Adoption support resource – insights from the NHS

Health technology adoption programme
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1 Introduction

This resource has been developed to provide practical information and advice on using high-sensitivity troponin tests for the early rule out of myocardial infarction (NICE diagnostics guidance DG15). It is intended for use by both clinical and non-clinical staff who are planning to implement this NICE guidance.

The Health Technologies Adoption Programme (HTAP) at NICE worked with NHS organisations to share their knowledge and experiences of using high-sensitivity troponin testing with others that may want to start using these technologies in the future. The information included in this resource is intended for the sole purpose of supporting the NHS in adopting or further researching the use of high-sensitivity troponin testing.

The information presented has not been assessed by the independent External Assessment Group or considered by the Diagnostics Advisory Committee when making its decision on the use of high-sensitivity troponin testing for the early rule out of myocardial infarction in the NHS.

The benefits of using high-sensitivity troponin tests for the early rule out of non-ST-segment elevation myocardial infarction (NSTEMI) as suggested by NHS staff involved in the production of this resource include:

- The test can inform the clinical decision to rule out NSTEMI. This can potentially be achieved within the 4-hour emergency department target in many patients.
• Improved clinical management of patients who present with symptoms suggestive of non-ST-elevation acute coronary syndrome due to earlier diagnosis.

The learning and experiences included here are not suggested as best practice but rather as the opinion of current NHS users of the technologies.

2 Current practice

NICE is aware that the NHS currently uses a wide range of non-high-sensitivity troponin tests to rule out non-ST-segment elevation myocardial infarction (NSTEMI). The use and timing of non-high-sensitivity troponin tests within serial testing care pathways is variable and has not been assessed in NICE guidance DG15.

**NICE guidance DG15** and this adoption support resource specifically relate to the use of high-sensitivity troponin tests for the early rule out of myocardial infarction. They are not intended to provide advice on the use of non-high-sensitivity troponin tests.

When a patient presents with an acute episode of chest pain or other cardiac type symptoms, it is important to establish an accurate diagnosis and to start treatment as quickly as possible. This involves consideration of the patient’s medical history, a clinical examination and a series of medical tests such as an electrocardiogram (ECG) and blood tests.

Possible cardiac diagnoses include ST-elevation myocardial infarction (STEMI), NSTEMI or unstable angina. These 3 conditions are collectively known as acute coronary syndrome.

STEMI can be detected from ST-elevation on an ECG. Once a diagnosis of STEMI is made, these patients can be treated in line with the NICE guideline on myocardial infarction with ST-segment elevation.

As NSTEMI does not produce ST-elevation on the ECG, cardiac biomarkers can be used to differentiate between NSTEMI, unstable angina and non-cardiac causes of chest pain.

Cardiac troponin I and T are biological markers of cardiac cell death and are released into circulation when damage has occurred to cardiac tissue. A rise and fall in cardiac troponin I or T levels, when combined with the results of other clinical assessments, can guide diagnosis and allow appropriate treatment to be started.

Serial testing of troponin levels is recommended to see if levels are changing over time. A rise and/or fall in cardiac troponin concentration is necessary for the diagnosis of myocardial infarction. The
NICE guideline on chest pain of recent onset also recommends that a blood sample for troponin I or T (non-high sensitivity assay) is taken at initial assessment of the person, with a second sample being taken 10–12 hours after the onset of symptoms.

In order for this serial testing to take place over the required time period, people are often admitted into medical assessment units or short-stay medical wards.

The introduction of high-sensitivity troponin assays has allowed smaller changes in troponin levels to be measured more quickly following the onset of symptoms. If incorporated into early rule-out protocols, this may allow people with normal results to be discharged directly from the emergency department or to have further investigations and treatment sooner.

3 Summary of NICE recommendations

The NICE diagnostics guidance on the early rule out of acute myocardial infarction using high-sensitivity troponin tests evaluated 3 high-sensitivity troponin assays. The guidance states:

- The Elecsys Troponin T high-sensitive assay and ARCHITECT STAT High Sensitive Troponin-I assay are recommended as options for the early rule out of non-ST-segment-elevation-myocardial infarction (NSTEMI) in people presenting to an emergency department with chest pain and suspected acute coronary syndrome.

