表 2. ②モデルに関する文献

No	Authors	Title	Source	Abstract
E-②-1	Bejciy-Spring SM.	Nursing case management: application to neuroscience nursing.	Journal of Neuroscience Nursing. 23(6):390-7, 1991 Dec.	The changing health care environment has challenged nurses to develop creative care delivery systems that provide for quality, comprehensive, cost-effective care in a time of restricted reimbursement and diminishing human and material resources. Nursing case management has been identified as one such approach to health care delivery that has resulted in quality, patient-centered care and improved resource utilization. The case management plan, critical path and discharge planning sheet are primary tools in this care delivery model. Because of the diverse case types and variety of patient care settings, neuroscience nursing is an ideal arena for implementing a nursing case management model of care. Patient satisfaction showed a statistically significant increase 6 months after implementation of nursing case management. 1. The role of nursing case manager described here was derived from the concept of primary nursing in acute care, team nursing, and the community-based social service role. 2. Nurses in nursing homes often function within a bureaucratic, physician advocate role instead of within a professional, patient advocate role. 3. Following implementation of the nursing case manager role, nurses were able to see results of their intervention, nursing accountability was enhanced, and the number of documented positive patient outcomes increased. 4. The two primary paper tools used by nurses in this project were the care plan to direct individualized care and the progress note to report problem resolution. A positive working relationship between the case manager and home care nurse is essential to the provision of quality care and the efficient use of resources. Results of this study demonstrated no significant differences in the frequency of the instrumental use of case management skills between nurses who graduated from the NAMFE program (NAMFE group) and those who were about to enter the program (comparison group); however, there was a significant difference ($p < .0001$ level) in the perceived preparation for performance of these skills between the two groups. Currently, few educational programs provide nurses with the essential knowledge and skills to function in the role of case manager; yet, the job market demands it of them. The program was able to fill the gap between education and service. Although the NAMFE course no longer is available for continuing education credit through the University of Kansas School of Nursing, the course currently is offered as an elective for senior level students and graduate students. Also, the curriculum materials and teaching strategies manuals, developed as part of this grant, and consultation.
E-②-2	Trella RS.	A multidisciplinary approach to case management of frail, hospitalized older adults	Journal of Nursing Administration. 23(2):20-6, 1993 Feb.	Case management has been operationally defined in many ways, depending on the model and the needs of the population. This article describes a multidisciplinary resource utilization model of case management in a geriatric acute care medical unit that differs from many nursing- and protocol-driven case management models. The author discusses the design, implementation, and outcomes, which include improved quality of care, decreased length of stay, improved financial results, and increased physician compliance.

E-②-3	Esposito L.	Home health case management: rural caregiving.	Home Healthcare Nurse. 12(3):38-43, 1994 May-Jun.	Providing home health services to a rural population can be a challenge to the home health nurse. Resources are limited in the rural environment as compared with the more populated urban areas. To fill the gap between the needs of the patients and available healthcare resources, informal networks are developed within the patient's support system. These informal networks are often made up of family members, friends, and relatives. The home health nurse has multiple tasks to complete when assisting/enabling the patients and families to become independent in the care required. The use of a three-model approach in home health practice (Collaborative Practice Model, Multisystem Model, and Family Caregiving Model) can produce a system in which a high quality of care is given to the rural population, thereby meeting the needs of the community and patient.
E-②-4	Shelton P. Schraeder C. Britt T. Kirby R.	A generalist physician-based model for a rural geriatric collaborative practice.	Journal of Case Management. 3(3):98-104, 1994 Fall.	This article describes a geriatric collaborative practice model in which primary care physicians (family practice and internal medicine) and nurse case managers are key members of a multidisciplinary team providing care to elderly rural patients in east central Illinois. Client characteristics, nursing case management roles, and the strengths and benefits associated with this geriatric collaborative model are presented.
E-②-5	Daly GM. Mitchell RD.	Case management in the community setting.	Nursing Clinics of North America. 31(3):527-34, 1996 Sep.	This article describes a federally funded nurse managed community health organization that treats the elderly.The innovative community-focused model uses the nurse as case manager to provide health promotion, screening, and early interventions to clients enrolled in the Community Nursing Organization (CNO). It explains the advantages of integrating advanced practice nurses into the nursing staff to provide both direct care to clients and teaching/conculation to the nursing staff. The CNO demonstrates that advanced practice nurses possess autonomous practice skills and are able to integrate preventive and curative care across practice sites.
E-②-6	Schraeder C. Shelton P. Britt T. Buttitta K.	Case management in a capitated system: the community nursing organization.	Journal of Case Management. 5(2):58-64, 1996 Summer.	This article describes the Community Nursing Organization, a federal health care model designed to provide specific ambulatory and outpatient services to medicare beneficiaries via a nurse managed delivery system under capitated financing. A primary nurse provider, working with the elderly client, family, physician, health care service providers, and community organizations, assesses the need for care and arranges for appropriate services. This nurse must also authorize payment of those services covered by the Community Nursing Organization (CNO). A 3-year demonstration project is currently under way. Findings at 1 year indicate that the system may have a positive effect on client health status.
E-②-7	Sohl-Kreiger R. Lagaard MW. Scherrer J.	Nursing case management: relationships as a strategy to improve care.	Clinical Nurse Specialist. 10(2):107-13, 1996 Mar.	MULTIPLE TRANSFERS, MULTIPLE caregivers, and an unpredictable hospital course may result in ineffective communication among patients, families, and the healthcare team, and a fragmented plan of care for complex patients. To address these concerns, CNSs in a tertiary hospital developed a nursing case management model for patients in a medical-surgical-neurological intensive care unit. Long-term relationships between nursing case managers (NCMs), patients, and families grounded the model. The NCM crossed traditional unit boundaries with the patient, improving communication among patient, family, and the healthcare team. Evaluation of the NCM's experience suggested four types of interventions: (a) telling the story, (b) advancing the plan of care, (c) maintaining values and beliefs, and (d) assisting with options and decisions. Case studies illustrate these interventions and demonstrate cost savings.

