabilitate. Within each area we present a collection of case studies to illustrate the real-world impact of community intervention on CVD.

Each individual intervention plays a part in the coordinated plan of action to **break free from CVD**.

Select the blue buttons to expand information:

Select purple button to be taken to a external link:

Prevent CVD

The importance of prevention cannot be overstated. Intervention at the silent risk phase is crucial. Proactive prevention initiatives have a wide protective reach, putting the brakes on a cascade of debilitating health problems.

Intervention targeted at the shared CVD risk profile delivers a ripple effect of health benefits throughout the system and reduces burden on services. Making CVD prevention a priority disrupts a harmful cycle and develops a healthier, more resilient population.

Identify at-risk patients to prevent strokes and heart attacks

GPs sought out people at increased risk of developing CVD to work with them on reducing their risk. By optimising/initiating statin medication thousands of patients reduced their cholesterol and blood pressure to safer levels.

Optimise anticoagulation in atrial fibrillation to prevent stroke

GP practices identified people with AF who were not receiving anticoagulant medication and invited them for assessment to develop an individualised management plan. After 12 months, 1,200 patients started anticoagulant treatment and over the next three years AF-related strokes dropped by 25%.

Detect CVD

Early and proactive detection is a powerful tool. Like finding a smouldering fire before it engulfs the building, early detection provides a precious window of opportunity to intervene and implement life-saving measures. It enables faster and more effective intervention to ensure people receive the management and support they need when they need it. For people with previously undetected CVD, early diagnosis is an opportunity to take charge of their own health.

Detecting CVD in its infancy improves outcomes; patients are less likely to experience sudden, life-threatening issues, like strokes and heart attacks, that require urgent admission and it is more likely they can be managed in the community.

Through regular screening, risk assessments, and vigilant monitoring of key indicators, invisible patients in the early stages of CVD can be identified. This enables healthcare providers to initiate interventions that range from lifestyle modifications to targeted medications, all geared towards halting the progression of CVD.

Proactively detect heart valve disease in community pharmacy

With the aid of artificial intelligence, community pharmacists carried out digital stethoscope auscultation to detect heart murmur. This enabled people with previously undetected heart valve disease to access lifesaving treatment before their condition deteriorated or reached a crisis.

Detect heart failure earlier in primary care

The protocol for patients with suspected HF was streamlined by introducing a single point of referral. A pro forma referral template and other guidance supported prompt GP decision-making to meet waiting targets and improve outcomes.

Code cleanse in GP practices for early detection of hypertension and atrial fibrillation

A review of GP records identified patients receiving treatment for hypertension or AF but not clinically coded for the conditions. Over 15,000 patients were added to disease registers and are now included in regular review processes to monitor their condition and optimise their medicines.

Manage CVD

Effective management of CVD in the community aims to prevent disease progression and minimise complications. Proactive and regular monitoring is key, especially for patients with conditions like high blood pressure – often referred to as the "silent killer". By detecting slight changes in blood pressure early on, healthcare professionals can intervene before the situation deteriorates and reduce emergency healthcare utilisation. A proactive approach to managing CVD involves staying engaged with patients and tailoring their care plans to suit individual needs. Prioritising regular monitoring goes a long way towards improving outcomes for people with CVD and breaking free from its devastating effects.

Address inequity in hypertension control

Using data analytics to identify high-risk patients, measures were introduced in primary care to establish and maintain contact with patients and facilitate ongoing HTN monitoring and management. Big improvements were achieved in blood pressure control and the gap between Black and White patients was successfully eliminated.

Utilise clinical pharmacists to manage AF in GP practices

A clinical pharmacist used software to identify AF patients receiving suboptimal or no anticoagulation treatment and invited them to a thorough review. With training to enhance GP skills and the support of a virtual MDT, anticoagulation therapy rates increased significantly.