- The assays are recommended for use with 'early rule-out protocols', which typically include a blood sample for cardiac troponin I or T taken at initial assessment in an emergency department and a second blood sample taken after 3 hours. Laboratories should report absolute values and the upper reference limit should be set at the 99th percentile. Results should be interpreted along with clinical judgement and the results of clinical assessment. Healthcare professionals should take into account the pre-test probability of NSTEMI, the length of time since the suspected acute coronary syndrome, the possibility of chronically elevated troponin levels in some patients and that 99th percentile thresholds for troponin I and T may differ between sexes. When NSTEMI is not ruled out using an 'early rule-out protocol', further clinical assessment is required to determine whether a diagnosis of NSTEMI is appropriate.

- The AccuTnI+3 assay is only recommended for use in clinical research, for early rule out of NSTEMI in people presenting to an emergency department with chest pain and suspected acute coronary syndrome.
Healthcare professionals using ‘early rule-out protocols’ including the Elecsys Troponin T high-sensitive or the ARCHITECT STAT High Sensitive Troponin-I assays should collect further information on the time taken to rule out NSTEMI in clinical practice and on the clinical outcomes of people presenting to an emergency department with chest pain and suspected acute coronary syndrome.

4  **Tips for adopting high-sensitivity troponin testing for use within early rule-out protocols**

- As troponin levels may be raised due to conditions other than myocardial infarction, high-sensitivity troponin assays should be used alongside clinical history taking and clinical assessment to diagnose non-ST-segment elevation myocardial infarction (NSTEMI). See **interpretation** for further details.

- Laboratories should report high-sensitivity troponin results in whole numbers (nanograms per litre) rather than using cut-off levels. See **reporting units and ranges** for further details.

- Trusts should ensure that the change in reporting units when moving from non-high-sensitivity to high-sensitivity troponin is planned and communicated as widely as possible. See **communication** for further details.

- High-sensitivity troponin testing should only be used for those patients suspected of having acute coronary syndrome. See **patient population** for further information.

- The use of high-sensitivity troponin testing is recommended for use as part of an early rule-out protocol. The timing of tests should be decided locally but typically includes testing at initial assessment and after 3 hours. See **introducing early rule-out protocols** for further details.

5  **How to implement NICE’s guidance on high-sensitivity troponin testing**

The following sections provide advice on the suggested steps that NHS trusts could take to start using high-sensitivity troponin for the early rule out of myocardial infarction. These steps have been developed in conjunction with NHS professionals who are current users of either standard or high-sensitivity troponin assays.

**Project management**

It is the experience of the Health Technologies Adoption Programme that in order to gain maximum benefit, the adoption of this diagnostic test should be carried out using a project management
approach. This means that the process of implementing and embedding the technology into routine use should be planned and implemented in a systematic and controlled way.

One way to ensure this is to formulate a project group that involves all stakeholders and takes full account of the impact, benefits and risks of implementation.

**Project group**

Individual NHS organisations will determine the membership of their project group and how long the project will last. In order to implement this guidance in an effective and sustainable way, consider including the following roles as part of a local project group:

- **Clinical champion(s):** This person could be any of the senior clinicians on the group. For example an emergency department consultant, a cardiologist or a clinical scientist. They should have the relevant knowledge and understanding to be able to drive the project, answer any clinical queries and champion the project at a senior level.

- **Emergency department consultant:** The majority of patients who require high-sensitivity troponin testing as part of an early rule-out protocol will be based within the emergency department. Emergency department consultants will be best placed to ensure that such protocols are effectively implemented.

- **Emergency department lead-nurse:** This person will help to ensure new pathways of care are implemented on a day-to-day basis and lead on education for nurses.

- **Cardiology consultant:** The cardiology consultant will be very valuable when determining the most appropriate early rule-out protocol. Successful implementation should also help to ensure that the most appropriate patients are referred to the cardiology team.

- **Acute medical consultant:** Medical consultants will also be valuable in determining the most appropriate early rule-out protocol.

- **Clinical biochemist:** This person will be a vital link to the laboratories and will be able to provide advice and guidance on validation, quality control and educational issues.

- **Management sponsor:** The use of this test is likely to reduce pressure within departments due to earlier discharges, but may also increase referrals to medical or cardiology specialties in those patients with elevated troponin concentrations admitted for further investigations. A management sponsor will be able to help assess the financial viability of the project, drive the formulation of a business case and help to demonstrate the cost savings achieved.
• Project manager: This person could be someone in a clinical or managerial role and will have responsibility for the day-to-day running of the project, coordinating the project team and ensuring the project is running as planned.