E-②-8	Moneyham L. Scott CB.	A model emerges for the community-based nurse care management of older adults.	N & HC Perspectives on Community. 18(2):68-71, 73, 1997 Mar-Apr.	Changes in the demographics of older adults and the structure and financing of the health care delivery system have created a need to develop alternative models of care delivery for the elderly. The nurse care management model is a potentially cost-effective solution for provision of comprehensive care to this population.By providing timely health promotion and illness prevention education, as well as coordinating community resources, nurses can reduce the health care costs of this growing segment of the population. Funding this model, however, remains a challenge as such services are not directly reimbursed by third-party payers.
E-②-9	Spooner SH. Yockey PS.	Complementary nursing--an acute care case management model. Part II--Evaluation.	Nursing Case Management. 2(6):257-66, 1997 Nov-Dec.	Complementary nursing is an acute care case management delivery system developed to maintain high quality care while controlling health care costs. In this article, the authors describe results of a multi-method evaluation of complementary nursing. Patient, staff, ancillary department, physician, and administration responses were positive and indicated that the program improved the quality and coordination of patient care. Readmissions and direct costs decreased, and there was growth in nursing expertise. The development and implementation of the Complementary Nursing Program was described in Part I of this article, appearing in the September/October 1997 issue of Nursing Case Management.
E-②-10	Borgermans LA. Abraham IL. Milisen K. Dejace AM. Gosset C. Rondal PM.	Nursing case management for psychogeriatric patients and their families: description of a clinical model. [Review] [49 refs]	Nursing Clinics of North America. 33(3):529-42, 1998 Sep.	A theoretical model of clinical case management for psychogeriatric patients and their families is described. Psychogeriatric patients often have complex health care needs, requiring specific nursing interventions. The increasing frailty of these patients over time, together with the risk for institutionalization, make professional nursing contribution to their care even more desirable. Nursing case management is described by means of a conceptual-operational continuum. On the conceptual site, the continuum includes a geriatric definition and core principles of case management. On the operational site, case management is described as a clinical system, a process, a technology, and a role. The process of case management is a deliberate, intellectual activity whereby the practice of nursing is approached in an orderly, systematic manner. It includes components of assessment, diagnosis, planning, implementation, and evaluation. The case management approach requires nurses to assume an active role in designing care maps and to work collaboratively with members of a multidisciplinary team.
E-②-11	Jerrell JM. Ridgely MS.	Impact of robustness of program implementation on outcomes of clients in dual diagnosis programs.	Psychiatric Services. 50(1):109-12, 1999 Jan.	Three types of treatment-behavioral skills training, a 12-step recovery model, and intensive case management-provided to 132 clients at four facilities were identified as being robustly or not robustly implemented, depending on whether core elements of these treatments were emphasized. Outcomes and costs of services to clients were examined over 18 months. Clients receiving robustly implemented behavioral skills training had significantly higher psychosocial functioning and lower costs for supportive services than those receiving nonrobustly implemented training. Clients receiving robustly implemented case management also exhibited significantly higher psychosocial functioning and lower costs for intensive services than those in the nonrobust intervention. To be effective, dual diagnosis programs should better manage the robustness of implementation of planned interventions.

E-②-12	Yurkow J.	Integration and collaboration: the advanced practice nursing role in gerontologic rehabilitation	Nurse Practitioner Forum. 10(1):20-6, 1999 Mar.	The Penn Nursing Network, the Academic Practices of the University of Pennsylvania School of Nursing, seeks to create practice settings that provide cost-effective, high-quality care and an environment for the development and testing of new models of nursing services. The Collaborative Assessment and Rehabilitation for Elders (CARE) Program is one such practice. As a Comprehensive Outpatient Rehabilitation Facility (CORF), the CARE Program offers opportunities for a nurse-managed model of care and four distinct advanced practice roles.
E-②-13	Marek KD. Rantz MJ.	Aging in place: a new model for long-term care.	Nursing Administration Quarterly. 24(3):1-11, 2000 Spring.	It is expected that at least 40 percent of the population over 75 will need extensive health care services late in their lives. The public has a negative view of nursing home placement that has, to some extent, been confirmed by research finding that the health of a frail older person deteriorates each time he or she is moved. The Aging in Place model of care for the elderly offers care coordination (case management) and health care services to older adults so they will not have to move from one level of care delivery to another as their health care needs increase. University Nurses Senior Care (UNSC) is the service entity of this project and provides as its core service care coordination with a variety of service options. These options include care packages or services at an hourly rate to meet individual client needs. The Aging in Place project will be evaluated by comparing project clients to residents of similar acuity in nursing homes and to similar clients receiving standard community support services. Data from this project will be important to consumers, researchers, providers, insurers, and policy makers.
E-②-14	Naleppa MJ. Reid WJ.	Integrating case management and brief-treatment strategies: a hospital-based geriatric program.	Social Work in Health Care. 31(4):1-24, 2000.	This article describes a geriatric case management practice approach developed in a hospital-based program for clients living in the community. The model integrates concepts of case management and the brief treatment strategies of the task-centered model. First the rationale for the case management model will be presented, followed by a description of the practice guidelines. Two case examples illustrate the implementation of the model. An example of a task planner exemplifies practice modules that can be developed using the described approach.
E-②-15	Panno JM. Kolcaba K. Holder C.	Acute care for elders (ACE): a holistic model for geriatric orthopaedic nursing care.	Orthopaedic Nursing. 19(6):53-60, 2000 Nov-Dec.	The normal aging process brings about inevitable and irreversible changes in physical, psychosocial, and spiritual health. These normal changes are partially responsible for the increased risk of developing health-related problems in the hospitalized elder population. The Acute Care for Elders (ACE) model provides an effective, proactive, inexpensive framework for addressing the complex health needs of older adults. When ACE principles are used for the clinical management of clients with orthopaedic problems, interdisciplinary conferences provide the structure for maintaining the continuity of care. Mobility as well as independent functioning, comfort level, mental status, depression, skin health, nutrition, and response to treatment, are discussed and nurse initiated guidelines for preventive and restorative interventions are implemented. Follow-up phone calls and/or home visits are important indices of thorough discharge planning. The theory of comfort is used to assure that holistic needs are addressed. Nurses who practice the ACE model are excited about demonstrating the highest level of competency in geriatric nursing, whereby patient functioning is maximized, comfort and dignity are promoted, functional decline is prevented, and patients are successfully returned to their homes.

E-②-16	Waszynski CM. Murakami W. Lewis M.	Community care management. Advanced practice nurses as care managers.	Care Management Journals. 2(3):148-52, 2000 Fall.	A group of advanced practice nurses partnered with a major insurer in the design and implementation of a care coordination model for high-risk older adults. This article will discuss the process of such an undertaking, highlighting the successes and barriers encountered. The key elements of this program included early identification and regular reassessment of each member's acuity level; fostering close partnerships between individual or teams of APRNs and groups of physicians; and uninterrupted clinical management of high-risk members across the health care continuum. This model was designed to achieve the following outcomes: to support the physician management of high-risk, chronic individuals; to increase or maintain the health of members; and to reduce health care costs. Outcome studies have demonstrated a substantial net savings by decreasing acute care admissions by 54%, reducing hospital days by 42%, and trimming primary care physicians' and specialists' visit costs by 37%. There was a 33% reduction in the overall costs of health care for members enrolled in this program. Physicians and members both rated their satisfaction with the APRN-based model of care as very high.
E-②-17	Bott MJ.	Model specification for case manager decision-making for long-term care placement of the frail elderly.	University of Kansas ** Ph.D. (185 p) 2001.	Whether one utilizes services was a function of an individual's need for services, predisposition to use services, and certain conditions that enable an individual to secure services. conduct a secondary data analysis using a national database to explore possible causal patterns in a model that explained nursing home admission. Comprised of community-dwelling residents (n = 3823) and institutional residents (n = 190). TETRAD II procedures that search for causal patterns in data could supplement structural equation modeling procedures (EQS) for model fitting was a primary focus. Measures used in the nursing home admission model were predisposing components (age, gender, ethnicity, living alone, and history of past hospitalization), enabling components (low income, non-homeowner, Medicaid, paid and unpaid caregivers, and rural location), and need components (ADL impairment, cognitive impairment, and a proxy measure for IADLs-inability to get around outside). Computer-assisted support systems have emerged to aid in decision making. Alternate statistical modeling procedures, such as TETRAD II, have opened up new avenues for testing theoretical models that can be used in making decision about the use of health care services. Andersen's Individual Determinants of Health Services Utilization (1973) was used as the guiding framework for specification of a model explaining nursing home placement. Andersen posited that whether one utilizes services was a function of an individual's need for services, predisposition to use services, and certain conditions that enable an individual to secure services.The purpose of the methodological study was to conduct a secondary data analysis using a national database to explore possible causal patterns in a model that explained nursing home admission. How TETRAD II procedures that search for causal patterns in data could supplement structural equation modeling procedures (EQS) for model fitting was a primary focus. Measures used in the nursing home admission model were predisposing components (age, gender, ethnicity, living alone, and history of past hospitalization), enabling components (low income, non-homeowner, Medicaid, paid and unpaid caregivers, and rural location), and need components (ADL impairment, cognitive impairment, and a proxy measure for IADLs-inability to get around outside).A hypothesized path analysis model of nursing home admission was tested using EQS and yielded poor model fit (CCFI = .46; [chi] (72) = 2816; p < .001). TETRAD II procedures revealed several patterns in the data that were consistent with Andersen's theory and provided directions for respecifying the model with improved model fit (CCFI = .70;