Rehabilitate CVD

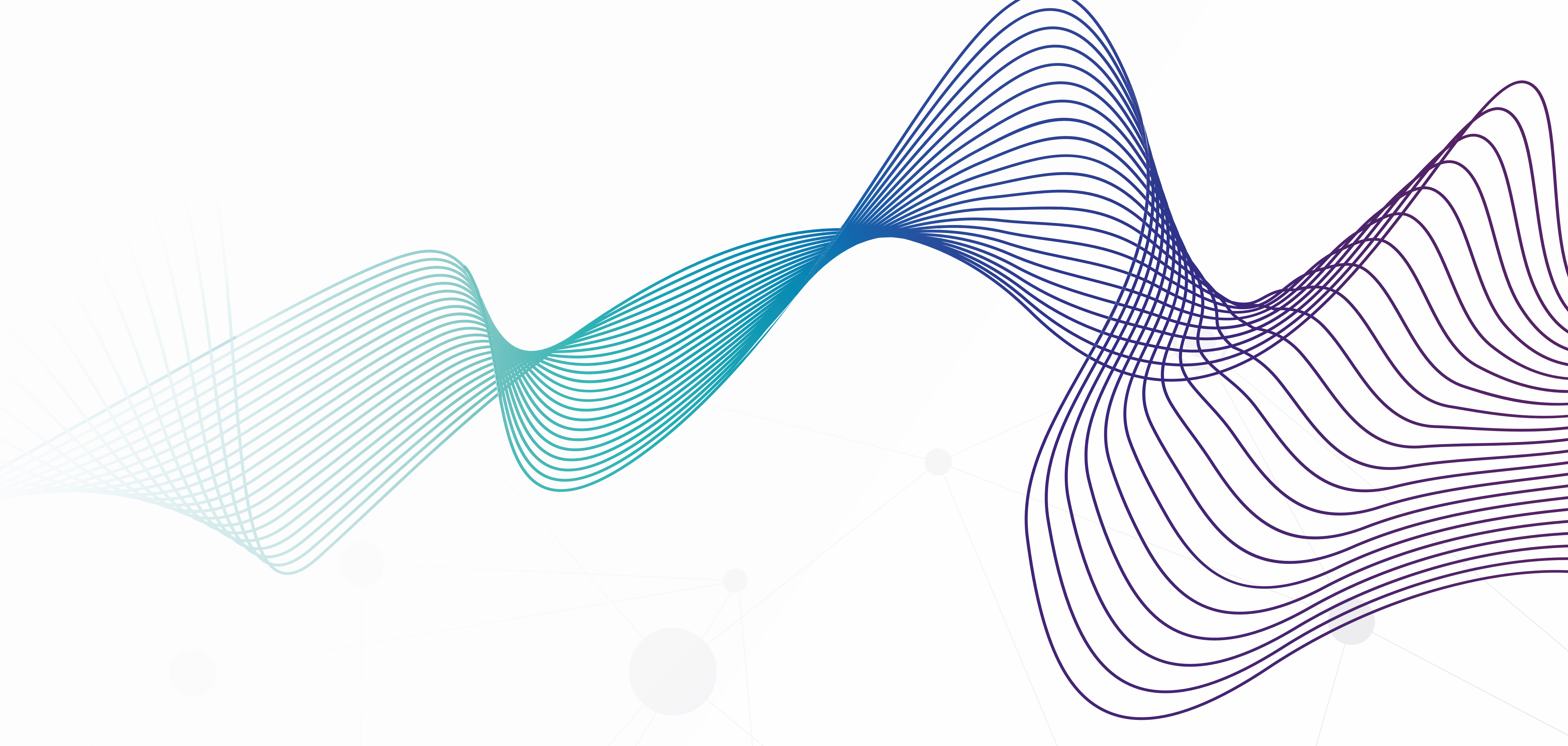
Following an acute cardiovascular episode, such as a heart attack, the journey towards recovery is a critical phase in a patient's life. Cardiac rehabilitation plays a pivotal role in the recovery process and return to normality. It is a holistic approach which includes physical exercise, dietary counselling, medication management and psychological support, to reduce complications and improve outcomes and quality of life.

Close attention to medication management is very important to ensure patients receive the right medications at the correct dosages. Ongoing monitoring and support helps identify and address issues promptly. Cardiac rehabilitation is not just about physical recovery; it ensures patients receive the comprehensive care they need to regain their health and their lives.

Stratify patient risk to enable prescribing during cardiac rehab

The cardiac rehab service took ownership of stratifying risk and prescribing during rehab. This involved setting up data sharing agreements to enable review of GP records, developing algorithms and protocols, and training non-medical staff to prescribe medication.

