ABSTRACT SERVICE

STANDARD OF DIABETES CARE

Comparison of Different Models of Diabetes Care on Compliance With Self-Monitoring of Blood Glucose by Memory Glucometer

Hoskins P. L., Alford J. B., Handelsman D. J., Yue. D. K., Turtle J. R. Diabetes Care 1988; 719-24.

The modern management of diabetes relies heavily on self-monitoring of blood glucose (SMBG), and therefore SMBG records are an important source of clinical data for management decision making. The development of memory Glucometer has provided the opportunity to verify the validity of glucose records thus generated and observe the effects to different educational approaches on compliance with SMBG. Thirty-four patients without previous experience of SMBG were randomized into one of the following experimental groups differing in the model of diabetes care: mutual decision making, didactic, and authoritarion. Patients, unaware of the memory capacity of the glucose meter, were required to perform four glucose measurements per day over a 14-day observation period. Patient generated blood glucose records were then compared with objective records stored in the glucose-meter memory. Patients with gestational diabetes mellitus recorded a lower proportion of correct (63 vs. 79%, P= .049) and exhibited a tendency to invent results with lower blood glucose levels (5.3 vs. 7.5mM, P< .0001) than the results omitted compared with patients with patients with non-insulin dependent diabetes mellitus. Predictors of greater validity of records were perceived intelligence of the subject (X^2 = 4.56, P< .02) and private health-insurance status (X^2 = 4.52, P< .04), whereas the experimental group assignment was not significant. These findings reflect potential motivational and socio-demographic limitations in the validity of SMBG recording within the management and education of patient with gestational and non-gestational diabetes.

Psychological stress and metabolic control in patients with Type I diabetes mellitus

Kemmer. F. W., Bisping. R., Steingruber H. J., et al N. Engl. J Med 1986; 314: 1078-84

Acute psychological stress is believed to cause disturbances of metabolic control in-patients with Type I diabetes. To examine the validity of this assumption, we subjected nine healthy persons (mean [± SEM] blood glucose level, 74 ± 2 mg per deciliter), nine patients with Type I diabetes who had normoglycemia (130 ± 10mg per deciliter), and nine diabetic patients with hyperglycameia (444 ± 17 mg per deciliter) to two acute psychological stresses: mental arithmetic and public speaking. Subjects in the three groups were matched for age, weight, sex and socio-economic status.

For all subjects, the mean increase in heart rate was 20 beats per minute while they were doing mental arithmetic and 25 beats per minute while they were speaking publicly (P<0.001). In all three groups, systolic and diastolic pressure rose markedly, the plasma epinephrine levels increased by 50 to 150pg per millitre, and the nor-epinephrine level by 100 to 200pg per milliliter under both stress conditions (P<0.001). The plasma cortisol levels rose significantly after public speaking in all groups. Neither stress induced changes in circulating levels of glucose, ketones free fatty acids, glucagon, or growth hormone.

Thus, sudden, short-lived psychological stimuli caring marked cardiovascular responses and moderate addition in plasma concentrations of catecholamines and cortisol are unlikely to disturb metabolic control in patients with Type I diabetes.

Eye Care Guidelines for patients With Diabetes Mellitus

Diabetes Care 1988; 11: 745-46

Eye care in the diabetic patient reflects a partnership between the primary physician and the eye doctor. The primary physician plays a fundamental role in the medical management, education, and co-ordination of care for the person with diabetes mellitus. The primary physician should be familiar with the indications for ophthalmic care in-patients with diabetes. Therefore, these guidelines are proposed for the familiarity of all involved health professions, and a suggested timetable for patient examination is included.

GENERAL EXAMINATION

In referring patients for routine eye evaluation, the practitioner should be guided by the expertise and qualifications of the eye doctor to perform the examinations described.

1. All patients should be informed that
   a) Sight-threatening eye disease is a common complication of diabetes mellitus and is often present even with good vision,

b) Early detection and appropriate treatment of diabetic eye disease greatly reduces the risk of visual loss.

2 People between 12 and 30 yr. of age with a diagnosis of diabetes mellitus of at least 5 yr. duration should have a baseline ophthalmic examination including:
   a) History of visual symptoms,
   b) Measurement of visual acuity and intraocular pressure,
   c) Ophthalmoscopic examination through dilated pupils.

