



NATIONAL JEWISH CENTER
FOR IMMUNOLOGY
AND RESPIRATORY MEDICINE

ASTHMA DISEASE MANAGEMENT

Warren E. Todd, M.B.A and David G. Tinkelman, M.D.

INTRODUCTION

Paradigm shift

Throughout its evolution, managed care has introduced new concepts and incentives aimed at reducing health care costs while maintaining or improving quality of care. Incentive-based strategies have focused unprecedented attention on previously unrestrained growth in health care costs. While managed care companies' (MCO) cost-containment strategies of the past decade have finally started to produce results (the rate of premium growth fell below the inflation rate for the first time in 1995), the industry's potential for future cost-containment success remains in question. This doubt is fueled by the fact that MCOs already have squeezed costs down considerably and by the expectation that MCOs will enroll more high-risk populations (i.e., Medicare and Medicaid). Similarly, the impact of managed care on quality remains open to question, with data to support a case on both sides of the issue.

Traditionally, managed care strategies have focused on individual episodes of care. As a first step toward improved health care management, the conventional methods and approaches can help achieve some efficiencies, but recent history suggests only modest potential for effecting change over the long term.

A number of health care organizations have moved to the forefront of managed care with a far-reaching alternative to the focus on episodic care provided through a highly fragmented "component-oriented" delivery system. Known as "disease management", this alternative takes a broader

view of the patient, encompassing the disease process and the patient population affected by the disease.

What is disease management?

Disease management reflects a fundamental rethinking of health care delivery and management. Conventional management strategies home in on individual components of the delivery environment. Disease management views the care environment as an integrated system that brings to bear all the necessary resources to provide the most effective and cost-efficient care. This approach encourages development of creative and effective solutions in the care environment, as well as optimal use of resources.

In the 1990s, a growing number of health care organizations refer to themselves as "integrated systems." However, disease management goes beyond a general integration of resources and services to combine coordinated care with a high level of expertise related to a specific disease process.

Disease management incorporates the elements of prevention, well care, early recognition and intervention by the patient, treatment, patient tracking and follow-up. Proactive intervention is applied to all facets of care management to coordinate services, address total patient care and reduce costs to the organization and payer. Education—of patients and the entire medical team—plays a key role in the success of disease management, especially for programs involving chronic illness. Comprehensive statistical analysis is employed to follow the entire process, including outcomes, in an effort to prevent

UPDATE

ASTHMA
DISEASE MANAGEMENT

MEDICAL SCIENTIFIC Vol. 13 No. 4, Fall/Winter 1995-96

complications before they occur and to minimize the effects of acute episodes that necessitate emergency room visits.

Ongoing quality improvement initiatives are inherent to disease management. The importance of such initiatives will only grow as managed care organizations implement the Health Plan Employer Data and Information Set (HEDIS 2.0), and other "report-card systems," to prepare for accreditation by the National Committee for Quality Assurance.

Driving forces

The HEDIS performance measures, which include asthma hospital admission and readmission rates for pediatrics, represent the first attempt by managed care organizations to measure and improve management of asthma and other diseases. Industry concern over these report-card systems has helped fuel interest in asthma as a prime candidate for disease management initiatives.

Despite some recent successes in cost containment, health care costs threaten to resume rising faster than the costs of other segments of the economy despite increasing pressure from the near-ubiquitous presence of containment measures. In addition, the current Congressional preoccupation with budgetary matters suggests that economic pressure from government and other payers will intensify in the future. These forces dictate that health care providers find more effective means to control costs while preserving the quality of care. Disease management offers an avenue to that dual objective.

Scrutiny of the quality of care has placed additional pressure on providers. Quality pertains not only to the skill with which care is delivered but also to the appropriateness, consistency and soundness of the care. Disease management bases care and care decisions on recognized standards of good medical practice, consistent with current trends in development and implementation of clinical practice guidelines.

The continued expansion of managed care provides additional impetus for the emergence of disease management. Specifically, capitation and other conventions of managed care (such as physician gatekeepers, utilization review and case management) result in a reimbursement framework that rewards efficiency and discourages inef-

ficient and inappropriate forms of care. Capitation holds the promise for removing the shackles of reimbursement mechanisms that have actually hindered the development of creative forms of integrated, cost-effective patient care.

Organizations and health care practitioners who adhere to the principles of disease management will be best positioned to thrive in the evolving cost-driven health care marketplace. At the same time, disease management helps ensure that patients receive the most appropriate care.