• Clinical audit facilitator: To help set up mechanisms to collect and analyse local data related to the project metrics and audit requirements.

The project group may wish to consider the following questions as part of their project:

• How will the trust use the test as part of early rule-out protocols?

• Are any additional costs likely? How will the project be funded?

• How will clinical outcomes be audited?

• How will local metrics be identified and measured?

• Who will be responsible for collecting clinical data?

• How will the required education be provided?

• How can effective communication be ensured?

• Are there any obvious challenges? How can these be overcome?

**Relevant NICE guidance**

When planning for the implementation of the test, NHS trusts may find it useful to refer to the following NICE publications when implementing high-sensitivity troponin testing.

<table>
<thead>
<tr>
<th>NICE pathway</th>
<th>Acute coronary syndromes</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICE guideline CG95 (2010)</td>
<td>Chest pain of recent onset</td>
</tr>
<tr>
<td>NICE guideline CG94 (2010)</td>
<td>Unstable angina and NSTEMI</td>
</tr>
<tr>
<td>NICE guidance GG167 (2013)</td>
<td>Myocardial infarction with ST-segment elevation</td>
</tr>
<tr>
<td>NICE guideline CG172 (2013)</td>
<td>Myocardial infarction – secondary prevention</td>
</tr>
</tbody>
</table>
Communication and collaborative working

Experience shared by NHS sites has indicated that when implementing high sensitivity troponin testing, it is important that there is clear and wide communication between all stakeholders. This will include the emergency department, medical wards, short stay units, laboratory staff, managers and primary care providers. The communication strategy for the project should be considered alongside planned educational activities.

The specific communications may include information on the following:

- Background to the proposed switch from non-high-sensitivity to high-sensitivity troponin testing.
- The date and time of the proposed switch, including detailed steps.
- Details of risk assessment and control measures put in place to mitigate risks during the switch-over phase.
- The change in reporting results from current units to nanograms per litre, reported in whole numbers with a reference range (see appendix for example letter).
- An explanation of the clinical significance of results above the 99th percentile upper reference limit (upper limit of normal).
- The use of the high-sensitivity troponin testing within an early rule-out protocol.
- The requirements and arrangements for clinical audit.
- Who to contact for further information and how to report problems.

In order to achieve the desired aims of the project, clear written and verbal communication may include:

- Letters to hospital consultants, departments and primary care practice managers.
- Use of trust intranet.
- Articles in trust newsletters.
- Dissemination of information at directorate, departmental and team meetings.
• Electronic messages displayed when blood tests are ordered or results displayed via local network.

• Information included as part of local induction and clinical teaching programmes.

**Costs**

Costs associated with switching to high-sensitivity troponin testing will vary depending on how the current non-high-sensitivity troponin tests are procured. For example, if high-sensitivity troponin testing falls outside of a current laboratory services contract, then a trust will need to procure the new test as an additional service or wait until their service contracts are due for re-tendering. Potentially this could mean a delay in the adoption of high-sensitivity troponin testing.

**Assay validation and quality control**

Whenever a new diagnostic assay is implemented within an NHS trust, a process of assay validation is undertaken. This includes a comprehensive evaluation of the quantitative performance of the test, including sensitivity, specificity, precision, accuracy, detection limit and range.

Once the assay is locally validated, laboratories should undertake quality control. This requires a combination of both Internal Quality Control (IQC) and External Quality Assessment (EQA) with an accredited external quality assurance scheme.

IQC is a process controlled by the test user and is a way of checking the day-to-day precision (reproducibility) of the test. In contrast, EQA is provided by an external organisation and is a spot check which occurs at a number of set times in the year. EQA programmes are considered a key element of a laboratory's quality assurance framework.[1]

For high-sensitivity troponin assays, IQC should be targeted at relevant clinical decision points as well as others within the working range of the assay. EQA providers should ensure that materials distributed, on a monthly basis, contain at least 1 sample targeted around the clinical decision points for troponin assays.

For laboratories validating high sensitivity troponin methods, EQA schemes should be able to supply back samples with targeted values to assist in this process.

For further details of the UK NEQAS EQA scheme for cardiac biomarkers, please contact:
Education

The successful adoption of this technology is reliant upon the knowledge and skills of those staff ordering the tests and interpreting the results.