3 People 30 yr. of age should have baseline ophthalmic examinations, as specified in 2 above, a time of diagnosis of diabetes.

4 After the initial eye examination, it is suggested that people with diabetes mellitus should receive the above ophthalmic exams annually unless more frequent exams are indicated by thepresence of abnormalities.

SPECIAL EXAMINATION

1. Women with insulin-dependent diabetes mellitus who are planning pregnancy within 12mo should be examined by an ophthalmologist.
2. Women with diabetes who become pregnant should have an examination for retinopathy by an ophthalmologist in the first trimester and thereafter at he discretion of the ophthalmologist.
3. Patients should be under the care of an ophthalmologist for
   a) unexplained visual symptoms,
   b) deterioration in visual acuity,
   c) increased intraocular pressure,
   d) any retinal abnormality,
   e) any other ocular pathology that threatens vision.
4. Patients should be under the care of a retinal specialist or other ophthalmologist experienced in the management of diabetic retinopathy when the following conditions are identified:
   a) Preproliferative retinopathy (multiple cotton-wool spots, multiple intraretinal haemorrhages, intraretinal micro-vascular abnormalities, venous beading)
   b) Proliferative retinopathy (retinal, neovascularization, preretinal or vitreous haemorrhage, fibrosis, traction retinal detachment)
   c) Macular oedema (hard lipid exudates and /or retinal thickening inside the temporal vascular arcades)
5. Patients with functionally decreased visual acuity should undergo low-vision evaluation and rehabilitation.
6. Laser photocoagulation therapy reduces the risk of visual loss and is generally effective in preventing blindness in-patients with high-risk proliferative retinopathy and/or clinically significant macular oedema. Vitrectomy can restore vision in certain patients with recent traction retinal detachment on vitreous haemorrhage. Laser therapy and vitrectomy should be performed by a retinal specialist or other ophthalmologist experienced in these procedures in people with diabetes.

Developed by the Committee on Professional practice and approved by the Executive Committee of the Board of Directors of the American Diabetes Association, 8 June 1988.

Reliability and Validity of a Diabetes Quality of Life measure for the Diabetes Control and Complications Trial (DCCT)

Jacobson. A., Barofsky. I. Cleary. P., and Rand L. Diabetes Care. 1988; 11: 725-32

We have developed a diabetic quality-of-life (DQOL) measure oriented toward the patient with insulin dependent diabetes mellitus (IDDM). The DQOL was assessed for its reliability and validity in-group of patients with IDDM (n = 192). We found that the DQOL and its four scales had high degrees of internal consistency (Cronbach's r = 66-92) and excellent test-retest reliability (r = 78-92). Using conceptually relevant measures of psychiatric symptoms, perceived well being and adjustment to illness, we also demonstrated convergent validity of the DQOL. This instrument was initially designed for use in the Diabetes Control and Complications Trial, a multicentre controlled clinical trial evaluating the effects of two different diabetes treatment regimens on the appearance and progression of early vascular complications. However, the DQOL may also be useful in evaluating the quality of life in other groups of patients with IDDM.

Quality of Life of Pancreatic Transplant Recipients

Milde F. K., Hart. L. K., Zehr. P. S. Diabetes care 1992; 15: 1459-63.

Objective: To comprehensively assess and compare pancreas/kidney transplant recipients quality of life.

Research Design And Methods: This quasi-experimental comparative study of 31 successful and 13 failed pancreas transplant recipients collected data from persons who had received pancreas and kidney transplants ³ 6mo prior at a university tertiary care centre. Physical and social function, symptoms, mental state, and sense of well being of the recipients were assessed.

Results: Group did not differ significantly regarding age, gender, marital status onset or length of diabetes, comorbidity, type of prior dialysis, current kidney function, length of time since transplant, physical activity, symptom burden, emotional state, feelings of well-being, and present quality of life and health. A significant time by group interaction occurred for quality of life (P = 0.0013) and health (P = 0.0001). The successful group indicated that both quality of life and health, were significantly better than in the past, and continued improvement was expected. The unsuccessful group did not have this perception. Members of the failed group were significantly more satisfied with their social support. The unsuccessful group's major concerns related to diabetes, not immunosuppression.

Conclusions: Recipients of successful pancreas transplants perceived their improvement in health and quality of life to be significantly greater than the unsuccessful recipients.