Information



Acknowledgements

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Previous President of the Primary Care Cardiovascular Society

Professor Simon Ray
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Previous President of the British Cardiovascular Society

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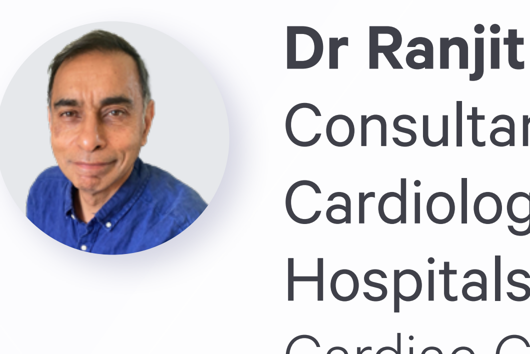

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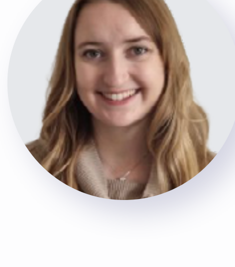

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Supported by an unrestricted grant from Edwards Lifesciences

Gloucestershire Heart Failure Pathway

Inpatients with suspected heart failure take a detailed history and perform clinical examination

Inpatients with known heart failure DO NOT measure NT-ProBNP but discuss case with Gloucestershire Heart Failure Service Clinician via Cinapsis

Arrange an ECG then

Measure NT proBNP

Request suspected new heart failure panel blood tests via ICE

NT proBNP result

NT proBNP >400 ng/l refer **routinely** to Gloucestershire Heart Failure Service via HeartFailureServiceReferrals@ghc.nhs.uk

>2000 ng/l refer **urgently** to Gloucestershire via HeartFailureServiceReferrals@ghc.nhs.uk

REFER TO GLOUCESTERSHIRE HEART FAILURE SERVICE VIA Email or CINAPSIS

NT proBNP <400ng/l Heart failure unlikely

Consider alternative cause for symptoms.

If GP remains concerned that patient has heart failure, discuss with Gloucestershire Heart Failure Service Clinician via Cinapsis

Referrals to Gloucestershire Heart Failure service will be triaged and where appropriate an Echocardiogram arranged. The timing of this investigation will be based on the clinical detail provided/NT-proBNP level and will be undertaken within 6 weeks.

Outcomes of the Echocardiogram

Heart Failure with reduced ejection fraction (HFrEF) and mildly reduced ejection fraction (HRmrEF) <45% patients will be seen and assessed by Gloucestershire Heart Failure Service. For these patients if they require referral onto Cardiology this will be done by the Clinician within the Gloucestershire Heart Failure Service

Heart Failure with mildly reduced ejection fraction (HFmrEF) and Heart Failure with Preserved ejection fraction (HFpEF),with an ejection fraction >45% the GP will receive information regarding further management. For these patients if this includes referral onto Cardiology this will need to be done by the GP

No Heart failure – patient referred back to GP/Primary Care

Gloucestershire Heart Failure Service Diagnostic/Referral Pathway, provided by Dr Jim Moore, and adapted for use in this document

Abbreviations

ABC	Anticoagulation, blood pressure management, cholesterol control
AF	Atrial fibrillation
AHSN	Academic Health Science Network (now known as Health Innovation Networks or HINs)
APL-AF	Active Patient Link - Atrial Fibrillation
AS	Aortic stenosis
BAME	Black, Asian, and minority ethnic
BNP	B-type natriuretic peptide
BP	Blood pressure
CCG	Clinical Commissioning Groups (no longer exist, have been replaced by ICBs)
COPD	Chronic obstructive pulmonary disease
CVD	Cardiovascular disease
GDP	Gross domestic product
GP	General practitioner
GPwSI	GP with special interest
HCA	Healthcare assistant
HCP	Healthcare professional
HF	Heart failure
HTN	Hypertension
HVD	Heart valve disease
ICB	Integrated Care Board
ICS	Integrated Care System
IT	Information technology
LDL-C	low-density lipoprotein-cholesterol
MDT	Multidisciplinary team
MVR	Mitral valve regurgitation
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
PBP	Practice-based pharmacist
PCN	Primary Care Network
PIS	Prescription Improvement Scheme
QOF	Quality and Outcomes Framework
SCN	Strategic Clinical Network
SSNAP	Stroke National Audit Programme
TC	Total cholesterol
TVR	Tricuspid valve regurgitation