The National Jewish Center for Immunology and Respiratory Medicine has taken the lead in the application of disease management principles to the asthma patient population. The result: "Disease Management Program: Asthma."

WHY ASTHMA?

Despite improvements in diagnosis and treatment, asthma incidence and mortality have continued to increase, rising about 40 percent each between 1982 and 1992.⁽¹⁾ The reasons for the increases remain unclear, but poor asthma management and education are among the factors implicated.

In 1990, the estimated annual expenditures for hospital-based asthma care were \$146 million for inpatient physician services and \$2.05 billion for hospital care.⁽²⁾ Work-related lost productivity associated with asthma has been estimated at \$4.4 billion annually.⁽³⁾

A 1992 study by National Jewish and John Hancock Mutual Life Insurance Co. showed that 1,300 patients with severe asthma accounted for \$28 million in expenditures related to their care.⁽⁴⁾ Furthermore, the study identified 235 patients whose annual expenditures for care exceeded \$100,000. Results of studies suggest that emergency room visits play a major role in driving up the cost of asthma and that appropriate disease management strategies that eliminate unnecessary ER visits can reduce asthma costs by 25 percent.

Unlike many other diseases, asthma represents a condition wherein good management can reduce the human and economic toll. There is widespread consensus on what constitutes good asthma management. The principles rely heavily on education to promote self-management and appropriate clinical management in the primary care setting for a large majority of patients. Referral to specialists is reserved for patients with moderate to severe

asthma, a strategy that has been shown to reduce the cost of care for such patients.⁽⁵⁾ The importance of such a strategy is further underscored by a study that found that 5 percent of asthmatics account for 70 percent of asthma-related expenditures.⁽⁶⁾

The growing influence of outcomes management in health care makes disease management an ideal strategy for chronic diseases that are suitable for self-management. Such conditions include angina, asthma, depression, diabetes, hypertension and ulcers.⁽⁷⁾

ASTHMA DISEASE MANAGEMENT AT NJ

Goals, concepts, key elements

National Jewish's *Disease Management Program: Asthma* has two basic goals: 1) enhance quality of life for the asthma patient and the patient's family, and 2) reduce the cost of managing the disease. As a tertiary center with experience in treating severe asthma, National Jewish has responded to the need expressed by payers to share our expertise with local partners to decrease the use and high cost of services. In responding to the need, National Jewish has incorporated a number of key concepts and elements.

Management by partnership

Historically, National Jewish has sought to establish partnerships with referring physicians, case managers and managed care organizations. The partnership approach led to the successful "Time Out for Asthma"TM program, a one-week intensive treatment program at National Jewish for patients who have failed to respond to conventional treatment or otherwise pose diagnostic or therapeutic challenges.

In communities across the country, the partnership concept has been carried forward in the *National Jewish Disease Management Program: Asthma*. National Jewish works closely with patients, primary care physicians, specialists, educators, case managers and other health care professionals involved in asthma management. The program specifically encourages active involvement of patients and their families to increase commitment to and compliance with asthma management decisions and strategies.

Multidisciplinary management

National Jewish brings to bear all of its specialized resources to assist community providers in the management of asthma. *National Jewish Disease Management Program: Asthma* resources include not only physicians who specialize in asthma management, but also nurse practitioners, case managers, psychiatrists and psychologists, pharmacists and social workers. Consultation is available for a wide range of issues affecting asthma management.

Disease-specific case management

Case managers at National Jewish offer experience and expertise specific to asthma. Such specialization improves patient management and tracking and helps ensure that patients receive the most appropriate care at all levels of asthma severity. For those patients with moderate-severe to severe asthma, who require more intensive interventions, the disease-specific case manager works with primary care practitioners to create support systems for the patients.

Education

Better informed patients, families and providers make for better disease management and compliance. A wide range of educational materials are available for patients and health care professionals. Additionally, National Jewish offers educational programming for professionals in a variety of formats, including interactive workshops, lectures, teleconferences and computer-based instructional modules.

"Best practice" care standards

Many asthma disease management programs in development follow the clinical guidelines published in 1991 by the National Institutes of Health National Asthma Education Program Expert Panel.⁽⁸⁾ However, the "best practice" in asthma management has evolved considerably since publication of the guidelines. As a nationally recognized leader in asthma diagnosis and treatment, National Jewish is at the forefront of new clinical developments. As a result, referring physicians and other providers have access to the most current standards of care.