Measurement of Health Status in Diabetic patients

Diabetes Impact measurement Scales

Hammond G. S, Aoki T. T. Diabetes Care 1992; 15: 469-77

Objective: To develop an instrument to measure health status in adult insulin dependent (type I) and non-insulin-dependent (Type II) diabetic patients.

Research Design and Methods: Correlative study to examine psychometric of the questionnaire. Test-retest reliability, item-scale correlation's principal-components analysis, correlation's with clinical data extracted from medical records were examined at the diabetic clinics at the University of California, Davis, Medical Centre. Patients were volunteer clinic patients able to complete the questionnaire. One hundred thirty patients completed a first administration of the questionnaire, and 52 completed a second administration.

Results: Test-retest reliability was satisfactory. Item-scale correlation's showed that of 44 questionnaire items were highly correlated with sub-scale and total scale scores Principal - components analysis identified one major factor measured by the questionnaire. Cronbach's μ , a measure of the scales' internal consistency, was of satisfactory magnitude. Global ratings of clinical status by patients and clinicians were highly of low magnitude but, where significant, were consistently in the direction hypothesized if the scale truly measures health status or disease impact.

Conclusions: The Diabetes Impact management Scales (DIMS) is an easily administered questionnaire with internal consistency and test-retest reliability. Preliminary correlative analyses support the validity of the instrument as a measure of health status in adult type I and type II diabetic patients. Further work will be necessary to firmly establish the validity of the DIMS and its usefulness in clinical outcome research.

Position Statement on Jet Injectors

Diabetes Care 1988; 600-01

Jet injection was first proposed for administering insulin 35 years ago with an aim to decrease pain of injections, compared to needles and syringes. Recently the application of these administering insulin has gained increasing attention. The task force on Jet injection of Youth Council of ADA was formed to revise the scientific literature available on Jet injectors and if possible to recommend guidelines for their use. Though available scientific literature is not sufficient to provide recommendations, sufficient data are available to support the specific conclusions.

Jet injection of insulin appears to offer a mechanically reliable and accurate alternative to syringe injection. Based on the results of testing with a model there is no increased risk for infections although each model needs to be individually evaluated.

The effect of jet injections on metabolic control in insulin regimen differs in frequency of injections and/or insulin type was also tested. The decrease in blood sugar is marginally increase with the use of jet injection as compared to syringe injection.

The possibility was raised that insulin could be denatured as a result of its forceful injections through a tiny port compared to an injection through a needle, which could lead to complications such as antibody formation.

Considering the initial expense of purchasing a jet injector the cost of this device is partially counteracted by saving the need to purchase disposable syringes. It is necessary to investigate patients' convenience and preference including cost analysis based on complete and independently obtained data.

Background, quality of life and metabolic control in patients with insulin-dependent diabetes mellitus

Wikby A., Hoernquist J. O., and Ersson P.O. Diabetes Res. Clin. Pract. 1991; 53-61.

The interference of background characteristics with quality of life and metabolic control in-patients with IDDM were examined. Seventy-three consecutive outpatients who switched from syringe injections to multiple pen-injection treatment comprised the study group. Perceived statuses as well as retrospective changes in quality of life, attributed to the new treatment modality, were assessed at follow-up after 9-13 months. Data on metabolic control (HbA1c) were collected at baseline and follow-up.

Nutritional recommendations for individuals with diabetes mellitus

Silvis N - S. Afr. Med. J. 1992; 162-6.

The diabetic diet is fundamentally a healthy diet high in complex carbohydrates, high in dietary fibre, low in fat. A nutritionally adequate, mixed diet is satisfactory for most people with diabetes and special foods or food supplements are not required. The dietary recommendations directed to wards the diabetic populations, are essentially similar to those recommended by most authorities for the population as a whole. Education of diabetic patients and their families and also individualized diet and meal planning are essential components in the management of diabetes mellitus. Weight loss and subsequent maintenance of a desirable body weight should be achieved when necessary. The amount of carbohydrate should be liberalized, including a wide variety of fibre-rich complex carbohydrates. In some individuals modest amounts of sucrose taken at meal times are acceptable. Foods with lower glycaemic indices should be offered on trial to people with diabetes. Total fat intake, especially saturated fat, should be restricted. More research is needed before recommendations regarding eicosapentaenoic acid supplementation can be made. Protein intake should be restricted to the Recommended Daily Allowance except in- groups at risk of negative nitrogen balance. A restriction in salt intake is advised. Alcoholic beverages and nutritive and non-nutritive sweeteners may be used, but in moderate amounts.

