British Lymphoma Pathologists Group, I am now helping that group develop an interpretative EQA scheme for haematopathology. As a recent past-President of the Association of Clinical Pathologists (ACP), I remain on their Council, responsible for creating an ACP national leadership skills development programme. I also have ongoing involvement with the National Cancer Research Institute as a clinical lead for pathology engagement in cancer research. I undertake coaching within an excellent Trust-wide volunteer scheme at Guy's and St Thomas' and am currently working towards formal qualification with the European Mentoring and Coaching Council. My ultimate vision for my coaching is to assist teams at all levels in NHS organisations, from coalface to executive board, to perform at their best.

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Audit of familial hypercholesterolaemia

The College's Clinical Effectiveness Department wishes to encourage high-quality clinical audit. We therefore periodically publish interesting examples of audits that have been successfully evaluated through our clinical audit certification scheme.

1. Background

Quality Standard QS41 – Famililal Hypercholestrolaemia, released August 2013 relating to NICE Guideline CG71, has been completed by the consultant chemical pathologist. However, evidence is required to demonstrate the Trust's position in relation to the quality statements.

2. Aims

The aim of the audit was to provide evidence against the following quality standards from QS41.

1. Adults with a total cholesterol above 7.5 mmol/l before treatment have an assessment for familial hypercholesterolaemia (FH).
2. People who are given a clinical diagnosis of FH because they have high cholesterol and family history or other signs are offered DNA testing as part of a specialist assessment.
3. Adults with FH are offered drugs to reduce the low-density cholesterol (bad cholesterol) in their blood to less than a half of the level before treatment
4. People with FH are offered a detailed review of their condition at least once a year.

3. Methodology

The audit proforma was developed by the project lead.

Consecutive cases were selected from patient's attending Dr Freedman's outpatient clinics over a three-month period (4 August to 31 October 2014). Patients selected for inclusion in the audit were new patients with a total cholesterol >7.5 mmol/L or patients attending follow-up appointments with a clinical diagnosis of FH.

Data collected was analysed by the Clinical Quality Department using SPSS.

4. Audit findings

4.1 All new patients with a total cholesterol > 7.5 mmol/L

Does patient have a total cholesterol > 7.5 mmol/L?
Yes 9 (90%). No 1 (10%).

Has patient been assessed for FH using Simon Broome criteria?
Yes 10 (100%).

Does patient fulfil the Simon Broome criteria for a presumed diagnosis of FH?
Yes 10 (100%).

If new patient given clinical diagnosis of FH, will they be offered an annual review?
Yes 10 (100%).

4.2 Patients with a clinical diagnosis of FH
Has a DNA test been offered to confirm the diagnosis of FH?
Yes 1 (10%). No 8 (80%). Not answered 1 (10%).

4.2.2 Have LDL-lowering drugs been offered? If no please state reason
Yes 10 (100%).

4.2.3 Was the treatment target to achieve an LDL-C of <50% of the pre-treatment concentration? If no, please state alternative target?
Yes 10 (100%).

4.2.4 If patient is already on treatment, has the treatment target for LDL been achieved?
Yes 4 (40%). No 4 (40%). Not applicable 2 (20%).

4.2.5 Existing patients for <1 year: will an annual review be undertaken?
Yes 9 (90%). Not applicable 1 (10%).

4.2.6 Existing patient for >1 year: has an annual review been undertaken?
Yes 1 (10%). Not applicable 9 (90%).

5. Summary and discussion of main findings

The findings from this audit provide evidence of compliance with the quality statements in QS41 – FH, including statements 1, 3, 5, 6 and 8.

Quality standard	Relevant to L&D	Status	Evidence to identify compliance
1. Adults with a total cholesterol above 7.5 mmol/l before treatment have an assessment for FH	YES	Compliant	Applies to all patients referred by primary care. Audit data
2. People who are given a clinical diagnosis of FH because they have high cholesterol and family history or other signs are referred for specialist assessment	N/A	N/A	N/A
3. People who are given a clinical diagnosis of FH because they have high cholesterol and family history or other signs are offered DNA testing as part of a specialist assessment	YES	Compliant where clinically indicated	Applies to all patients referred by primary care. Audit data
4. Children at risk of FH because they have one parent with the condition are offered diagnostic tests by the age of 10 years	N/A	N/A	N/A
5. Relatives of people with a confirmed diagnosis of FH and a known DNA mutation are offered DNA testing themselves as part of a national scheme	YES	Compliant where clinically indicated	Applies to all patients referred by primary care. Cost implications: Initial DNA testing = £75, if neg and strong fam Hx full seq = £324 (Belfast)
6. Adults with FH are offered drugs to reduce the low-density cholesterol (bad cholesterol) in their blood to less than a half of the level before treatment	YES	Compliant	Applies to all patients referred by primary care. Audit data – to be collected
7. Children with FH have an assessment for possible drug treatment to reduce the low-density cholesterol (bad cholesterol) in their blood by a specialist in a children's department, by the age of 10 years	N/A	N/A	N/A
8. People with FH are offered a detailed review of their condition at least once a year	YES	Compliant	Applies to all patients referred by primary care. Audit data – to be collected