Reliance on the primary care provider

National Jewish maintains a strong commitment to the primary care provider. The vast majority of asthma patients are managed most appropriately in the primary care setting. Even those patients who require referral for specialized evaluation or treatment still receive much of their care in the primary care setting. National Jewish stands ready to provide educational or consultational support whenever requested by a provider.

When a patient is referred for evaluation or treatment, *the overall goal is to return the patient to the referring provider as soon as possible.* The primary care provider receives the information necessary to resume responsibility for the bulk of patient care.

For all asthma patients, a written asthma action plan is essential for effective management. National Jewish works with primary care providers throughout the country to develop appropriate action plans that are understood and accepted by the providers and their patients (or the patients' families). The action plan lays out a specific course of action based on symptomatology and exacerbations. This is particularly important for patients with moderate to severe asthma.

Psychosocial considerations

Unique to National Jewish, a psychosocial assessment figures prominently in patient evaluation and disease management. Our experience suggests that long-term cost reductions cannot be realized without identifying and addressing psychosocial issues affecting asthma patients. Even with optimal care, family and social dynamics affect compliance and outcome.⁽⁹⁾

An estimated 30-50 percent of severe asthmatics have some level of psychosocial dysfunction that interferes with their treatment plan. At National Jewish, 70-95 percent of pediatric and adolescent asthma patients have psychosocial problems that interfere with treatment plans. Successfully addressing the problems accounts in part for the 45-80 percent reduction in post-treatment costs following evaluation and treatment at National Jewish.

National Jewish Disease Management Program: Asthma offers screening tests and techniques to identify patients or families with psychosocial problems that may prevent optimal management of asthma. Screening and evaluation can be performed locally, by the primary care physician, or

by National Jewish's disease-specific case management team. Intensive psychosocial evaluation specific to asthma is available through National Jewish. Consultation also is available to assist physicians and other providers with psychosocial assessment of asthma patients and their families.

Ongoing assessment

Every facet of *National Jewish Disease Management Program: Asthma* has an assessment component. The assessments help gauge the effectiveness and applicability of the program to individual provider's patients and practice environments. Ongoing evaluation of the program allows for timely modification and updating of the various components, as indicated by feedback from providers, patients and families.

Specific services

Patient and case manager education. A wide variety of educational materials provide age- and severity-specific information. Some materials have been developed specifically for children to improve their understanding of asthma and promote compliance. Interactive seminars, support group referrals, and materials for the employer and workplace also are available.

As aids to education, National Jewish also offers LUNG LINE® and LUNG FACTS®. The former is a toll-free information service staffed by nurses experienced in asthma management. The latter is a 24-hour toll-free automated asthma information service. LUNG FACTS® consists of more than 125 audio messages on respiratory disease.

Case managers can receive information via a separate toll-free LUNG LINE® number.

Physician and pharmacist support. National Jewish offers a variety of physician education and consultation programs, which can be customized to meet individual needs. Via the disease management program, physicians can access clinical practice guidelines and treatment support that reflect the current "best treatment." Consultation and education also are available for pharmacists.

Physician specialist support. Through a nationwide collaborative effort, primary care providers have access to asthma specialists who trained at National Jewish or who meet our clinical standards. The network reflects recent evidence that appropriate referral to a specialist can reduce the total cost of managing asthma.

Multidisciplinary treatment. The primary objective of *National Jewish Disease Management Program: Asthma* is to prevent unnecessary and costly referrals. However, in any given population, some patients may meet specific criteria for referral to the week-long "Time Out for Asthma"TM program at National Jewish. The program provides an intense multidisciplinary evaluation that leads to a patient-specific management plan. In general, the program is limited to patients who have not responded to conventional treatment; who have a severe, dual or uncertain diagnosis; and/or who require substantial pharmacotherapy. Historically, these patients also have exceeded specific expenditure thresholds.

CONCLUSION

Asthma poses a complex disease management problem that many health care professionals have yet to appreciate fully. Patients have a multiplicity of medical and psychosocial needs, which require a concerted multidisciplinary approach to ensure optimal management.

An essential ingredient in effective asthma management is education of patients, families, physicians and other health care providers. With improved knowledge, everyone concerned is better prepared to make informed decisions, develop effective management plans and comply with the standards of good care.

To be successful, asthma disease management requires a partnership that involves health care professionals, patients and families. Such a partnership promotes appropriate use of health care resources, better outcomes and reduced expenditures for asthma care.