				[chi]2(49) = 1518; p < .001). The study demonstrated how the TETRAD II procedures could be used in conjunction with EQS for model specification. TETRAD II identified plausible causal patterns in the data, the investigator determined what patterns were consistent with the theory, and EQS procedures examined how well those patterns improved model fit. Based on the findings, a conceptual model of nursing home admission was proposed for future testing in new sample drawn from another database.
E-②-18	Genrich SJ. Banks JC. Bufton K. Savage ME. et al	Group involvement in decision-making: a pilot study.	Journal of Continuing Education in Nursing. 32(1):20-6; quiz 46-7, 200.	The Vroom-Yetton-Jago Leadership Model served as a model to determine if leaders could be taught the appropriate level of group involvement in decision-making. A convenience sample of 27 health care leaders who attended a 90-minute class offered in one institution were eligible for inclusion in the study and pre- and post-performance on similar case studies was measured. Using a paired t test, results for this sample were statistically significant (t [21] = 6.02, p < .001). These results suggest that participating in a class on the use of this leadership model may help leaders gain the skill needed to appropriately delegate decision-making to groups.
E-②-19	Smyth C. Dubin S. Restrepo A. Nueva-Espana H. Capezuti E.	Creating order out of chaos: models of GNP practice with hospitalized older adults.[References: 31]	Clinical Excellence for Nurse Practitioners. 5(2):88-95, 2001 Mar.	Confirm the fact, hospitalization of an older adult can trigger a cascade of events that negatively affect quality of life long after hospitalization. Hospitalization of an older adult. The GNPs' roles include primary care provider, consultant, educator, researcher, and/or administrator. In one model, the GNP collaborated with a multi-disciplinary team to create a clinical pathway, the Functional Recovery Pathway. In the second model, the GNP and nurse manager addressed the issue of fall risk with an education program for the staff. As a result, the fall rate decreased 5.8%. In a third model, the GNP coordinated care of hospitalized nursing home residents in a "scatter bed" program. Working synergistically with a case management program, the length of stay for this group of patients decreased from a median of 12 days to 9 days in the first year to 6.8 days in the third year. It has been well documented that hospitalization of an older adult can trigger a cascade of events that negatively affect quality of life long after hospitalization. Three models of care directed by hospital-based geriatric nurse practitioners (GNPs) are described. The GNPs' roles include primary care provider, consultant, educator, researcher, and/or administrator. In one model, the GNP collaborated with a multi-disciplinary team to create a clinical pathway, the Functional Recovery Pathway. In the second model, the GNP and nurse manager addressed the issue of fall risk with an education program for the staff. As a result, the fall rate decreased 5.8%. In a third model, the GNP coordinated care of hospitalized nursing home residents in a "scatter bed" program. Working synergistically with a case management program, the length of stay for this group of patients decreased from a median of 12 days to 9 days in the first year to 6.8 days in the third year. All three models showed that the GNP facilitate change, improve resource utilization, and create innovative strategies to optimize care for hospitalized elders.

E-②-20	Xie H. McHugo G. Sengupta A. Hedeker D. Drake R.	An application of the thresholds of change model to the analysis of mental health data.	Mental Health Services Research. 3(2):107-14, 2001 Jun.	The threshold of change model (TCM) is a statistical technique for analyzing ordered stages of change variables. TCM focuses on the thresholds that separate the ordered stages, and the effects of explanatory variables are evaluated in terms of raising or lowering the thresholds. TCM also allows the explanatory variables to exert differential influence on each threshold. In this paper, we use TCM to analyze the data from a clinical trial that compared assertive community treatment (ACT) with standard case management (SCM) for patients with co-occurring severe mental illness and substance use disorder. Endpoint data (36-month follow up) were used for this analysis. The response variable is the recoded Substance Abuse Treatment Scale with three ordered levels (engagement/persuasion, active treatment, and recovery/relapse prevention), and hence two thresholds. The explanatory variables are gender and group (ACT vs. SCM). The results indicate that gender exerts constant and significant effects on both thresholds. The group effect is somewhat mixed: ACT lowers the first threshold (active treatment), but raises the second threshold (recovery/relapse prevention).
E-②-21	Lee VK. Fletcher KR.	Sustaining the Geriatric Resource Nurse Model at the University of Virginia.	Geriatric Nursing. 23(3):128-32, 2002 May-Jun.	This article describes the continued evolution of the Geriatric Resource Nurse Model at the University of Virginia, one of the original NICHE (Nurses Improving Care for Healthsystem Elders) sites established in 1994. The model developed slowly, unit by unit, a few nurses at a time, and has evolved with a multidisciplinary focus. Flexibility, mentoring relationships, a core curriculum, additional stimulating educational offerings, and a strong leadership team have been key influences on sustainability and growth.
E-②-22	Fitzpatrick JJ. Salinas TK. O'Connor LJ. et al	Nursing care quality initiative for care of hospitalized elders and their families.	Journal of Nursing Care Quality. 19(2):156-61, 2004 Apr-Jun.	This report describes a Nursing Care Quality Initiative (NCQI) through which a new model of care for hospitalized older adults and their families, the Family-Centered Geriatric Resource Nurse (FCGRN) model, was introduced. Eighteen units in 10 hospitals participated in the NCQI Project. Educational, clinical, and evaluation components of the NCQI Project are described.
E-②-23	Suhonen R. Valimaki M. Leino-Kilpi H. Katajisto J.	Testing the individualized care model.	Scandinavian Journal of Caring Sciences. 18(1):27-36, 2004 Mar.	Although there has been some research to identify the dimensions on which individualized care should be measured, the indicators that constitute individualized care remain unclear. To describe briefly the maintenance of individualized care and to test a hypothetical model of individualized care in a sample of surgical patients. A correlational survey design was used. Data were collected with questionnaires from adult patients (n = 454) discharged from surgical wards in one Finnish hospital district (response rate 91%). Structural equation modelling LISREL SIMPLIS using maximum likelihood estimation was used to estimate and test the parameters of the hypothesized model derived deductively from the previous literature. The goodness-of-fit statistics supported the basic solution of the Individualized Care Model, although two additional paths indicating error covariances between the sub-concepts were identified in the revised model. In this model individualized care is defined in terms of patients' views of nursing activities aimed at supporting individuality in care and in terms of perceptions of individuality in their own care. The model has been found to capture attributes that characterize individualized care. It can be used as a basis for evaluation in clinical nursing practice from patients' point of view. The study highlights the importance of patients' clinical situation, personal life situation and decisional control as predictors of individualized care. The results also confirm the construct validity of the previously developed Individualized Care Scale.

