Lowering Cholesterol through Nurse Case Management

**Issue:** High Cholesterol

The World Health Organization (WHO) estimates that high cholesterol causes approximately 18% of global cerebrovascular disease and 56% of global ischemic heart disease. It results in about 4.4 million deaths (nearly 8% of total deaths worldwide) and causes substantial disability and disease burden across the globe.

**Action: Lowering Cholesterol through Nurse Case Management**

Allen, Blumenthal et al. (2002) found that nurse case management can substantially lower cholesterol levels and improve diet and exercise habits. They randomized 228 adults with high blood cholesterol and CHD who had just undergone coronary revascularization surgery into two groups: An Intervention Group receiving follow-up with a nurse practitioner, lipid management including individualized lifestyle modification and pharmacologic intervention plus usual care; and a Control Group receiving the usual care, enhanced with written results on lipid profiles sent to the general practitioner or cardiologist.

During one year of lipid management from a Nurse Practitioner, the intervention group patients received outpatient and telephone visits for counselling on nutrition, physical activity, and smoking cessation as well as prescription or adjustment of lipid-lowering medications.

**Outcome**

After one year, the serum total cholesterol, low-density lipoprotein and triglyceride levels were significantly lower in the Intervention Group than in the Control Group, and the former reported a greater reduction in dietary consumption of total fat, saturated fat, and cholesterol, a greater increase in fibre intake, better adherence with medications, and more frequent exercise than the Control Group.

**Effectiveness**

Nursing interventions including education, counselling, pharmaceutical surveillance, health screenings, case management, and follow-up resulted in:
- Reduction in serum cholesterol levels.
- Improvement in dietary habits including lower consumption of fat and cholesterol and increased intake of fibre.
- Improvement in lifestyle including more frequent exercise, smoking cessation, and cholesterol self-monitoring.

**Related studies**

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<th>Authors</th>
<th>Sample &amp; Setting</th>
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<th>Outcomes in Intervention Group (versus Control)</th>
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<td>DeBusk, et al. (1994)</td>
<td>585 adults under 70 hospitalized for acute myocardial infarction in five large U.S. medical centres.</td>
<td>Specially trained nurses initiated in-hospital interventions for smoking cessation, exercise training, and diet-drug therapy for hyperlipidemia. Followed up by telephone and mail.</td>
<td>Significantly lower plasma LDL levels, higher rates of smoking cessation, and better functional capabilities.</td>
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<td>Imperial Cancer Research Fund OXCHECK Study Group (1995)</td>
<td>4121 adults, aged 35 to 64, being seen by five urban general practices in Bedfordshire, U.K.</td>
<td>Health checks performed by nurses according to a standard protocol. Included completing a medical history, lifestyle questionnaire, brief physical examination, and structured dietary assessment. Subjects then received follow up visits according to the protocol for each risk factor.</td>
<td>Dietary advice from nurses led to significant improvements in dietary and exercise habits and a modest improvement in mean cholesterol concentrations.</td>
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For further information, please contact: icn@icn.ch

The International Council of Nurses (ICN) is a federation of more than 130 national nurses associations representing the millions of nurses worldwide. Operated by nurses and leading nursing internationally, ICN works to ensure quality nursing care for all and sound health policies globally.

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References


