



SHARP 2020

An Audit of Familial Hypercholesterolaemia Treatment Outcomes in Grampian, Scotland

Dr Josh Newmark¹, Dr Ewen Millar¹, Dr Rhona Boyle¹, Dr Jonathan Bowman², Dr Kevin Deans¹, Dr William Simpson¹

1. Department of Clinical Biochemistry, Aberdeen Royal Infirmary, Foresterhill Health Campus, Aberdeen, AB25 2ZN

2. Institute of Medical Sciences, University of Aberdeen, Foresterhill Health Campus, Aberdeen, AB25 2ZD



BACKGROUND

- Familial hypercholesterolaemia (FH) is an autosomal dominant disorder of lipid metabolism associated with elevated low-density lipoprotein cholesterol (LDL-C)
- Untreated, approximately 1 in 2 men with FH will develop clinically evident coronary heart disease by age 55 years and approximately 1 in 3 women by age 60 years
- Effective treatment reduces the risk of developing coronary heart disease to the level of a non-FH population
- Treatment involves appropriate lipid-lowering therapy and lifestyle interventions

AUDIT STANDARD

- NICE Quality Standard 41 (published 2013; updated 2017) based on NICE Clinical Guideline 71

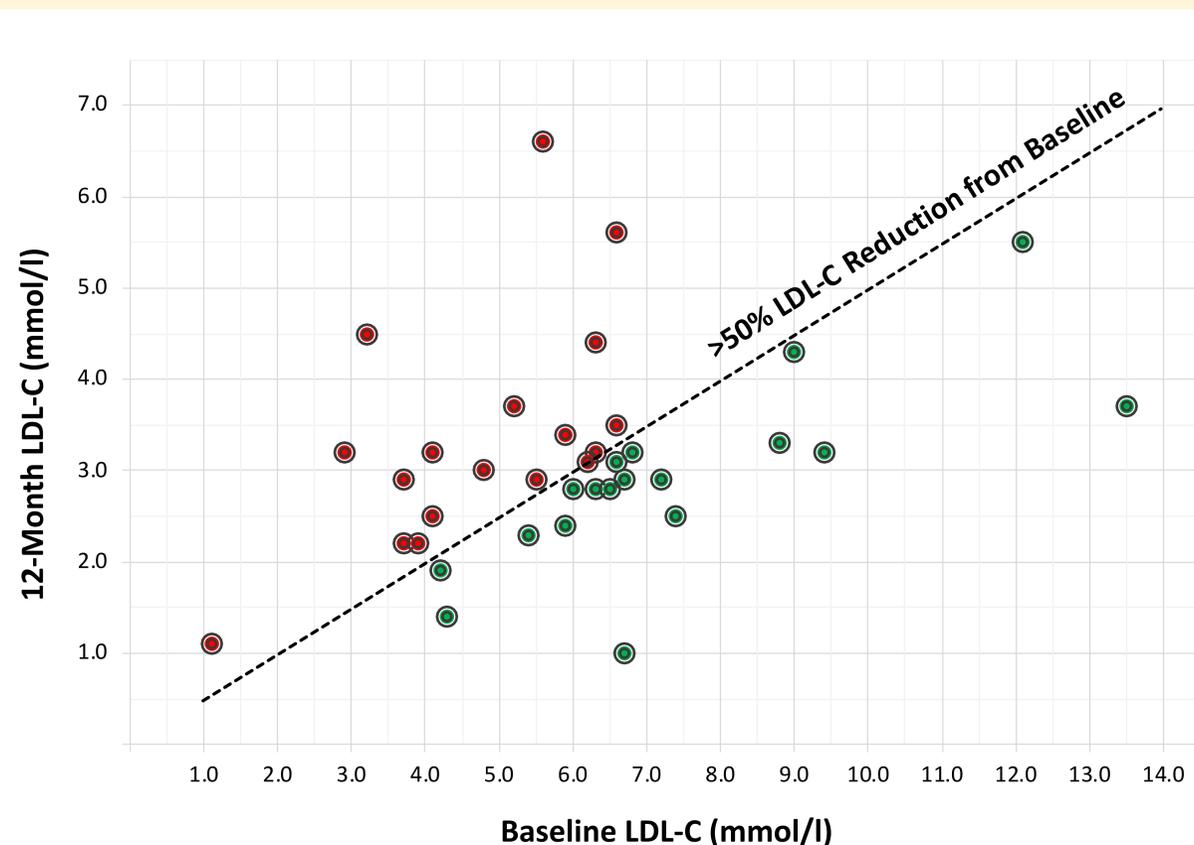
INDICATOR AND TARGET

- Adults with FH should receive lipid-modifying treatment to reduce LDL-C by >50% from baseline (Quality Statement 6)

METHODS

- Outcomes for adults (>16 years) diagnosed with heterozygous FH between January 2018 and October 2020 were evaluated retrospectively from clinical records
- For patients established on lipid-lowering treatment prior to their FH diagnosis, a baseline LDL-C was imputed using a validated tool (CardioRisk Calculator v1.5.4)[†]
- Audit protocol registered with the NHS Grampian Quality Improvement and Assurance Team (ID5074)

RESULTS AND ANALYSIS



- Forty-three patients with FH (98% cases confirmed genetically) were studied
- Treated LDL-C showed a reduction, down from a baseline median of 6.1 mmol/l to 3.1 mmol/l within 12 months ($n=36$)
- Mean reduction for individual patients was 43%, median 51% (IQR 36-57%)

DISCUSSION

- Working towards nationally-agreed standards is anticipated to improve local clinical practice, and thereby reduce the morbidity and mortality associated with FH
- LDL-C reductions achieved in Grampian exceeded those reported by the Royal College of Physicians in their National Audit of the Management of FH (2010)[‡]
- However, as only 50% patients achieved >50% reduction in LDL-C, this represents an opportunity for improvement

ACTION PLAN

- Implement changes in prescribing practices to ensure all adults with FH are offered high-intensity statins, titrated to achieve the recommended >50% reduction in LDL-C
- Formalise systematic prospective data collection to monitor compliance with quality assurance standards and drive progress towards improving patient outcomes
- Mitigate the disruption occurring in clinical care for patients diagnosed with FH during the COVID-19 pandemic