

**Audit Template**

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| **Audit Title:**  Audit of Lipids | |
| **Lead Auditor:**  **Dawn Grenshaw** | **Audit date(s):**  6th June 2016 |
| Please indicate if **Regional**  Please indicate which hospital & location or region  **Wexham Park Hospital**  **Southern region** | **Report Author:**  Name: Dawn Grenshaw  Email: DawnGrenshaw@nhs.net |
| **Aims of the Audit:**  To review the use of lipid testing in the Southern 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), which referred to guidance given in the NICE Clinical Guideline 181 (2014) and also the NICE Clinical Guideline CG71 (2008) regarding the identification and management of familial hypercholesterolaemia. A total of 18 responses were received and included in the audit.  A large amount of variation was seen in the contents of lipid profiles between labs across the region. There was also wide variation in the fasting time recommended, lipid reference/guidance ranges and interpretative comments.  All labs were aware of NICE CG181. Most labs (15/18) include non-HDL cholesterol in their lipid profile(s) with a further 2 labs planning to include it in the future.  Most labs (14/18) include the Total Cholesterol: HDL Cholesterol ratio in their lipid profile(s). | |
| **Audit Recommendations / Standards:**  1. A non-fasting lipid profile should be recommended as the first-line lipid profile in the vast majority of patients (NICE CG181).  2. It is recommended that laboratories provide a lipid profile that includes TC, HDL, non-HDL and TG, where fasting is not required (NICE CG181).  3. It is recommended that laboratories also provide the TC:HDL ratio on lipid profiles, as this is required for the QRISK2 calculator (NICE CG181).  4. It is recommended that laboratories continue to provide fasting lipid profiles that include calculated LDL when requested, as this may be needed in the diagnosis and monitoring of patients with FH (NICE CG71).  5. It is recommended that laboratories provide fasting TG analysis, which may be required to follow up patients with high non-fasting TG (NICE CG181).  6. It is recommended that request forms should include an option to state whether the patient is fasting and that fasting status is included on the report.  7. Adult patients should fast for at least 12 hours before a sample is taken for fasting lipids. Pre-prandial samples are recommended for children.3  8. LDL should be calculated using the Friedewald equation (LDL (mmol/L) = TC-(HDL + TG/2.2) and the result should only be reported in fasting samples where the TG is £ 4.5 mmol/L.4  9. Triglycerides should be measured on relevant samples that are visibly lipaemic and/or have a high lipaemic index to potentially identify patients that could benefit from a specialist referral.  10. Triglyceride concentrations >20 mmol/L should be phoned to the requesting clinician. 5  11. It is recommended that grossly abnormal lipid results should be clinically as well as technically validated by qualified laboratory staff.  12. It is recommended that interpretative comments be provided to significantly abnormal lipid results, where appropriate, particularly:  a. highlighting the need to exclude secondary dyslipidaemias such as hypothyroidism, diabetes mellitus and alcohol.  b. in patients with TC >7.5, suggesting that consideration be given to the possibility of familial hypercholesterolaemia.  c. where the TG is >10 mmol/L, suggesting appropriate action such as repeating a fasting level, excluding secondary causes, highlighting the risk of pancreatitis and recommending specialist follow-up where appropriate. | |
| **Please indicate to whom and when audit presented &/or circulated&/or published:**  Audit presented at the Thames Audit meeting on 6th June 2016. | |
| **Audit recommendations / standards ratified by … and when:**  Thames Audit Committee meeting – 28th November 2016 | |
| **Date of audit report:** November 2016 | |
| **Audit documents for upload to http://www.acb.org.uk/whatwedo/science/audit.aspx**  *Please include as attachments with this Audit Summary form if authors and the organising committee would like information to be publicly accessible on the ACB website Audit section.* | |