表 3. ③コストに関する文献

No	Authors	Title	Source	Abstract
E-③-1	Zander K.	Nursing case management: strategic management of cost and quality outcomes.	Journal of Nursing Administration. 18(5):23-30, 1988 May.	Nursing Case Management has four essential components: achievement of clinical outcomes within a prescribed timeframe;the care giver as case manager; episode-based RN-MD group practices that transcend units; and active participation by patients/families in goal setting and evaluation.In the first year of implementation, nursing case management has shown positive resolutions for some of the complex issues facing health care administrators, managers, and clinicians.
E-③-2	Jackson B. Finkler D. Robinson C.	A cost analysis of a case management system for infants with chronic illnesses and developmental disabilities.	Journal of Pediatric Nursing. 10(5):304-10, 1995 Oct.	Service coordination has long been a documented need of children with disabilities. The purpose of this study was to examine the costs associated with providing a comprehensive system of service coordination for hospitalized infants and toddlers with special health care needs and their families. Coordination costs were evaluated across seven functions including (a) determining eligibility for services, (b) identifying and arranging evaluations, (c) providing support to families, (d) making referrals to outside agencies, (e) exchanging information among service providers and families, (f) maintaining follow-up contact, and (g) determining discharge from the program. Results indicated that the service coordination function of providing family support was the most time-consuming task area, followed by the functions of exchanging information and maintaining follow-up contact. Costs also varied with the medical diagnosis and the child's age. Consistent with this variability, the diagnostic category and/or possibly the length of hospitalization was a better correlate of total cost of service coordination per child than was the number of months served. The complexity of the family's social and financial situation also appeared to be related to cost per month of service.
E-③-3	Petryshen P. Nagle LM.	Establishing a meaningful relationship: case costing and clinical practice.	Medinfo. 8 Pt 2:1331-4, 1995.	The authors provide an overview of the defining principles guiding the movement toward managed care in an organization. Specifically, the significance of linking case specific costs to clinical practice activities and how this supports outcome monitoring will be discussed. Sustaining a cost-quality balance in the delivery of health care is predicated on the development of integrated financial and clinical information systems.
E-③-4	Curtas S. Hariri R. Steiger E.	Case management in home total parenteral nutrition: a cost-identification analysis.	Jpen: Journal of Parenteral & Enteral Nutrition. 20(2):113-9, 1996 Mar-Apr.	Home parenteral nutrition (HPN) requires intensive medical case management by practitioners with expertise in the provision of nutrition support. There is expenditure of considerable time and resources for management of these patients not covered by any of the traditional reimbursement mechanisms. The costs associated with this unreimbursed input and follow-up are most often borne by the Nutrition Support Team or individual practitioners. Reimbursement by home care agencies to physicians for management of patients after discharge cannot be done because this may be construed as a "kick-back" for referral of patients to particular home care agencies. Time and costs associated with management of HPN patients after discharge from the hospital were assessed using a cost-identification analysis of 24 different factors. Daily activity logs were kept

				by the Nutrition Support Team members over a 2-week period. Costs of space and furnishings were calculated. On average, a total of 25 h/d was spent by members of the Nutrition Support Team on our HPN patients. Variable activities accounted for 5640.1 hours of time with fixed support at 890.3 hours. This computes to a total annual personnel cost of $168,482 ($1982 per patient). If costs of furnishings and space are also included, the overall cost of all resources was $175,989 per year or $2070 per patient. Significant and currently nonreimbursed costs are involved in HPN patient management. These costs are most often absorbed by the Nutrition Support Team and should be considered when evaluating total costs of HPN.
E-③-5	Frossard M.	Case management in France: an economic perspective. [Review] [9 refs]	Journal of Case Management. 5(4):162-7, 1996 Winter.	Case management is currently an important issue in France. Because neither service providers nor consumers pay for case management in this country, a cost-benefit analysis is often required by the organizations that do pay. Given the context of French social policy and the current focus on justifying case management through cost-benefit analysis, we have developed a way to evaluate its costs. This article presents the limitations of standard economic choice theory, provides a methodology based on the principles of limited rationality, and gives the results of an evaluation of four case management programs. The article provides a method to measure case management costs and efficiency, as well as the willingness of consumers to pay for services.
E-③-6	Grant P. Love K.	Blood from a turnip. Financial models in case management.	Nursing Case Management. 1(2):90-5, 1996 May-Jun.	The Baptist Health System has saved more than $5.4 million in a 3-year period as a result of its comprehensive case management program. The key to its success has been the pairing of financial cost data with key clinical information. Sharing this information with physicians and employing clinical experts as case managers has dramatically affected patient care across the continuum at the Baptist Health System. With more than 8 years of case management experience, the Baptist Health System's financial model has evolved into a concise method of measuring cost at the patient/day level. This cost information is analyzed by team members and used to improve patient care. At the core of this process is the case manager. By providing the case manager with the resources necessary, any healthcare institution can achieve significant financial savings and clinical process improvement.
E-③-7	Kretz SE. Pantos BS.	Cost savings and clinical improvement through disease management.	Journal of Case Management. 5(4):173-81, 1996 Winter.	Cystic fibrosis is an expensive chronic illness that has not historically demonstrated cost savings and quality of care improvement potential by alternate care plans using comprehensive disease management treatment modalities. This case study describes care provided over a 45-month period to an adolescent female with severe cystic fibrosis involving multiple hospitalizations and $396,000 in total cost of care. Treatment plans before and after the initiation of a comprehensive home care disease management program are described. Clinical improvement outcomes and savings of 33.4% in total costs were documented using longitudinal analysis of paid claims data and medical chart review. Guidelines are suggested for case managers desiring to initiate similar programs of care.

E-③-8	Standish JD.	Slicing the pie.	Medical Group Management Journal. 43(5):92-8, 1996 Sep-Oct.	Case rate contracts take the onus of dividing payment from the insurer and places it on the provider. There are a number of methods which can be used to respond to this challenge. One method which has a number of significant advantages is the floating conversion factor reimbursement method. It is based on a very simple concept, is transparent and delivers the market reality of the plan performance directly to participating physicians, without any convoluted calculations or cushions in between. A withhold can be added to this method, though it is unnecessary. A profit/loss sharing plan with the hospital can be helpful in completing the alignment of incentives.
E-③-9	Carter AM.	Case management in psychiatric inpatient recapture.	Military Medicine. 162(1):44-50, 1997 Jan.	A 2-year reduction of $5.25 million in inpatient costs, representing a decrease of 74%, resulted from implementation of a Psychiatric Management Initiative at Munson Army Community Hospital. Case management was a major component. Management in the military Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) system has major differences from the civilian sector. The military case manager functions as a "guest" in the civilian psychiatric hospitals with no authority to direct care. The practice involves trend analysis, team work, innovative treatment alternatives, and active discharge planning with follow-up. This program was successful in the recapture of CHAMPUS costs despite constraints by CHAMPUS regulations. Costs went from $3,555,285 in fiscal year 1993 down to $600,743 in fiscal year 1995.
E-③-10	Gray AM. Marshall M. Lockwood A. Morris J.	Problems in conducting economic evaluations alongside clinical trials. Lessons from a study of case management for people with mental disorders.	British Journal of Psychiatry. 170:47-52, 1997 Jan.	Case management has become the statutory basis of community care in the UK for people with long-term mental disorders, although a randomised controlled trial found no important improvements over standard care. Here we compare the costs and cost consequences of this intervention with standard care. Resource-use data were collected over a six-month baseline period and for 14 months after randomisation on all patients in the trial.At 14 months the ratio of control group to treatment group weekly costs was 1.09 (95% CI 0.86-1.38) for total costs; 1.12 (0.76-1.65) for state benefits, and 1.21 (0.61-2.42) for health care costs. Costs were thus lower in the treatment group, but these differences were not significant. Retrospective power calculations indicated that the trial could have detected differences of 30% in total cost, but would have required 700 patients per arm to detect a 20% difference in health care costs. Hence this study, which had adequate power to detect clinically meaningful differences, was found to be far too small to detect large differences in costs. Funding agencies increasingly request that clinical trials include economic alongside clinical end-points: these findings may have important lessons for that policy.