Diabetes support groups improve health care of older diabetic patients

Gilden J. L., Hendryx M. S., Clar S., Casia., Sing S. P., J. Am. Geriatr. Soc. 1992; 147-50.

The aim of the present study was to assess whether knowledge or psychosocial and glycaemic benefits of a diabetes education programme are enhanced by a support group for older patients. The study took place at a diabetes clinic at a veterans' Affairs Medical Center and comprised a partially randomized, controlled trial involving two groups of patients: group A, subjects who received an education programme followed by 18 month of support group sessions; and group B, only the diabetes education programme. A third convenience sample, group C, received neither intervention. Groups A and B were assessed before and immediately after education programme and all groups were assessed 2 years after the education programme. All subjects were male (mean age 68 ± 1.3 years, range 57-82 years; duration of diabetes 10 ± 2 years, range 3-16). Sample sizes were 11 in group A, 13 in group B and eight in group C. The education programme consisted of six weekly sessions covering aspects of diabetes self-care. The support group consisted of 18 monthly sessions for continuing education, discussion and structured social activities. Diabetes knowledge, psychosocial factors (self-care-related quality of life stress, family involvement in care and social involvement), depression and glycaemic control were evaluated. Group A scored better (at least $p < 0.05$) on knowledge, quality of life and depression than the other groups. Groups A and B showed less stress, greater family involvement, better glycaemic control, but less involvement in social activities than group C. It is concluded that diabetes education programmes can have long-term benefits on knowledge, psychosocial functioning and glycaemic control for older diabetic patients. The addition of support groups enhances knowledge and psychosocial functioning.

The scope of practice for diabetes educators and the standards of practice for diabetes educators

American Association of Diabetes Educators Diabetes Educ. 1992; 52-6.

The American Association of Diabetes Educators is a professional organization dedicated to enhancing the competence of health professional who teach people with diabetes, advancing the speciality practice of diabetes education and improving the quality of diabetes education and care. In keeping with this mission, a multidisciplinary task force of health professionals has developed a Scope of practice for Diabetes Educators and a Standard of Practice for Diabetes Educators. These guidelines will not only foster high professional standards for those who teach people with diabetes, but will also provide a consistent point of reference for developing evaluation tools, quality programmes orientation procedures and professional appraisal systems.

Diabetes in prison: can good diabetic care be achieved?

MacFarlane I. A., Gill G. V., Masson E., Tucker N. H., Med. J.: 1992; 152-5

The study aim was to investigate the clinical characteristics and metabolic control of diabetic patients given structured diabetic men serving prison sentences during a 22-month period in a large British prison-HM Prison, Walton, Liver-pool. Subjects comprised 42 male diabetic prisoners, of whom 23 had IDDM and 19 had NIDDM. Episodes of diabetic instability, glycated haemoglobin concentrations and BMI were measured. No serious diabetic instability occurred. Between the initial assessment by the visiting consultant diabetologist and a second assessment 10 weeks later glycated haemoglobin concentrations had fallen from 10.8 (SD 2.9) to 9.8 (2.4)% ($p < 0.05$) in prisoners with IDDM and from 8.7 (1.9) to 7.6 (1.2)% ($p < 0.05$) in those with NIDDM. Good glycaemic control continued, a mean glycated haemoglobin concentration of 7.6 (1.5% being recorded in seven men remaining in prison for 6-1 months. Mean BMI (weight [kg]/[height (m^2)]) did not change during the study IDDM prisoners 23.3 [SD 2.1]). NIDDM prisoners 27.9 [3.8]). It is concluded that good diabetic metabolic control is usual in prison, probably due to the rigid dietary regimen, no alcohol and compliance with treatment. Many younger men had defaulted from their home diabetic clinics, and imprisonment allowed screening for diabetic complications and reassessment of treatment. Structured diabetic care should be offered in all prisons.

Evaluation of the use of the reflectance meter by several operators in field screening for diabetes mellitus

AI-Kassab A. S., Abu-Zeid H. A. Diabetes res. Clin. Pract. 1992; 163-6.