National Jewish Center for Immunology and Respiratory Medicine is a recognized leader in the development of innovative, effective asthma management strategies.⁽¹⁰⁾ "Disease Management Program: Asthma" is an attempt to make the institutional expertise more widely available for the benefit of patients and primary care providers.

References

1. Centers for Disease Control. *Asthma—United States*. 1982-1992. MMWR 1995;43:952.
2. Weiss, KB, et al. *An economic evaluation of asthma in the United States*. N Engl J Med 1992;326:862.
3. Sullivan SD. *The economic cost of asthma*. Medical Interface 1994;7(suppl):17.
4. Kretz SE, Meyer LC. *Improving patient outcomes*

for severe asthma through comprehensive, specialized treatment: A report of the prototype project to develop a center of excellence model for the treatment of severe asthma. National Jewish Center for Immunology and Respiratory Medicine and The John Hancock Managed Care Group, 1993, pp. 1-23.

5. Zeiger RS, et al. *Facilitated referral to asthma specialist reduces relapses in asthma emergency room visits*. J Allergy Clin Immunol 1991;87:1160.
6. *Characteristics of Asthma and Chronic Obstructive Pulmonary Disease Among a General Population of Employed Individuals*. Ann Arbor, MI: MEDSTAT Systems, Inc. 1990. Final Report.
7. Zitter M. *Disease Management: A Systems Approach*. Disease Management Conference: A Systems Approach to Managing Health Outcomes. Philadelphia PA: September 1994. Conference Workbook.
8. *Executive Summary: Guidelines for the Diagnosis and Management of Asthma*. Bethesda, MD: National Institutes of Health, 1991, Expert Panel Report.
9. Rohl B, et al. *An individualized, comprehensive asthma care treatment program*. Medical Interface 1994;3:112.
10. *Employers recognize the need for better management of asthma*. Business & Health 1995;13(suppl D):20.
11. Todd W. *New mindsets in asthma: interventions and disease management*. J Care Management 1995;1(1)

Faculty- Disease Management

David G. Tinkelman, M.D., Vice-president of Health Initiatives, National Jewish

Warren E. Todd, M.B.A., Vice-president of Marketing, National Jewish

Upcoming CME Programs

18th Annual Update On Allergy and Clinical Immunology

February 7 - 11, 1996

Keystone Resort, Keystone, CO

39th Annual Pediatric Meeting

August 5-8, 1996

Aspen, CO

Food Allergy Symposium

May 4, 1996

(For Patients & Families)

Update on Rhinitis for Primary Care Practitioners

April 11, 1996

Denver Tech Center

Update on Rhinitis for Primary Care Practitioners Part II

April 17, 1996

Sheraton West Conference Center, Denver, CO

For further information on CME programs,
at National Jewish, call 303-398-1000

Medical Advisory Board:

Mark Boguniewicz, M.D., Willi Born, Ph.D.,
Larry Borish, M.D., Barry Make, M.D.,
and Uwe Staerz, M.D., Ph.D.

Important Phone Numbers:

Patient referrals/appointments

Tel: 303-398-1355 or 800-222-5864 X 1355

Fax: 303-398-1183

UPDATE

Office of Professional Education
National Jewish Center for Immunology
and Respiratory Medicine
1400 Jackson Street
Denver, CO 80206-2762

Address Correction Requested

Weekly Education Listings

All sessions are held in Heitler Hall. For more information, call Lynda Miller at 303-398-1079

Monday: Immunology Course

Tuesday: Research in Progress

Wednesday: Denver Allergy Rounds

Thursday: Pediatric Grand Rounds

Friday: Pulmonary Research in Progress

Medical Scientific Update, a publication of the continuing medical education office at National Jewish, provides information to physicians about our clinical and research programs in allergic, respiratory and immune system disorders.

Please send any comments or requests for topics to Adele Gelfand, Manager of Professional Education, National Jewish Center for Immunology and Respiratory Medicine, 1400 Jackson Street, Rm M-222, Denver, CO 80206. We'd like to hear from you.

Copyright ©1995, National Jewish Center for Immunology and Respiratory Medicine

Lung Line® 800-222-LUNG. 355-LUNG (Denver only)

This free information service, staffed by highly qualified registered nurses, answers patients' questions about respiratory, allergic and immunologic diseases. Callers are encouraged to discuss information received with their physicians.

The Physician Line at 1-800-NJC-9555, exclusively for physician use is a toll free service that connects you with a highly experienced representative who can provide information on National Jewish programs, laboratory tests and referrals.

Non-Profit Org.
U.S Postage
PAID
Permit No. 1541
Denver, CO