

LIPID OPTIMIZATION TOOL (LOT) DATABASE TO ACHIEVE LDL CONTROL IN A COMMUNITY CARDIOLOGY GROUP PRACTICE 2007 AUDIT

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PURPOSE:

Lipid optimization to newer more aggressive targets has the potential to reduce cardiovascular events significantly and save tens of thousands of lives. Despite well-established benefits of lipid-lowering therapies, lipid targets are broadly underachieved. At the OCC we have developed a structured physician supervised, nurse managed lipid protocol and applied it via a flow chart based structured lipid management program. We have audited our practice over the last four years and developed a database capable of ongoing decision support and quality control measurement.

METHODS:

We have previously reported the use of the LOT to guide LDL control in patients at the OCC. For our 2006 practice audits, a database version of the LOT was developed and refined. This database is designed to risk stratify, to calculate LDL percent reduction to achieve to CCS, ATP III or user defined targets, to provide therapeutic decision support and to track sequential control rates to specified targets. Reports including risk factors, risk modifiers, coronary heart disease (CHD) equivalents and LDL control rates are generated automatically. For the 2007 audit parameters from 2780 sequential patients managed with the LOT by 13 OCC physicians were entered into the database.

RESULTS:

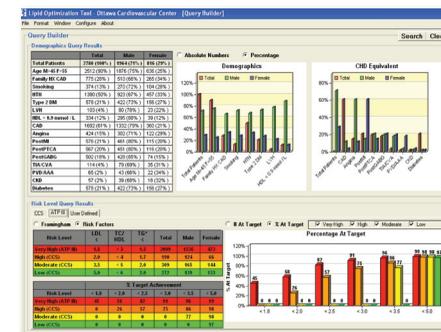
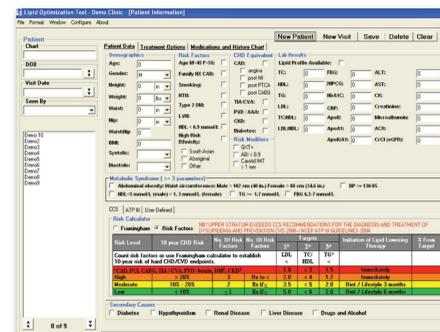
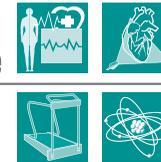
Of the 2780 patients audited in 2007, LDL control rates were 91% to an LDL of 3.0 mmol/L, 82% to an LDL of 2.5 mmol/L, 58% to an LDL of 2.0 mmol/L and 45% to an LDL of 1.8 mmol/L. 79% of patients were high or very high risk for cardiovascular events and 86% of these were on a statin. Control rates in statin treated patients were 94% to an LDL of 3.0 mmol/L, 87% to an LDL of 2.5 mmol/L, 63% to an LDL of 2.0 mmol/L and 48% to an LDL of 1.8 mmol/L. Eleven percent of patients were on combination therapy with statin + ezetimibe. Comparable Vascular Protection (VP)/Guideline Oriented Approach to Lipid Lowering (GOALL) registry control rates were 51%, 22% and 21 to LDL's of 2.5, 2.0 and 1.8 mmol/L respectively and Canadian Lipid Study-Observational (CALIPSO) control rates of 64%, 30% and 19% to LDL's of 2.5, 2.0 and 1.8 mmol/L respectively. Optimal target achievement rates are in the range of 79% to an LDL of 2.5 with statin monotherapy, 94% to an LDL target of 2.5 mmol/L with combination statin + ezetimibe therapy and 80% to an LDL target of 1.8 with combination statin + ezetimibe therapy based on EXPLORER study data.

CONCLUSION:

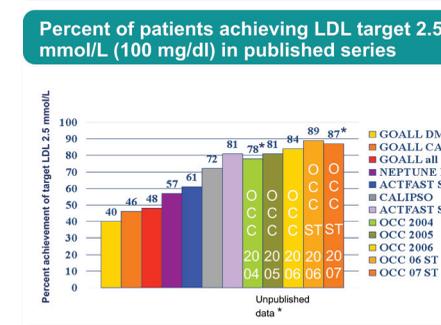
Although achieved LDL control rates at the OCC utilizing the LOT are among the best reported in the world literature, there is room for further improvement and increased use of combination therapy might result in even better control rates. Further testing of this hypothesis in real time clinical practice using the LOT database and protocol prospectively is warranted.



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Target LDL mmol/L	OCC LOT All pts. % at target	OCC LOT on Statin % at target	VP/GOALL % at target	CALIPSO % at target
< 3.0	92	95		
< 2.5	84	89	51	64
< 2.0	62	66	22	30
< 1.8	47	52	21	19



- 1) RT Yan et al. Guideline Oriented Approach in Lipid Lowering (GOALL)/Registry data presented at CCC Symposium Oct 2005.
- 2) MH Davidson et al. Results of the National Cholesterol Education (NCEP) Program Evaluation Project Utilizing Novel e-Technology (NEPTUNE) I Survey and Implications for Treatment Under the Recent NCEP Writing Group Recommendations. Am J Cardiol 2005 Aug 15;96(4):556-63.
- 3) A Langer et al. Targeted Dosing of Atorvastatin Achieves Cholesterol Targets Quickly in Subjects with Diabetes or the Metabolic Syndrome (The ACTFAST Studies). Can J Cardiol 2005; Vol 21 Suppl C: Abstract 826, 253C.
- 4) C Bourgault et al. Statin Therapy in Canadian Patients with Hypercholesterolemia: The Canadian Lipid Study – Observational (CALIPSO). Can J Cardiol 2005; 21(13):1187-1193.
- 5) Yan et al. Contemporary Management of Dyslipidemia in High Risk Patients: Targets Still Not Met. Am J Med 2006; 119: 676-683.