The performance of reflectance meters for measuring blood glucose concentrations was previously evaluated in other studies and was found to be satisfactory. In the present study, we have evaluated the reliability of one brand of such meters (Glucometer II), when used by several operators, for blood glucose measurements during an epidemiological survey. We have compared the results obtained by the meter with those obtained by standard hospital laboratory procedure for the same samples. A high and statistically significant degree of correlation ($r = 0.901$) was observed between the two groups of measurements. The linear regression equation was $Y = 0.9X + 13.4$. We conclude that the Glucometer II is an accurate and practical instrument, even when used by several operators, in epidemiological surveys provided that adequate training is given to those operators prior to using the instrument. This is important since the use of reflectance meters in epidemiological surveys is becoming increasingly widespread especially in the third world countries.

An audit of lower limb arteriography in diabetic patients

Mansell P.I., Gregson R., Allison S. P. Diabetic Med. 1992; 84-90.

The outcome of 83 diabetic patients with peripheral vascular disease who underwent arteriography between 1984 and 1988 was reviewed. Angioplasty was possible in 42 legs and was technically successful in 31 but led directly to clinical improvement in only 15. Five of 20 patients referred for vascular surgery also improved. Factors associated with a clinically successful outcome were presentation with claudication, palpable pulses in the contralateral foot and radiographic evidence of either a short proximal lesion or 2-3 vessel, run-off. Median life expectancy following arteriography was 36 months. The median time to amputation was 21 months and median survival with both life and limb intact was only 13 months.

Financial implications of implementing standards of care diabetic eye disease

Rand L. I. Diabetes Care 1992; 15 (Suppli. 1): 32-5.

This article reviews practical financial issues surrounding the implementation of published standards of care for diabetic patients concerning examination for detection of retinopathy. Issues such as the financial basis of referral patterns and the fear of patients, loss are raised. The role of the primary physician in co-ordinating care is discussed. The strategies of ophthalmic screening at the site of primary care are presented as alternatives to published standards. There is a need for development of low-cost screening for low-risk patient groups. All effective means of detecting retinopathy and implementing sight-saving therapy in a timely manner are cost-effective compared with the cost saved of disability payment alone.

Micral-test strips evaluated for screening for albuminuria

Marshall S. M., Shearing P. A., Alberti K. G. Clin. Chem. 1992; 38: 588-9.

We have evaluated Micral-Test, an immunochemical strip test specific for albumin, as a screening tool for slight ('micro') albuminuria. First morning urine samples containing albumin concentrations (by radioimmunoassay) of 0.4-440 mg/l were collected from 112 diabetic patients. The Micral-Test results for each sample was assessed by one observer. All 34 samples having albumin concentrations ³ 20 mg/l and 71 of 78 samples < 20 mg/l were correctly identified, giving 100% sensitivity and 91% specificity. Six samples were measured 10 times by one observer; three samples were read consistently; one albumin concentration 86 mg/l was read as 50 and 100 mg/l; and two, albumin concentrations 32 and 38 mg/l, were read as 20 and 50 mg/l, respectively. Contact with urine for 2 seconds rather than the recommended 5 seconds resulted in an underestimation of the albumin concentration in 13 of 35 samples ($Z = -3.18$, $p = 0.001$), as did taking readings earlier than the recommended 5 minutes ($Z = -3.92$, $p < 0.001$). Six observers independently performed Micral-Test measurements on 10 samples. Eight samples were correctly classified as ³ 20 or < 20 mg/l by all observers, but two (albumin concentrations 25 and 18 mg/l) were misclassified by at least one observer. The Micral-Test is a sensitive and specific screening tool, but is semiquantitative and critically time-dependent.

Diabetes education: Whose priorities are met?

Genev N. M.: Flack J. R., Hoskins P. L., et al Diabetic Med. 1992; 9: 475-9.

