EXECUTIVE SUMMARY

The NHS England Long Term Plan calls for improvements in:

- Early detection of cardiovascular disease (CVD)
- Preventative treatment
- Early and effective treatment out of hospital for emergencies
- Hospital treatments
- Referral to cardiac rehabilitation

As services recover from the COVID-19 pandemic first wave, national audit data can feed quality improvement programmes and service redesign through four main processes:

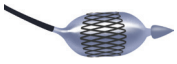
Aggregation: clinical pathways should be reviewed

- In 2018/19 (compared with the previous financial year), prior to COVID-19, there was a 2.4% reduction in heart attack admissions (to 87,091), a 2.5% reduction in PCIs (to 100,294) and 7.8% reduction in first time CABG (to 14,098, partly explained by non-participation of two Scottish hospitals).

- More PCI and pacemaker implant centres conform to national minimum numbers of procedures (but 16 NHS PCI centres and 28 NHS pacing services still do not; 38 NHS centres do not conform to standards for complex device implantation).

- There are challenges to delivering cardiac surgical procedures for acute aortic dissection (hospitals perform between 3 and 32 procedures per year).

Collaboration: working together to achieve better results



- Primary PCI is now the default treatment for patients with STEMI across the participating nations (it is now offered throughout Wales); more patients with STEMI now receive reperfusion therapy (from 74% in 2010/11 to 82% in 2018/19).

- However, Call-To-Door times are worsening (median 110 minutes in 2010/11 to 123 minutes in 2018/19).
- An increased number of patients with NSTEMI receive in-house angiography (from 64% in 2010/11 to 85% in 2018/19), but still only 57% receive it within the recommended 72 hours from admission.

- The previous fall in referral to cardiac rehabilitation after a heart attack has been reversed – now 80% overall (target 85%) but in-patient referral after admission with heart failure remains low (13%).

- Double scrubbing in congenital procedures is now performed in 1 in 10 surgical procedures (1 in 5 neonatal operations) and 1 in 5 interventional procedures (1 in 3 neonatal procedures).

Information: enables decision-making

- There is considerable age-specific variation between centres in the proportion of patients receiving tissue (vs

mechanical) aortic valve replacements (63-94% overall).

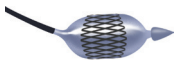
- More patients are now offered intervention for aortic valve disease (2,333 [22%] increase from 10,694 in 2014/15 to 13,027 in 2018/19); the proportion receiving TAVI has increased from 17.5% to 40%.
- The 1-year repeat intervention rate after AF/AT ablation varies between centres (0-24%, median 9.1%).

- Radial access rates for PCI have improved further – now 89% of all procedures.

Delegation: Nurse Specialists and Physician Associates can improve services

- Only 61% of patients with a heart attack are admitted to a cardiac ward, but 96.7% are seen by a member of a specialist cardiac team; 45% of patients with heart failure are admitted to a cardiac ward, but 82% are seen by a member of a specialist team.

- Over 90% of patients with a heart attack were discharged on all the secondary preventive drugs they were eligible to receive but only 67% with left ventricular dysfunction receive an MRA. Only 48% of patients admitted with heart failure with reduced ejection fraction are discharged on all three disease-modifying drugs, mainly because of a low prescription rate of MRAs (55%).



- Day-case services for elective PCI remains at 64% (variance <10-100%); implementation of this service requires specialist nurse input.

Future plans include the roll-out of on-line data tools to all hospitals for all specialty domains to allow:

- data quality checks
- immediate views of how a hospital fares against the national average and the best centres for the designated QI metrics
- local queries from the live database.

These tools are already available for the NAPCI and NACSA domains. The utility of these tools is dependent on rapid data submission from all participating hospitals.

Legend:
AF = atrial fibrillation; AT = atrial tachycardia; CABG = coronary artery bypass grafting; CVD = cardiovascular disease; HFrEF = heart failure with reduced ejection fraction; MRA = mineralocorticoid receptor antagonist; NACSA = National Adult Cardiac Surgery Audit; NAPCI = National Audit of Percutaneous Coronary Intervention; NSTEMI = non-ST-elevation myocardial infarction; PCI = percutaneous coronary intervention; QI = quality improvement; STEMI = ST-elevation myocardial infarction; TAVI = transcatheter aortic valve implantation.