

**Audit Template**

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| **Audit Title:**  Audit of Laboratory Analyses for Natriuretic Peptides | |
| **Lead Auditor:**  **Funmi Akinlade** | **Audit date(s):**  October 2015 |
| Please indicate if **Regional**  Please indicate which hospital & location or region  **Queen's Hospital, Romford**  **Southern region** | **Report Author:**  Name: Funmi Akinlade  Email: funmi.akinlade@nhs.net |
| **Aims of the Audit:**  To review the use of natriuretic peptide testing in the Thames region. To identify any areas for improvement and/or harmonisation. | |
| **Audit Method and Outcome(s):**  An audit questionnaire was devised by the lead auditor and ratified by the committee of the Thames Audit Group (TAG). The NICE guideline for Chronic Heart Failure in Adults (CG108) was reviewed in the development ofthis questionnaire that was distributed to all members of the TAG. A total of 18 responses were received and included in the audit.  All 18 laboratories provided a service for natriuretic peptide testing with the majority (16 labs) offering a service in house. All but one laboratory provided a service for primary care patients and 78% of these labs provideda service to primary care for over two years. 3 laboratories implemented Natriuretic peptideservice within the last two years. 10 laboratories provided a service to both primary and secondary care patients whereas 7 labs offered a service to primary care patients only.  Up to two thirds of laboratories provided NT-proBNPwith fewer offering BNP testing. Only 1 laboratory provided a POCT service for BNP. The majority of labs reported results in ng/L; other units were also used by laboratories within the region. Laboratories reported a range of sample requirements and stability instructions even amongst those that utilised the same method. There was wide variation in the NP workload by the different laboratories. Whilst some laboratories provide a 24 hour service for natriuretic testing others analysed samples in 1 or more batches during the week.  A few laboratories reported different thresholds according to age, gender and whether acute or chronic heart failure was being investigated. Some laboratories reported reference intervals in addition to action thresholds with results. The source of reference ranges and thresholds reported included the assay manufacturer, scientific papers, NICE and local or regional guidelines.  The majority of laboratories provided interpretative comments alongside results. 50 % of labs communicated results directly to the Heart Failure team or to the GP practice. 40% of labs (n=7) had been involved in a clinical auditof natriuretic peptide results with echocardiography/clinical assessment. Most laboratories did not have a Clinical guideline or care pathway available for users.  This audit highlighted the variation in the use of NP testing by laboratories within this region and especially with regard to sample requirements and stability instructions. It was also noted that laboratories reported different thresholds for the interpretation of results. | |
| **Audit Recommendations / Standards:**   1. Natriuretic Peptides (NP) results should be reported in ng/L units. 2. Laboratories should confirm that sample types and requirements for NP are consistent with the manufacturer's recommendations. 3. NP results should be reported alongside clinical thresholds only rather than reference ranges to avoid causing confusion where no action is required when a patient has a NP level above the reference interval but below the action threshold. 4. Interpretative comments should be reported alongside results and/or results linked to clinical guideline on laboratory website. This should also include information about drug interferences of the test. 5. The source of clinical thresholds should be published by the laboratory and where the action thresholds differ from those suggested by NICE the source of this should be highlighted. 6. Laboratories should determine the feasibility and clinical need for urgent communication of results to requester. 7. Natriuretic Peptides should only be measured once, unless there is a repeat episode of suspected heart failure where previously excluded. 8. Laboratory staff should work with clinical teams to produce a clinical guideline for the heart failure pathway 9. Information regarding natriuretic peptides should be available in the Trust/ laboratory user guide and on website 10. Laboratories should participate in a multidisciplinary clinical audit of Natriuretic Peptide results and clinical assessment/Echocardiography. 11. Laboratories should be aware of the potential effects the use of newer drugs that inhibit neprilysin (an enzyme that degrades natriuretic peptides) may have on BNP measurement. | |
| **Please indicate to whom and when audit presented &/or circulated&/or published:**  Audit presented at the Thames Audit meeting on 26th October 2015. | |
| **Audit recommendations / standards ratified by … and when:**  Thames Audit CommitteeNovember 2016 | |
| **Date of audit report:** November 2016 | |
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