Educational initiatives should be planned and undertaken for all staff affected by this change. Input may need to be tailored to the specific audience. This could be undertaken by any member of the project group who has the appropriate skills and knowledge.

The following categories of information have been identified by NHS sites as important to include within educational initiatives:

Background information

Full information regarding the background of the project should be provided. This includes information on national policy and relevant NICE guidance. It should also include an overview of the local project plan, the timeframes involved, and the steps that have been identified locally that will allow the project to proceed in a systematic and safe manner.

Patient population

NICE guidance DG15 recommendation 1.1 specifically relates to people presenting to an emergency department with chest pain and suspected acute coronary syndrome. The Diagnostics Advisory Committee at NICE noted that caution should be advised in interpreting the results of
high-sensitivity troponin tests when they are used outside the suspected acute coronary syndrome clinical setting.

It is important to recognise that there are many other causes of elevated troponin levels in addition to acute myocardial infarction. Heart failure and renal disease may result in chronically elevated troponin levels. Acute health problems such as pulmonary embolism, myocarditis or hypertensive crisis may result in acutely raised troponin levels. Care should therefore be taken to ensure testing and interpretation is carried out within the most appropriate patient populations, and as part of a wider clinical assessment. The Diagnostics Advisory Committee suggested that clinicians should assess the pre-test probability of acute MI to determine whether troponin testing is clinically appropriate.

**Reporting units and ranges**

The definition of a high-sensitivity troponin assay used within the NICE guidance on early rule out of acute myocardial infarction using high-sensitivity troponin tests relates to those tests that have a coefficient of variation of 10% or less at the 99th percentile (the upper limit of the reference population) and are able to detect troponin in at least 50% of the reference population. Recommendation 1.2 states that results should be reported in absolute values and that the upper reference limit should be set at the 99th percentile.

Due to the increased sensitivity of these assays, the working group of European Society of Cardiology on Acute Cardiac Care also suggest that high-sensitivity assays should be reported as nanograms per litre and in whole numbers.

**Interpretation**

NICE guidance DG15 recommendation 1.2 states that results should be interpreted along with clinical judgement and the results of clinical assessment. While serial results within the normal reference range may indicate a patient can be discharged as per an early rule-out protocol, raised results do not necessarily equate to a definitive diagnosis of myocardial infarction. NICE clinical guideline 95 recommends that diagnosis of NSTEMI should be made using the universal definition of myocardial infarction.

One element of the universal definition of myocardial infarction is the rise and/or fall of cardiac biomarker values with at least 1 value above the 99th percentile upper reference limit. The Diagnostics Advisory Committee acknowledged that the use of a specific percentage change between tests (delta value), within the context of early rule-out protocols, was not widely
understood. The decision to include delta values should be made locally, in conjunction with clinical and laboratory specialists.

The following table can be used to calculate delta values as part of an early rule-out protocol.

<table>
<thead>
<tr>
<th>Time 1st sample taken = time zero</th>
<th>Taken at <em><strong>:</strong></em></th>
<th>1st HS Troponin = ___ng/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd sample due at <em><strong>:</strong></em> = 3 hours after time zero</td>
<td>Taken at <em><strong>:</strong></em></td>
<td>2nd HS Troponin = ___ng/l</td>
</tr>
<tr>
<td>Difference between 2 results: 2nd HS Troponin - 1st HS Troponin = ___ng/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% increase from 1st to 2nd HS Troponin = (Difference between troponins x100) / 1st HS Troponin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Diagnostics Advisory Committee concluded that there was insufficient evidence to make recommendations on the use of high-sensitivity troponin testing within any subgroups. However the clinical specialists suggested there was developing evidence to suggest 99th percentile cut-off values may vary between men and women and this may need to be taken into account when interpreting results.

Other important factors to consider in relation to the interpretation of results may include:

- The use of cardiac risk stratification tools such as GRACE[^1] or TIMI[^2].
- History of raised troponin levels.
- Results that are rising but do not cross the 99th percentile upper reference limit at 3 hours.
- Co-morbidities, such as known heart failure, valvular heart disease or renal failure.
- Time since onset of symptoms and early presentation.
- Level of clinical suspicion that symptoms are of cardiac origin.
- Sex.
- Age.
Educational opportunities

Many different opportunities for educational activities are available. Clinicians have reported the following examples may be the most appropriate:

- Formal presentations to different established groups/meetings. For example directorate meetings.
- Specific teaching sessions for interested staff groups such as laboratory staff, cardiology nurses, emergency department staff.
- The formulation of local guidance documents.
- Teaching as part of set clinical teaching and audit days.
- The use of social media, podcasts and the local intranet.
- Inclusion of educational materials within clinical decision support guidelines.
- The use of ‘pop-up’ information boxes when ordering tests on-line or when logging onto the blood results system.