6. Clinical audit action plan

Findings/risk(s) identified (RAG score)	Recommendations and/or corresponding action	Lead responsible for action	Implementation date	Date actions achieved	RAG score
Share findings with stake holders	Circulate audit to members on the distribution list	Clinical Audit Department	27/01/2015	27/01/2015	Green
Share findings with directorate and ensure monitoring via clinical governance	Present audit findings at DTO clinical governance meeting	Rebecca Leyland	27/01/2015		Green
Determine if anything has changed with regards to the audit questions	Re-audit March–June 2016	Rebecca Leyland	27/03/2016		Green

Project Leads:

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Principal Clinical Biochemist

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Clinical Quality Support
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Dr Natasha Ratnaraja

A3 problem solving – EntericBio improvement project

A3 problem solving is a method of analysing problems in a thorough and systematic way. A3 refers to the size of paper sheet that is used to report the analysis and the actions arising from that analysis. The A3 allows a standardised approach to problem solving which, if done correctly, can lead to robust and sustainable solutions to problems rather than the empirical and more risky solutions derived from a 'knee jerk' or superficial solution-generating methodology.

Our microbiology laboratory at Sandwell and West Birmingham Hospitals NHS Trust has been investing in LEAN principles for a number of years. As part of our review into the way we work, we wanted to look at streamlining the processing of faecal samples for routine pathogens.

We started with a problem statement: "Currently there are lengthy processing times for routine faecal samples. This impacts on staff workload and skill mix, restricting productivity of the laboratory".

A fishbone diagram was undertaken to look at the possible causes for this problem. Analysis identified the most likely root causes. Using culture, as opposed to rapid molecular techniques, was thought to be the main problem and a project to introduce this method into the laboratory was initiated.

The whole project was project managed by the Microbiology Project Manager, Kailash Desai, and a project team was created, consisting of laboratory staff, me and the laboratory managers. Regular meetings were held to ensure that the project was on schedule. Other stakeholders – Public Health England, GPs and the CCG and other users – were involved at various stages of the project.

A3 thinking and reporting was implemented to document the 'Plan-Do-Check-Act' (PDCA) cycle. The current state was mapped out and value stream and spaghetti maps were devised. Potential bottlenecks in the current state were identified. Our goal was to implement the molecular method for testing for faecal pathogens and to reduce the reading time for biomedical science (BMS) staff as well as the turnaround time for a negative result. Wastes were also identified. A future state was mapped out, with countermeasures for any bottlenecks.

A validation study was undertaken to ensure that the method chosen was sensitive and specific. Whilst this was being undertaken, an action plan was developed.

The action plan was the most labour intensive part as it involved close working with external stakeholders and widespread communication. It was essential that there was accurate and transparent interpretation and communication of results, and Public Health was consulted to create standardised reports and communication channels. Bench guides and SOPs were developed to ensure that laboratory staff also had clear and consistent guidance on processing and reading samples.

Training staff has been a long and involved process. The results of the implementation of EntericBio showed an 87% improvement in efficiency and a reduction in turnaround time of 49 hours and 40 minutes for negative results (with an associated reduction in the number of plates to read). As part of our ongoing commitment to LEAN principles and increasing efficiency and quality of our service, after six months of implementation, we validated the EntericBio Clostridium difficile assay and are in the process of validating the Giardia and Cryptosporidium assays. This has resulted in a longer training time as the intention is to train all staff within the laboratory using this method. It is envisaged that training of all staff will be complete by December 2015, following which another audit will be undertaken to review efficiency.

Project planning and management and A3 thinking were key to the success of this project, and it has energised staff to utilise this for other projects within our laboratory.

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