E-③-11	Gulliford MC.	Design of cost-effective packages of care for non-insulin-dependent diabetes mellitus. Defining the information needs. [Review]	International Journal of Technology Assessment in Health Care. 13(3):395-410, 1997 Summer.	This review concludes that: a) the global burden of disease from non-insulin-dependent diabetes mellitus (NIDDM) cannot be completely estimated at present; b) evidence for the efficacy of key elements of a package of care is still needed; c) generalizing the results of evaluations of costs or effectiveness across different populations is not straightforward; and d) for this complex intervention, the costs and effectiveness of intervention may be highly dependent on methods of organizing care. Addressing this information deficit represents an important task for researchers and health decision makers. [87 refs]
E-③-12	Huggins D. Lehman K.	Reducing costs through case management.	Nursing Management. 28(12):34-7,1997.	Three studies over a 3-year period compare nursing case management (NCM) outcomes--resources, service costs and NCM costs. NCM continues to improve quality of patient care in a cost-effective way.
E-③-13	McCarthy C. Chadwick J.	Case costing means, measuring and managing now! The journey traveled by a community hospital.	Canadian Operating Room Nursing Journal. 15(4):14-9, 1997 Dec.	Funding for health care in Ontario is moving from global funding to equity funding. In the future, hospitals will be reimbursed for how efficiently they care for their various patient populations. The Ontario Case Costing Project (OCCP) was a joint venture by the Ontario Hospital Association and the Ministry of Health. Incentive for participation in this project was based on the need to assess efficiencies in caring for patient populations in surgical suites and to obtain Canadian data. Case Costing has the potential to forecast budgets, identify variances and highlight areas for cost savings. Case Costing can also determine cost per surgeon, cost per service, cost per procedure. The nurses at Markham Stouffville Hospital are empowered to enhance the focus of their practice to include managing human resources, processes and materials. This enhanced focus in the Operating Room maximizes efficiency and effectiveness of processes, and allows the organization to provide better service. This article documents the journey and growth of perioperative nurses toward the destination of case costing. Key to this journey is not only the destination, but the growth and change that occurred and enabled perioperative nurses to effectively champion initiatives such as case costing. Opportunities and Threats, a One Page Plan and our recommended learnings will be shared.
E-③-14	Timpka T. Leijon M. Karlsson G. Svensson L. Bjurulf P.	Long-term economic effects of team-based clinical case management of patients with chronic minor disease and long-term absence from working life.	Scandinavian Journal of Social Medicine. 25(4):229-37, 1997 Dec.	To examine the socio-economic effects of team-based clinical case management of patients with chronic minor disease bound for early retirement. 239 patients with minor disease and long-term vocational absence consecutively admitted to the study. At the one-year evaluation, 17 patients had been readmitted to the team, 7 could not be found, 6 declined the interview and 2 were deceased. At the five-year evaluation of 49 patients who were active after one year, one was deceased and 10 were unable to be found. Marginal analysis of programme costs and benefits to society compared with no-programme baseline of costs occurring in society due to productivity loss. Prospective patient data collection on admission, discharge, and at one year and five years after discharge to determine programme effectiveness. Out-patient clinic at the department of social medicine in tertiary care hospital. Vocational activity. Programme costs. Benefits to society measured by decrease in indirect costs. The one-year vocational rehabilitation rate from the

				program was 20.5% and the five-year rehabilitation rate was 11.3%. The total discounted cost for case management of the 239 patients was 7.3 MSEK (600,000 Pounds). The decrease in the indirect costs to society from the 28 patients found active after five years was 35.1 MSEK (2,500,000 Pounds). The net present value of the programme at the 1991 price level was 27.5 MSEK (2,365,000 Pounds). Tertiary care level team-based clinical case management for vocational rehabilitation of patients with chronic minor disease has a positive cost-benefit ratio. A cross-boundary awareness at a health policy level is needed of the societal costs involved for this group of patients who fall between the traditional services in health care and social work.
E-③-15	Walsh KK. Kastner T. Criscione T.	Characteristics of hospitalizations for people with developmental disabilities: utilization, costs, and impact of care coordination.	American Journal of Mental Retardation. 101(5):505-20, 1997 Mar.	Hospitalizations and the impact of care coordination were studied in two large databases for people with developmental disabilities. Acute care admissions for alternate years between 1983 and 1991 were analyzed and compared to the data for the nondisabled population of New Jersey. The statewide dataset included 22,294 admissions; the coordinated dataset included 692 admissions to a community hospital. Under the diagnostic-related group reimbursement system, admissions for the general population remained constant, whereas hospital days and average length of stay dropped during the study period. Increases in admissions (56%) and days (42%) were found for people with developmental disabilities. Their total hospital charges rose 206%, almost twice the rate for the general population. Care coordination moderated all of these differences.
E-③-16	Baker JJ. Chiverton P. Hines V.	Identifying costs for capitation in psychiatric case management.	Journal of Health Care Finance. 24(3):41-4, 1998.	This article presents an example of how one hospital identified costs for capitation in psychiatric case management. An 18-month postacute case management pilot project collected data on a nurse-specific and patient-specific basis. Costs were identified using activity-based costing methodology.
E-③-17	Beilman JP. Sowell RL. Knox M. Phillips KD.	Case management at what expense? A case study of the emotional costs of case management.	Nursing Case Management. 3(2):89-95, 1998 Mar-Apr.	Case management, which has its historical roots in community and public health, seeks to coordinate care, decrease costs, and promote access to appropriate levels of service. The case management system in this case study underscores the potential negative outcomes that can result from ignoring the holistic approach represented by an implemented case management system as a cost control mechanism. These negative outcomes not only include those expenditures of resources usually included when describing costs of care, but include those emotional costs of the system, patient, and care managers. Several needed system changes are identified and recommendations provided.