Two hundred type-II diabetic patients newly referred to the diabetes centre at a large university teaching hospital were studied over an 8-month period. Patients completed a diabetes knowledge questionnaire and specified their educational priorities by selecting six diabetes-related topics from a list of 14. After giving 1 hour of individual education and using the same list the educators selected six topics which they considered to be most important for that particular patient to know. Choice of educational priorities differed between the patients and the corresponding educator ($p < 0.001$). In only 38% cases did the educators; first three priorities coincide with those of the patients. The major discrepancies were in the selection of 'sick day management' and 'complications', especially favoured by patients, as against 'oral hypoglycaemic agents' and other therapy-related topics, especially favoured by educators. Diabetes knowledge was a determinant of educational priority for patients ($p<0.001$) but not educators. In contrast, only the educators' overall choices were affected by duration of diabetes ($p<0.001$). Diabetes treatment type influenced both patients' and educators' selection of priorities ($p< 0.001$). We conclude that an educational strategy which relies on health professionals' perceptions to determine what diabetic patients need to know may be inadequate.

Standards for the care of diabetes. Origins, uses and implications for third-party payment

Clark C. M. Jr., Kinney K. D. Diabetes Care 1992; 15(Suppl.): 10-4.

Standards of care are those principles that define the appropriate environment, process and procedures necessary for quality medical care and optimal health outcomes. The initial impetus to develop standards of care came from the medical profession when it attempted to define quality of care. More recently, standards defining the medical necessity of diagnostic tests or procedures have been developed at the request of public and private third-party payors. These efforts are the natural outgrowth of two decades of health-care delivery research and technology assessment examining the effectiveness of various medical procedures. This article reviews the development of standards by the medical profession, emphasizing current standard-setting activities of private organizations and the federal

government. This study examines the characteristics of a good process for developing credible medical standards to guide patient care and the payment for that care. This study also discusses how the American diabetes Association used this process in developing standards for care of patients with diabetes mellitus and implementation problems encountered because of coverage policy of public and private health insurer programmes.

International comparisons of IDDM mortality. Clues to prevention and the role of diabetes care

Songer T. J. Deberry K., LaPorte R. E., Tumilehto J. Diabetes Care 1992; 15 (Suppl. 1): 15-21.

A striking difference in all-cause mortality has been noted between individuals with IDDM from Finland and Allegheny county PA. Mortality rates among people 25-37 years of age from the Allegheny County IDDM Registry were over two times greater than the rates observed from the Finland IDDM Registry. Applying the Finnish rate to the structure of the IDDM population from Allegheny County suggests that about one-half of the deaths in the Allegheny County cohort may be theoretically preventable. Most deaths that might be avoided appear to be caused by the acute complications of diabetes. Deaths from acute-related causes were higher (as a proportion of all deaths) in the Allegheny County cohort than in Finland (46.2 vs. 33.3%). There is some indication that barriers to health care may be present among individuals with IDDM in the United States. Individuals without health insurance from the Children's Hospital IDDM Registry in Pittsburgh had fewer physician visits than those with insurance. Even for those with insurance, out-of-pocket health care expenses were significant. People with lower household incomes (<$20,000) spent more, as a percentage of their income, on medical supplies than those with higher incomes, and may have been less likely to monitor blood glucose levels and visit an eye doctor because of it. These findings suggests that health system barriers, such as the access to care and the financial burden of diabetes care, in the United States, may be affecting the health of adults with IDDM. Further investigation is needed to clarify the extent of barriers to care in IDDM and their contribution to adverse health outcomes.

Diabetes care in health maintenance organizations

Geffner D. L. Diabetes Care 1992; 15 (suppl. 1): 44-50.

An increasing amount of health car today is directed to the amelioration of chronic diseases for which there are no cures. Technological advances and the aging of the population have increased the costs of that care. In an attempt to control costs and increase the efficiency of health care, it is being increasingly delivered in alternate health care systems where third-party payors influence the access, use and quality of that care. This article traces the history of the development of alternative health care delivery systems and described how they attempt to deal with the tension between cost and quality in the context of the delivery of health care to people with diabetes. Systems for home health care, health education and dietary counselling, prescriptions and durable medical equipment, medical technology assessment, quality management, peer review and cost containment in the various alternative health care settings were described. Theoretically, the health maintenance organization offers an ideal system for delivering care that is accessible, affordable and of good quality.

Medicare admission criteria for diabetes mellitus in Florida

O'Malley B. C. Diabetes Care 1992; 15 (Suppl. 1): 54-8.

