

Establishing Preventive Cardiology Programs

(Wong, Gardin, Black, Ch. 24, Preventive Cardiology)

- Cardiac rehabilitation programs exist at some hospitals
- Effective programs for treating high-risk persons without CVD and long-term programs for persons with established CVD are lacking
- Well-rounded programs provide professional and community education, research, and clinical management

Components of Programs

- Cooperation and communication among a wide range of physician and nonphysician health care specialists
- Mission to deliver effective, efficient, and cost-effective service
- Components recommended by joint task force include 1) lifestyle and cardiovascular risk assessment, 2) behavioral change, 3) education, 4) family-based intervention, 5) risk-factor management, and 6) screening of first-degree relatives.

Priorities for CHD Prevention

- Patients with established CHD or other atherosclerotic vascular disease
- Asymptomatic subjects of particularly high risk (severe dyslipidemia, diabetes, hypertension, multiple risk factors)
- Close relatives of patients with early-onset CHD
- Other subjects with one or more cardiovascular risk factors

Identification of Patients at Risk

- Failure of physicians to request the appropriate tests (e.g., lipid profiles, blood pressure follow-up) or healthcare system to identify those patients needing such tests
- Few incentives in healthcare system to identify or follow these patients
- Example: recent chart audit of 50,000 CHD pts showed only 44% to have annual diagnostic testing of LDL-C, and of those tested only 25% reached target LDL-C <100 mg/dl

Estimated Compliance with Secondary Prevention Measures

(Pearson et al. 1996)

- Referral to cardiac rehabilitation <5%
- Smoking cessation counseling 20%
- Lipid-lowering drug therapy 25%
- Beta-blocker therapy 40%
- ACE inhibitor therapy 60%
- Aspirin 70%

Tools for CAD Risk Assessment

- CHD risk algorithms (e.g., Framingham)
- Questionnaires for nutrition, physical activity, and psychosocial characteristics
- Use of computerized patient tracking databases to identify patients needing certain tests
- Reminder checklists for patients with abnormal values needing follow-up or treatment

Key Measures of Quality of Preventive Care

(Pearson et al. 1996)

- Document smoking status in all CHD pts
- Organizations should have smoking cessation programs
- Document in medical record use of physician advice and self-help materials to stop smoking
- All pts with CHD should have fasting lipid profile

Key measures (continued)

- All patients with CHD who have an LDL-C of 130 mg/dl or higher should be prescribed medication
- Exercise prescription and counseling should be provided
- Aspirin should be offered to all patients, or document contraindication
- All patients should have blood pressures documented at every visit
- If average of three BP readings are at least 140 mmHg systolic or 90 mmHg diastolic, offer and document lifestyle and pharmacologic management

Recommended Resources

- Physicians - can provide leadership, ensure prevention is an integral part of the system
- Nurses - can recruit patients, organize assessments, risk factor screening, etc.
- Dietitians - provides important dietary management advice
- Exercise specialists - exercise evaluation and prescriptions
- Pharmacists - have major educational role in use of drugs, indications, side effects, and increasing role in general health education
- Psychologists - can design necessary programs to cope and manage stress
- Vocational Support - assistance may be needed for patients to return to work
- Facilities - adequate office space, area for assessment, counseling and education

Organizational Approaches:

Office-based approach

- Many primary care physicians serve as focal point of preventive services delivered in short office visit
- Physicians can be effective in explaining clinical significance of problem, recommending needed education for risk factor management from other prevention staff
- Provide protocols for type of specialty services each team member will provide, format, ensure necessary training
- Suboptimal compliance because
 - 1) not all health professionals agree on strategies,
 - 2) physicians fail to implement risk-reducing therapies,
 - 3) patients poorly adhere to (sometimes because of presumed adverse reactions), and
 - 4) there is lack of adequate reimbursement.

Organizational Approaches:

Physician-directed specialty clinic

- Marketed as a “risk reduction” or “preventive cardiology” clinic
- May focus on management of a particular disorder such as dyslipidemia or hypertension, but should have capacity for managing other risk factors for “one-stop” preventive care
- Should be prepared to handle difficult cases
- First visit may include comprehensive medical history and physical, with battery of diagnostic lab test results, nutrition, exercise, and behavioral survey results available
- Physician director and other trained physicians, research or administrative director, clinic manager, and other health professionals

Pharmacist or nurse case-management approach

- Pharmacists or nurse / nurse practitioners taking increasing responsibility for preventive services, assisted by a physician supervisor
- May be focal point of care in a case-management approach, following lifestyle and/or medical management algorithms, with physician approval of prescriptions
- Case management systems can be more efficacious and cost-effective than physician-staffed risk factor modification (one nurse-managed home-based program showed greater smoking cessation, lipid control, and improved functional capacity)
- Patients encouraged to adhere to drug and diet regimens, instructed in self-monitoring, and taught to take appropriate action based on symptoms

Barriers to Implementation

- Patient factors - lack of knowledge, motivation, access to care, cultural and social factors
- Physician barriers - focus on “acute care priorities”, pressures of managed care, poor reimbursement, lack of training or confidence in implementing risk-reducing strategies
- Hospitals often focus on acute conditions, pressure for early discharge, lack of infrastructure and staffing to implement risk-reducing behaviors, and lack of continuity to ensure long-term compliance
- Often physicians and nurses have no formal training in behavioral aspects of risk factor modification.

Educational Programs

- Professional - subspecialty training programs should provide instruction on pathophysiologic, epidemiologic, and clinical trial evidence, comprehensive assessment of risk, and techniques to modify risk from lifestyle and pharmacologic means
- Community Education - lectures, classes, and educational outreach programs to lay public on identifying and reducing risk
- Research - may include basic, epidemiologic, and/or clinical research programs