E-③-18	Johnston S. Salkeld G. Sanderson K. Issakidis C. Teesson M. Buhrich N.	Intensive case management: a cost-effectiveness analysis.	Australian & New Zealand Journal of Psychiatry. 32(4):551-9, 1998 Aug.	The objective of this study was to compare the outcomes and costs of intensive case management with routine case management for a group of severely disabled patients with a mental illness. A cost-effectiveness analysis was conducted alongside a randomised controlled trial. Seventy-three patients, who reside in the eastern suburbs of Sydney, were randomly allocated to either intensive or routine case management. Staff providing intensive case management and substantially lower caseloads than staff providing routine case management. The main health outcome measured was patients' level of functioning as measured by the Life Skills Profile. Costing data were collected from hospital services, mental health services, general health services, community services and informal carers. At 12 months, outcome and costing data were analysed on 58 patients and hospitalisation data were analysed on 68 patients. Significantly more patients in the intensive case management group remained in treatment (chi 2 = 6.00, df = 1, $p < 0.01$) and showed a clinically significant improvement in functioning from baseline to 12 months (chi 2 = 4.50, df = 1, $p < 0.05$). The mean cost per patient was $7745 more in the intensive group than in the routine group ($t = 1.49$, df = 56, $p > 0.01$) over 12 months. The cost-effectiveness ratio indicated a cost of $27,661 per year for one additional patient in the intensive case management group to make a clinically significant improvement in functioning. Intensive case management led to an increased rate of retention in treatment and a clinically significant improvement in functioning. Further comparative cost-effectiveness studies are required to determine whether $27,661 per year for one patient to make a clinically significant improvement in functioning is a cost-effective use of mental health resources.
E-③-19	Scott A. Currie N. Donaldson C.	Evaluating innovation in general practice: a pragmatic framework using programme budgeting and marginal analysis.	Family Practice. 15(3):216-22, 1998 Jun.	Innovation in primary care in the UK, in terms of new service developments, is occurring at a fast pace. However, little information is available on the costs and benefits of these changes. We aimed to illustrate the use of programme budgeting and marginal analysis (PBMA) as a framework for evaluating innovation in primary care, using an example of practice-based diabetes care. The aim was to examine changes in the use of practice resources and the changes in benefits to patients, following the introduction of a diabetes clinic. PBMA is a form of pragmatic economic evaluation combining practice data for the 'before' period and data from the literature to model the 'after' period. In 1995/6, the total amount of resources devoted to diabetes care in the two practices was 145813 pound sterling (634 pound sterling per patient). Of this sum, 62% was allocated to out-patient visits, 28% to prescribing, 5% to hospital admissions, 2% to GP consultations and 2% to tests. The literature suggests that a nurse-run diabetes clinic would result in similar health outcomes and better access for patients. The introduction of such a clinic could potentially save each practice between 2000 pound sterling and 16000 pound sterling per year. This result takes into account a wide range of assumptions about changes in resource use, but does depend on the findings of previous studies. The results of this study show that PBMA is a useful framework for helping practices be accountable and make 'evidence-based' decisions about service innovations in primary care.

E-③-20	Von Korff M. Katon W. Bush T. Lin EH. Simon GE. Saunders K. Ludman E. Walker E. Unutzer J.	Treatment costs, cost offset, and cost-effectiveness of collaborative management of depression.	Psychosomatic Medicine. 60(2):143-9, 1998 Mar-Apr.	The report estimates the treatment costs, cost-offset effects, and cost-effectiveness of Collaborative Care of depressive illness in primary care. Treatment costs, cost-offset effects, and cost-effectiveness were assessed in two randomized, controlled trials. In the first randomized trail (N = 217), consulting psychiatrists provide enhanced management of pharmacotherapy and brief psychoeducational interventions to enhance adherence. In the second randomized trial (N = 153). Collaborative Care was implemented through brief cognitive-behavioral therapy and enhanced patient education. Consulting psychologist provided brief psychotherapy supplemented by educational materials and enhanced pharmacotherapy management. Collaborative Care increased the costs of treating depression largely because of the extra visits required to provide the interventions. There was a modest cost offset due to reduced use of specialty mental health services among Collaborative Care patients, but costs of ambulatory medical care services did not differ significantly between the intervention and control groups. Among patients with major depression there was a modest increase in cost-effectiveness. The cost per patient successfully treated was lower for Collaborative Care than for Usual Care patients. For patients with minor depression. Collaborative Care was more costly and not more cost-effective than Usual Care. Collaborative Care increased depression treatment costs and improved the cost-effectiveness of treatment for patients with major depression. A cost offset in specialty mental health costs, but not medical care costs, was observed. Collaborative Care may provide a means of increasing the value of treatment services for major depression.
E-③-21	Freeman MB. Plant BA.	Viatical settlements: what case managers should know. [Review] [4 refs]	Case Manager. 10(5):54-8, 1999 Sep-Oct.	Culturally we are taught not to discuss money and other people's financial circumstances, particularly if financial hardship exists. The reluctance is even greater if that hardship involves dire circumstances like a serious illness. Added to this reticence is anecdotal evidence that case managers (and other professionals who may be called to interact with clients regarding a broad range of stressful issues during ill health) are hesitant to discuss financial matters other than those directly pertaining to payment for specific, predetermined medical treatment.
E-③-22	Issel LM. Anderson RA.	Avoidable costs of comprehensive case management. [Review] [34 refs]	Health Care Management Review. 24(3):64-72, 1999 Summer.	Comprehensive case management has become an industry standard and its pervasiveness raises questions about the ubiquitous need for this service. Analyzed from the perspective of transaction cost analysis and access, we argue that in some cases comprehensive case management is an avoidable cost incurred because of system problems that limit access to otherwise eligible clients. Implications are discussed.

E-③-23	Kaiser KL. Miller LL. Hays BJ. Nelson F.	Patterns of health resource utilization, costs, and intensity of need for primary care clients receiving public health nursing case management.	Nursing Case Management. 4(2):53-62; quiz 63-6, 1999 Mar-Apr.	Case management has been promoted as a managed care strategy that improves quality of care and contains costs. Health resource utilization patterns and associated costs were examined for a generalized primary care population receiving a public health nursing model of case management intervention during a 30-week period. Subjects were referred by providers practicing in an academic health science center and included two client subsamples: chronically ill adults and younger families requiring health maintenance. Health resource utilization patterns and associated costs were examined in relation to intensity of need for care levels as determined by the Community Health Intensity Rating Scale. Results of this pilot study suggest that during public health nursing case management intervention, health resource utilization patterns changed from the preintervention period. Total health resource utilization costs were correlated with care needs related to health management behavior of the chronically ill.
E-③-24	Long MJ. Marshall BS.	Case management and the cost of care in the last month of life: evidence from one managed care setting.	Health Care Management Review. 24(4):45-53, 1999 Fall.	Elderly, functionally disabled enrollees in a managed care organization were randomly assigned to case management or regular care. The service use and cost of care for the last month life for the case managed deceased is compared with that of the regular care group. The results suggest that contrary to general expectation, the managed care clients experienced greater use and costs of care in the last month of life.
E-③-25	Schmidt SM. Guo L. Scheer S. Boydston J. et al	Epidemiologic determination of community-based nursing case management for stroke.	Journal of Nursing Administration. 29(6):40-7, 1999 Jun.	Efforts to control costs, especially those resulting from the 1997 Balanced Budget Act, have resulted in profound opportunities for futuristic community-based nursing care. A retrospective chart review was conducted on 1,992 stroke patients discharged from 15 Cincinnati hospitals from July 1, 1995, to June 30, 1996. Determinants and descriptors of stroke distribution were identified. This study shows how nurses can plan cost-effective care while maintaining quality through an epidemiologic assessment of patient, family, and community needs.
E-③-26	Boult C. Rassen J. Rassen A. Moore RJ. Robison S.	The effect of case management on the costs of health care for enrollees in Medicare Plus Choice plans: a randomized trial.	Journal of the American Geriatrics Society. 48(8):996-1001, 2000 Aug.	To measure the effects of case management on an older population's costs of health care. A 1-year randomized controlled trial. Multiple sites of care in San Francisco, California. Patients aged 65 or older of primary care physicians in a large provider organization bearing financial risk for their care (n = 6409). Screening for high risk and provision of social work-based case management. Volume and cost of hospital, physician, case management, and other health-related services. The experimental group used more case management services than the control group (0.09 vs. 0.02 months per person, P<.001). The experimental group's average total payments for health care were slightly lower ($3148 vs $3277, P = .40). This study provides no statistically significant evidence that social work-oriented case management reduces the use or the cost of health care for high-risk older people. Other potentially favorable effects of this type of case management need to be evaluated, as do the effects of other types of case management.