Introducing early rule-out protocols

The Diagnostics Advisory Committee considered that a sequential test strategy at presentation and 3 hours showed merit as an early rule-out strategy. They also agreed that the inclusion of a second sample improved the sensitivity of the strategies sufficiently to recommend the use of a two-step rule-out in clinical practice. However there was insufficient evidence to recommend a specific test strategy and the committee agreed that early rule-out protocols should be chosen locally.

The implementation of early rule out protocols may be dependent upon a number of factors. If the intention is to use an early rule-out protocol in the emergency department within the 4-hour waiting time target, consideration will need to be made of the logistics. Blood sample transportation, laboratory turnaround times, reporting systems, the availability of clinicians and the time taken to discharge or transfer the patient will all need to be factored in.

The following 3 protocols are not presented as best practice but rather as examples of early rule-out pathways using high-sensitivity troponin testing.

- Example high-sensitivity early rule-out example protocols
Measuring success and audit

In order to demonstrate the benefits of adopting high-sensitivity troponin testing it is important to take measurements before, during and after implementation. This will enable the benefits and impact achieved at a local level to be built upon and will help to embed the technology into routine use.

The NICE guidance on early rule out of acute myocardial infarction using high-sensitivity troponin tests recommends that healthcare professionals using early rule-out protocols should collect further information on the time taken to rule out NSTEMI in clinical practice, and on the clinical outcomes of people who present to an emergency department with chest pain and suspected acute coronary syndrome. NICE have developed an audit tool for this purpose.

Overcoming implementation hurdles

NHS sites currently using or implementing high-sensitivity troponin testing reported a number of implementation hurdles, as set out in the table below.

<table>
<thead>
<tr>
<th>Implementation hurdle</th>
<th>Potential solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inclusion of high-sensitivity troponin test is not included within current laboratory contracts.</td>
<td>Preparation of business case. Investigate alternative purchase options.</td>
</tr>
<tr>
<td>Educational requirements of staff.</td>
<td>Plan a programme of educational activities for all affected staff. Ensure all staff are available for training sessions. Keep accurate training records.</td>
</tr>
<tr>
<td>Consistency in interpretation of results.</td>
<td>Gain consensus from clinicians regarding interpretation of results and how they are to be used within early rule-out protocols.</td>
</tr>
<tr>
<td>Risk of misinterpretation of results due to unit of measurement switch-over.</td>
<td>Undertake full risk assessment of all implementation stages and ensure appropriate local control measures are in place.</td>
</tr>
<tr>
<td>Need to maintain high standards of quality and governance.</td>
<td>Ensure that quality control regimes are adhered to.</td>
</tr>
</tbody>
</table>
The technologies

This guidance considers high-sensitivity troponin tests to be those that have a coefficient of variation of 10% or less at the 99th percentile (the upper limit of the reference population), and are able to detect cardiac troponin in at least 50% of the reference population (that is, a healthy population).

The following table provides details of the 3 high-sensitivity assays included in the guidance.

<table>
<thead>
<tr>
<th>Name of assay</th>
<th>Elecsys Troponin T high-sensitive assay</th>
<th>ARCHITECT STAT High Sensitive Troponin-I assay</th>
<th>AccuTnl+3 troponin I assay*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>Roche Diagnostics</td>
<td>Abbott Diagnostics</td>
<td>Beckman Coulter</td>
</tr>
<tr>
<td>Type of assay</td>
<td>Sandwich electro-chemiluminescence immunoassay</td>
<td>Chemiluminescent microparticle immunoassay</td>
<td>Paramagnetic particle chemiluminescent immunoassay</td>
</tr>
<tr>
<td>Analyser</td>
<td>Roche Elecsys 2010 Cobas modular Analytics e-series</td>
<td>ARCHITECT i2000SR and i1000SR</td>
<td>Beckman Coulter Access II UniCel Dxl analyser</td>
</tr>
<tr>
<td>Estimated turnaround time</td>
<td>18 minutes 9 minutes (STAT version)</td>
<td>16 minutes</td>
<td>13 minutes</td>
</tr>
<tr>
<td>Reported detection rate in reference population</td>
<td>61%</td>
<td>96%</td>
<td>Not available</td>
</tr>
<tr>
<td>Reported 99th percentile–upper limit of normal</td>
<td>14 ng/l 34 ng/l for men 16 ng/l for women</td>
<td>26 ng/l 34 ng/l</td>
<td>40 ng/l</td>
</tr>
<tr>
<td>Reported coefficient of variation</td>
<td>10%</td>
<td>4% at 26 ng/l 3.5% at 34 ng/l 5.3% at 16 ng/l</td>
<td>10%</td>
</tr>
</tbody>
</table>