Medicare criteria for admission of patients to hospitals are the responsibility of Peer Review Organizations in each state. In 1986, in Florida, an attempt was made to introduce stricter than previously accepted admission criteria for diabetes mellitus. The new criteria were found to be unacceptable to many physicians and potentially dangerous. This article decribes how a group of endocrinologists and diabetologist were able to impact on the Florida Peer Review Organization and change the criteria to allow for more acceptable standards without jeopardizing the review process.

Improved diabetes care in a UK health district

Jones J. N., Marsden P. Diabetic Med. 1992; 176-80.

The present study reports an analysis of diabetes care in general practice in a London Health District. A specialist nurse facilitator used various techniques to obtain practice information building up individual practice profiles. Four groups of constraints were identified as affecting the provision of GP diabetes care. Individual practice plans were formulated, working with key staff, to apply various interventions to ameliorate identified constraints.

Using a non-prescriptive approach, GPs were encouraged to become involved in diabetes care in the way they felt most appropriate for their practice. Using this method, GP involvement in diabetes care has increased from 17-53% during the 3 years of the study.

Payment for diabetes care under the Medicare fee schedule

Lasker R. D. Diabetes Care 1992; 15 (Suppl. 1): 62-5.

The system Medicare uses to determine physician payment is inequitable to physicians who provide primarily evaluation and management (EM) services. This creates financial incentives that may discourage physicians from providing Medicare patients with care that meets the American Diabetes Association's Standards. Under Medicare's resource-based fee schedule, which was phased in January 1992, payment for EM services should more accurately reflect the time effort and overhead costs involved improving them. This article describes how physician payment will be determined under the Medicare fee schedule and examines the probable effects of changes in payment on the physicians who care for patients with diabetes and the quality of services they provide.

Home blood pressure monitoring in diabetes

Gompels C., Savage D. Arch. Dis. Child 1992; 636-9.

Forty-three children with diabetes were recruited to evaluate home blood pressure monitoring using an electronic oscillometric sphygmomanometer (Philips HP5330). This device was found to be simple to use and reliable. It fulfilled the accuracy criteria of the American Association for the Advancement of Medical Instrumentation for both systolic and diastolic blood pressure and those of the British Hypertension Society for systolic blood pressure. Thirty-eight children successfully measured their own blood pressure at home and taught other family members to do the same. The results indicate that home blood pressure monitoring is of value in the management of diabetic children.

The treatment of diabetic retinopathy: a view for the internist

Raskin P., Arauz-Pacheco C. Ann. Intern. Med. 1992; 117: 226-33.

A review was carried out into the status of surgical and medical therapy for diabetic retinopathy from the perspective of the non-ophthalmologist. Relevant English-language articles published from January 1981 to July 1991 was identified through MEDLINE. Other relevant articles were obtained from the authors' personal database. For the review of surgical treatment, large randomized, controlled trials were selected. For the review of medical treatment, randomized studies comparing intensive insulin treatment with conventional insulin therapy were selected, as were double-blind, randomized, controlled trials of aldose reductase inhibitor therapy and antiplatelet therapy in patients with diabetic retinopathy. Emphasis was on findings from large, multicenter, randomized, controlled studies. Surgery is effective in three clinical situations; panretinal (scatter) photocoagulation is effective treatment for proliferative retinopathy that is likely to progress to severe visual loss, with such therapy resulting in a 50-60% decrease in the main outcome (visual acuity of 5/200 or less); focal photocoagulation decrease the incidence of deterioration of visual acuity by 60% in-patients with clinically significant macular oedema, but no benefit of photocoagulation has been shown in patients with mild-to-moderate background diabetic retinopathy; and vitrectomy is effective in improving visual acuity only in patients with severe, complicated proliferative retinopathy. Intensive insulin therapy has not been consistently effective in short term studies with small number of subjects. Results of the Diabetes control complication trial should show whether intensive insulin therapy affects the course of diabetic complication. Aldose reductase inhibitors have not shown efficacy in changing the curse of diabetic retinopathy. Results of the trial using antiplatelet agents are controversial current therapy, of diabetic retinopathy is based on detection and surgical treatment of advanced lesions. Medical interventions that effectively halt the progressions or prevent the development of diabetic retinopathy are needed.

The Rochester Diabetic Neuropathy Study: reassessment of tests and criteria for diagnosis and staged severity

Dyck P. J., Karnes J. L., O'Brien P.C. Neurology 1992; 42: 1164-70.