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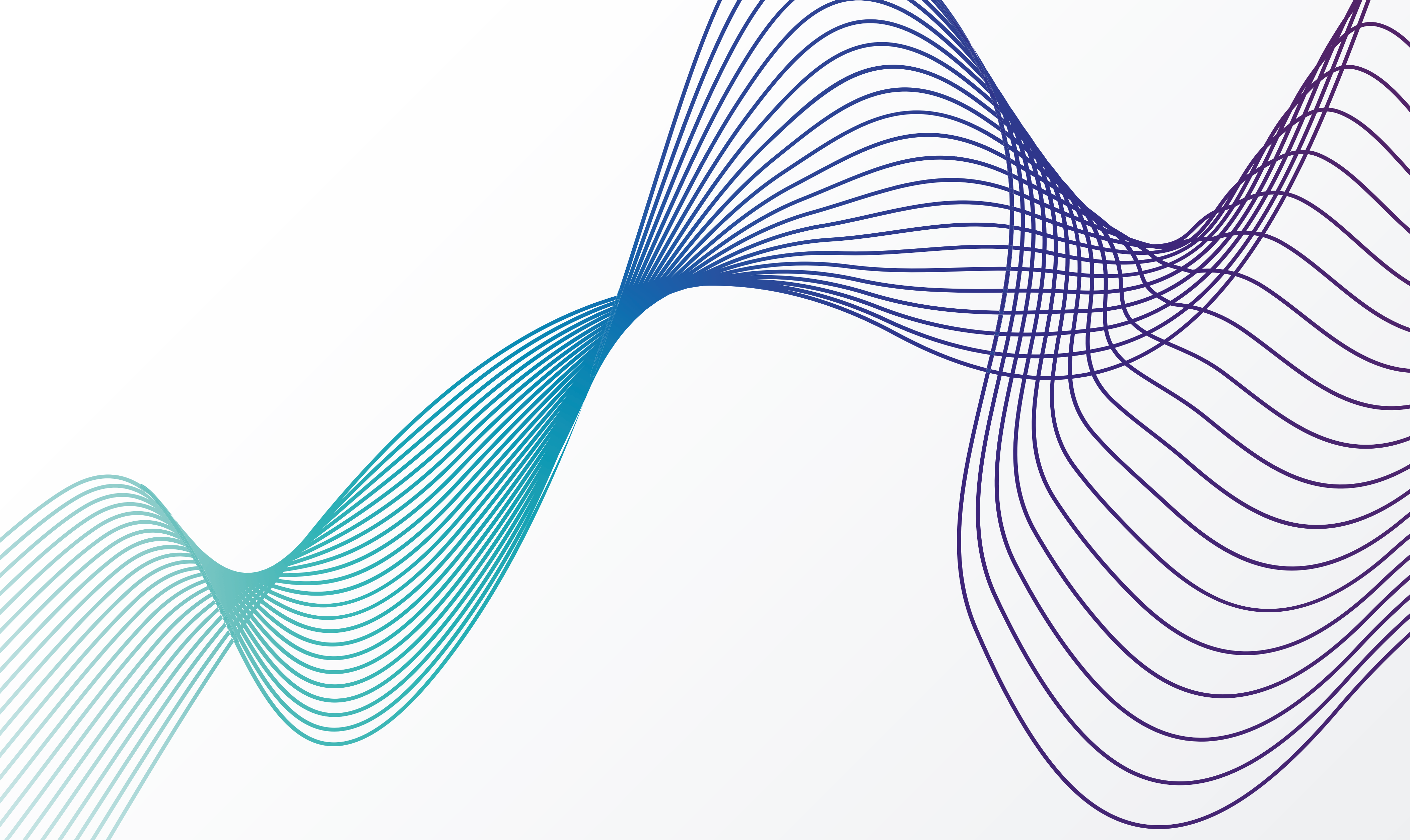

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