E-③-27	Chan S. Mackenzie A. Jacobs P.	Cost-effectiveness analysis of case management versus a routine community careorganization for patients with chronic schizophrenia	Archives of Psychiatric Nursing. 14(2):98-104, 2000 Apr.	This article reports the economic analysis of a study on the implementation of case management in the Community Psychiatric Nursing Service (CPNS) caring for chronic schizophrenic clients in Hong Kong. The purpose of the study was to compare the outcome of case management service with the conventional practice CPNS. Sixty-two subjects participated in the analysis.Cost-effectiveness analysis showed that case management costs more in Hong Kong $3,600 (US$450) per person and that over a 5-month period, case management was associated with improvements in psychological and functional outcomes and patient satisfaction. The results of this study will inform policy makers about resource allocation and policy development in the implementation of case management for the care of mentally ill clients.
E-③-28	Long MJ. Marshall BS.	What price an additional day of life? A cost-effectiveness study of case management.	American Journal of Managed Care. 6(8):881-6, 2000 Aug.	To examine the costs and benefits of a case-management program for an elderly, functionally impaired population in a managed care setting. A post hoc, cost-effectiveness study of case management. As part of a larger study, 317 elderly, functionally impaired clients were randomly assigned to a case-managed or regular-care group. During the 2-year study period, 34 clients in the case-managed and 43 clients in the regular-care group died. A post hoc analysis of the difference in average total cost per person, death rates, and average number of days of exposure per person were assessed to determine the cost per life saved and cost per additional day of life. Although the average costs for the case-managed group were greater than the costs for the regular-care group, clients in the case-managed group lived an average of 106 days longer. The cost per additional day of life was $40. The difference in death rates was so small that, by extrapolation, the cost per life saved was over $42 million.Although the case-management program was more costly when viewed from a purely fiscal perspective, it may very well be considered a success when its benefits are evaluated. The case-management program improved quality and was associated with prolonged life at a cost of $40 per day of additional life. Additional research involving other patient populations, study settings, and case-management models is warranted.
E-③-29	Lynch JP. Forman SA. Graff S. Gunby MC.	High-risk population health management--achieving improved patient outcomes and near-term financial results.	American Journal of Managed Care. 6(7):781-91, 2000 Jul.	A managed care organization sought to achieve efficiencies in care delivery and cost savings by anticipating and better caring for its frail and least stable members. Key attributes of the intervention included predictive registries of at-risk members based on existing data, relentless focus on the high-risk group, an integrated clinical and psychosocial approach to assessments and are planning, a reengineered care management process, secured Internet applications enabling rapid implementation and broad connectivity, and population-based outcomes metrics derived from widely used measures of resource utilization and functional status. Time sequence case study of program intervention across an entire managed care population in its first year compared with the prior baseline year. Concentrating on the highest-risk group, which averaged just 1.1% prevalence in the total membership, yielded bottom line results. When the year before program implementation (July 1997 through June 1998) was compared with the subsequent year, the total population's annualized commercial admission rate was reduced 5.3%, and seniors' was reduced 3.0%. A claims-paid analysis exclusively of the highest-risk group revealed that their efficiencies and

				savings overwhelmingly contributed to the membershipwide effect. This subgroup's costs dropped 35.7% from preprogram levels of $2590 per member per month (excluding pharmaceuticals). During the same time, patient-derived cross-sectional functional status rose 12.5%. A sharply focused, Internet-deployed case management strategy achieved economic and functional status results on a population basis and produced systemwide savings in its first year of implementation.
E-③-30	Parent F. Coppieters Y.	Assessment of hospital morbidity, mortality, and cost-effectiveness of a nutritional program for children under 5 years of age in Pala, Chad.	Journal of Tropical Pediatrics. 46(4):252-4, 2000 Aug.	This paper analyses the effectiveness of case management at referral level for malnourished sick children in a rural district health system in the south of Chad (Pala district). The methodology followed was based on a cohort study of malnourished children as well as a cost-effective analysis of alternative options for nutritional rehabilitation strategies. Results show that effective case management at hospital level is possible with few resources as long as the nutritional rehabilitation programme is implemented on an integrated basis including early diagnosis of malnutrition for all children admitted to hospital and not to wait for a normal weight-for-height but discharge when the hospital is no longer the best place to avoid further mortality.
E-③-31	Preston NJ. Fazio S.	Establishing the efficacy and cost effectiveness of community intensive case management of long-term mentally ill: a matched control group study.	Australian & New Zealand Journal of Psychiatry. 34(1):114-21, 2000 Feb.	The study attempted to identify whether chronic mentally ill persons after receiving intensive case management (ICM) could demonstrate improved inpatient service utilisation compared with a matched control group cohort. Costings were measured to observe whether the increase in providing intensive outpatient contacts would be offset by savings in reduced inpatient service utilisation. Eighty ICM patients were matched on ICD-9 diagnosis, age, gender, length of illness, age at first inpatient and outpatient contact, marital status, educational level, employment status, country of birth, year of arrival to Australia and religion. Inpatient bed-days and outpatient contacts were recorded and compared 12 months prior to ICM treatment, 12 and 24 months after ICM using within/between group repeated measures analysis of variance.The ICM group demonstrate significant reductions in inpatient service utilisation both within the 12- and 24-month period after receiving ICM treatment. The cost differential by 24 months of treatment was $801,475 in favour of the ICM model. The increase in costs of outpatient contacts were offset by a significant reduction in inpatient service utilisation. When outpatient contacts averaged one contact a week for the duration of the study period no significant reductions in inpatient service utilisation was recorded, as demonstrated by comparison with the matched control group. By increasing outpatient contacts by 3-4 contacts a week, inpatient contacts reduced by 36.8%. ICM is an efficacious and cost effective way to implement community-based services to the chronically long-term mentally ill.

E-③-32	Abdel-Hameed AA. Abdalla HM. Alnaury AH.	Household expenditure on malaria case management in Wad-Medani, Sudan.	African Journal of Medicine & Medical Sciences. 30 Suppl:35-8, 2001.	This study was done in Wad-Medani town in the central Sudan. A household survey and a hospital survey were conducted using structured questionnaires to assess household expenditure on malaria case management. A total of 360 cases of malaria were reported in the household survey. They were assessed by a questionnaire focused on household income daily expenditure and resources), with special attention to treatment and cost incurred. Also, a random sample of malaria cases hospitalized in the medical, obstetrical and paediatric wards in Wad-Medani hospitals were interviewed, comprising 75 adult patients and 75 children. Cases in the house survey were treated in health centers, private clinics, health insurance facilities or by self-medication. The mean expenditure on diagnosis and treatment of an episode of malaria was US dollars 5.12 for home-treated cases and US dollars 17.2 for a hospitalized case, representing a significant economic burden to family income. This cost varied according to type of treatment, type of health care provider and in hospitalized versus home-treated cases.
E-③-33	Robertson MC. Gardner MM. Devlin N. McGee R. Campbell AJ.	Effectiveness and economic evaluation of a nurse delivered home exercise programme to prevent falls. 2: Controlled trial in multiple centres.	BMJ. 322(7288):701-4, 2001 Mar 24.	To assess the effectiveness of trained nurses based in general practices individually prescribing a home exercise programme to reduce falls and injuries in elderly people and to estimate the cost effectiveness of the programme.Controlled trial with one year's follow up. 32 general practices in seven southern New Zealand centres. 450 women and men aged 80 years and older. Intervention: 330 participants received the exercise programme (exercise centres) and 120 received usual care (control centres); 87% (371 of 426) completed the trial. Number of falls, number of injuries resulting from falls, costs of implementing the programme, and hospital costs as a result of falls. Falls were reduced by 30% in the exercise centres (incidence rate ratio 0.70, 95% confidence interval 0.59 to 0.84). The programme was equally effective in men and women. The programme cost $NZ418 (121 pound sterling) (at 1998 prices) per person to deliver for one year or $NZ1519 (441 pound sterling) per fall prevented. Fewer participants had falls resulting in injuries, but there was no difference in the number who had serious injuries and no difference in hospital costs resulting from falls in exercise centres compared with control centres. An individually tailored exercise programme, delivered by trained nurses from within general practices, was effective in reducing falls in three different centres. This strategy should be combined with other successful interventions to form part of home programmes to prevent falls in elderly people.