* This assay is only recommended for research; see recommendation 1.3.
**Contact details**

**Elecsys Troponin T high-sensitive**

**Roche Diagnostics**  
Roche Diagnostics Ltd,  
Charles Avenue,  
Burgess Hill,  
West Sussex  
RH15 9RY

Telephone: 01444 256000

**ARCHITECT STAT High Sensitive Troponin-I**

**Abbott Diagnostics**  
Barbara Maniglia,  
Market Segment Manager,  
Region North,  
Abbott Diagnostics, Abbott House,  
Vanwall Business Park, Vanwall Road,  
Maidenhead,  
Berkshire  
SL6 4XE

Mobile telephone: 07837 736177  
Telephone: 01628 774668

**AccuTnl+3**

**NICE guidance DG15** states that the AccuTnl+3 assay is only recommended for use in clinical research, for early rule-out of NSTEMI. The following information is provided for organisations which may wish to purchase the assay for this purpose.

**Beckman Coulter United Kingdom Ltd**  
Oakley Court,  
Kingsmead Business Park,  
London Road,  
High Wycombe,
6 Acknowledgements

NICE would like to acknowledge and thank the following people and organisations for their valuable contribution to this resource.

Dr Rick Body
Consultant in Emergency Medicine and Honorary Lecturer in Cardiovascular Medicine, Central Manchester University Hospitals NHS Foundation Trust

Professor Paul Collinson
Consultant Chemical Pathologist & Professor of Cardiovascular Biomarkers, St George’s Healthcare NHS Trust

Professor Steve Goodacre
Professor of Emergency Medicine, University of Sheffield

Dr Nicholas Mills
Reader and Consultant Cardiologist, University of Edinburgh

Mr Thomas James
Advanced Nurse Practitioner, Wirral University Teaching Hospital NHS Trust
7 About this resource

The NICE Health Technologies Adoption Programme produces practical advice on adopting health technologies in the NHS in England.

NICE’s Health Technologies Adoption Programme surveyed and worked with NHS organisations to help share their experiences and knowledge of high-sensitivity troponin testing with organisations that may want to adopt the technology in the future. The information gained from these NHS organisations and included in this resource is intended for the sole purpose of supporting the NHS in adopting or researching the use of high-sensitivity troponin testing as part of an early rule-out protocol. The information was not assessed by the independent External Assessment Group or considered by the Diagnostics Advisory Committee when making its decision on the use of high-sensitivity troponin testing in the NHS.

This resource accompanies, and should be read in conjunction with, the diagnostics guidance, myocardial infarction (acute): Early rule out using high-sensitivity troponin tests (Elecsys Troponin T high-sensitive, ARCHITECT STAT High Sensitive Troponin-I and AccuTnl+3 assays) and the manufacturer’s instructions for use. It is an implementation tool and discusses and summarises the experiences reported by NHS sites who have previously adopted this technology and shares the learning that took place. It was developed using the NICE Health Technologies Adoption Programme process.
Implementation of the guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this document should be interpreted in a way that would be inconsistent with compliance with those duties.

Click here for more information about the Health Technology Adoption Programme

8 Appendix

Example letter to primary care

Practice Manager

Date (insert)

Dear Practice Manager

RE: Change in reporting units of Troponin I/T

I would be grateful if you could please pass the following information to all GPs, locums and nursing staff within your practice.

From (insert date), units for Troponin I/T will be reported in ng/l and the upper reference limit will become (insert) ng/l. The change is necessary as it will bring us in line with national and international guidelines.

Kind regards

(insert)