We evaluated the initial assessments of the 380 diabetic patients with and without polyneuropathy in the Rochester Diabetic Neuropathy Study for: 1) associations among neuropathy test results; 2) usefulness of different tests for diagnosing and

staging polyneuropathy; 3) appropriateness of different minimal criteria for the diagnosis of polyneuropathy; and 4) significant differences in test results with increasing stage of polyneuropathy. Nerve conduction (NC, abnormality in two or more nerves) and quantitative autonomic examination (QAE, decreased heart beat response to deep breathing [DB] or the Valsalva manoeuvre [VAL] were the most sensitive and objective and were especially suitable for detection of subclinical neuropathy. We propose the following minimal criteria for the diagnosis of diabetic polyneuropathy: ^{3} 2 abnormal evaluations (from among neuropathic symptoms, neuropathic deficits, NC, quantitative sensory examination [QSE] and QAE) with one of the two being abnormality of NC or QAE (DB or VAL). Neuropathy symptom Score, Neuropathy Disability Score, QSE (vibratory or cooling detection threshold) and summated compound muscle action potential of ulnar, peroneal and tibial nerves were best for judging severity. Inability to walk on heels provided a discrete separation of diabetic patients into those with mild and those with more severe neuropathy-a separation helpful in staging.

Quality of life in young adults with type-I diabetes in relation to demographic and disease variables

Eiser C., Flynn M., Green E., Diabetic Med. 1992; 9: 375-8.

Sixty-nine young adults (mean age 21 [range 15-25] years) with type-I diabetes completed measures of diabetes knowledge and quality of life. Factor analysis of the quality of life scale resulted in the identification of three subscales (social relationships, diabetes concerns, and impact). There was no relation between any of the quality of life subscales with knowledge or with multiple vs. twice-daily insulin injection regimens. Higher self-rated diabetes satisfaction was related to lower fructosamine levels and better clinic attendance ($p < 0.05$). Females reported a more negative impact of diabetes on their lives compared with males ($p < 0.05$).

Controversial beliefs about diabetes and its care

Anderson R. M., Donnelly M. B., Davis W. K. Diabetes Care 1992; 15: 859-63.

The purpose of this study was to identify specific beliefs that differentiate health care professionals whose attitude toward diabetes agreed most strongly with a group of national diabetes experts from those whose attitude disagreed most strongly. The sample for this study included 271 physicians, 834 nurses and 546 dietitians who completed a Diabetes Attitudes Survey. The samples include specialists in diabetes care and non-specialists. Controversial beliefs about diabetes and its care were determined by comparing the beliefs of the 10% of the sample whose attitude were most concordant (with the national panel) with the beliefs of the 10% of the sample whose attitude were the most discordant. Ten beliefs met the criteria for being defined as controversial. The most controversial beliefs concerned whether the patient or the physician should be the primary decision, maker in diabetes care, the meaning of patient non-compliance, and the seriousness of NIDDM. The 10% of the sample with the most discordant attitudes contained a disproportionately large number of physicians, non-specialist in diabetes, and health care professionals who had been in practice longer than the other members of the sample. This study identifies some important differences in beliefs between younger health care professionals who specialize in diabetes and older non-specialists. Such beliefs should be addressed in-continuing education programmes with the aim being to foster the widespread adoption of a contemporary approach to diabetes care.

Use of the accident and emergency department by patients with diabetes

Holmwood K.I., Williams D. R., Roland J. M. Diabetic Med. 1992; 9: 386-8.

As part of a district-based audit of diabetes care all attendance's (of diabetic and non-diabetic patients) at a local accident and emergency departments were monitored over a 3-month period. A total of 9505 attendance's took place of which 62 (0.7%) were by people with diabetes.
This was no different from the expected number of attendance's (61.5) based on the rates seen in non-diabetic individuals. Of these 62 attendance's, 20 (by 15 individuals) were directly related to diabetes (hypoglycaemia 17, hyperglycaemia 1, for supplies of insulin or equipment 2). When these diabetes-specific attendance were removed from the total, the number of attendance's (42) was significantly ($p = 0.004$) less than that expected. Diabetic males aged 0-19 years attended significantly more often than non-diabetic individuals of the same age but this excess was solely attributable to diabetes.