E-③-34	Gregory D. Baigelman W. Wilson IB.	Hospital economics of the hospitalist.	Health Services Research. 38(3):905-18; discussion 919-22, 2003 Jun.	To determine the economic impact on the hospital of a hospitalist program and to develop insights into the relative economic importance of variables such as reductions in mean length of stay and cost, improvements in throughput (patients discharged per unit time), payer methods of reimbursement, and the cost of the hospitalist program. The primary data source was Tufts-New England Medical Center in Boston. Patient demographics, utilization, cost, and revenue data were obtained from the hospital's cost accounting system and medical records. The hospitalist admitted and managed all patients during a six-week period on the general medical unit of Tufts-New England Medical Center. Reimbursement, cost, length of stay, and throughput outcomes during this period were contrasted with patients admitted to the unit in the same period in the prior year, in the preceding period, and in the following period.The hospitalist group compared with the control group demonstrated: length of stay reduced to 2.19 days from 3.45 days (p<.001); total hospital costs per admission reduced to 1,775 dollars from 2,332 dollars (p<.001); costs per day increased to 811 dollars from 679 dollars (p<.001); no differences for readmission within 30 days of discharge to extended care facilities. The hospital's expected incremental profitability with the hospitalist was -1.44 dollars per admission excluding incremental throughput effects, and it was most sensitive to changes in the ratio of per diem to case rate reimbursement. Incremental throughput with the hospitalist was estimated at 266 patients annually with an associated incremental profitability of 1.3 million dollars. Hospital interventions designed to reduce length of stay, such as the hospitalist, should be evaluated in terms of cost, throughput, and reimbursement effects. Excluding throughput effects, the hospitalist program was not economically viable due to the influence of per diem reimbursement. Throughput improvements occasioned by the hospitalist program with high baseline occupancy levels are substantial and tend to favor a hospitalist program.
E-③-35	Rosenheck R. Kasprow W. Frisman L. Liu-Mares W.	Cost-effectiveness of supported housing for homeless persons with mental illness.	Archives of General Psychiatry. 60(9):940-51, 2003 Sep.	Supported housing, integrating clinical and housing services, is a widely advocated intervention for homeless people with mental illness. In 1992, the US Department of Housing and Urban Development (HUD) and the US Department of Veterans Affairs (VA) established the HUD-VA Supported Housing (HUD-VASH) program. Homeless veterans with psychiatric and/or substance abuse disorders or both (N = 460) were randomly assigned to 1 of 3 groups: (1) HUD-VASH, with Section 8 vouchers (rent subsidies) and intensive case management (n = 182); (2) case management only, without special access to Section 8 vouchers (n = 90); and (3) standard VA care (n = 188) Primary outcomes were days housed and daysDuring a 3-year follow-up, HUD-VASH veterans had 16% more days housed than the case management-only group and 25% more days housed than the standard care group (P<.001 for both). The case management-only group had only 7% more days housed than the standard care group (P =.29). The HUD-VASH group also experienced 35% and 36% fewer days homeless than each of the control groups (P<.005 for both). There were no significant differences on any measures of psychiatric or substance abuse status or community adjustment, although HUD-VASH clients had larger social networks. From the societal perspective, HUD-VASH was 6200 US dollars (15%) more costly than standard care. Incremental

				cost-effectiveness ratios suggest that HUD-VASH cost 45 US dollars more than standard care for each additional day housed (95% confidence interval, -19 US dollars to 108 US dollars). Supported housing for homeless people with mental illness results in superior housing outcomes than intensive case management alone or standard care and modestly increases societal costs. homeless. Secondary outcomes were mental health status, community adjustment, and costs from 4 perspectives.
E-③-36	Tucker D. DiRico L.	GN management. Managing costly Medicare patients in the hospital.	Geriatric Nursing. 24(5):294-7, 2003. (20 ref)	Cost-effective strategies must be developed to address the rapidly rising number of hospitalized older adults. Medicare cost outliers represent substantial unrecovered cost to hospitals caused by limited reimbursement based on diagnosis-related groups. A predictive model is used to identify potential cost outliers during admission, and a registered nurse inpatient case manager with geriatric expertise is the intervention to tailor the care to the unique needs of older adults. Community follow up is provided by social workers to complete the continuum. Positive outcomes from this project suggest that nursing can identify and successfully intervene with high-cost Medicare patients.
E-③-37	Beck JK. Logan KJ. Hamm RM. Sproat SM. Musser KM. Everhart PD. McDermott HM. Copeland KC.	Reimbursement for pediatric diabetes intensive case management: a model for chronic diseases?.	Pediatrics. 113(1 Pt 1):e47-50, 2004 Jan.	Current reimbursement policies serve as potent disincentives for physicians who provide evaluation and management services exclusively. Such policies threaten nationwide availability of care for personnel-intensive services such as pediatric diabetes. This report describes an approach to improving reimbursement for highly specialized, comprehensive pediatric diabetes management through prospective contracting for services. The objective of this study was to determine whether pediatric diabetes intensive case management services are cost-effective to the payer, the patient, and a pediatric diabetes program. A contract with a third-party payer was created to reimburse for 3 key pediatric diabetes intensive case management components: specialty education, 24/7 telephone access to an educator (and board-certified pediatric endocrinologist as needed), and quarterly educator assessments of self-management skills. Data were collected and analyzed for 15 months after signing the contract. Within the first 15 months after the contract was signed, 22 hospital admissions for diabetic ketoacidosis (DKA) occurred in 16 different patients. After hospitalizations for DKA, all 16 patients were offered participation in the program. All were followed during the subsequent 1 to 15 months of observation. Ten patients elected to participate, and 6 refused participation. Frequency of rehospitalization, emergency department visits, and costs were compared between the 2 groups. Among the 10 participating patients, there was only 1 subsequent DKA admission, whereas among the 6 who refused participation, 5 were rehospitalized for DKA on at least 1 occasion. The 10 patients who participated in the program had greater telephone contact with the team compared with those who did not (16 crisis-management calls vs 0). Costs (education, hospitalization, and emergency department visits) per participating patient were approximately 1350 dollars less than those for nonparticipating patients. Differences between participating and nonparticipating groups included age (participants were of younger age), double-parent households (participants were more likely to