

## Diabetes

### Summary of Methods and Data for Estimate of Costs of Illness

- |  |                 |
|--|-----------------|
| 1. Estimated Total Economic Cost (See Commentary)  | \$ 98.2 billion |
| Estimated Direct Cost (See Commentary)   | \$ 44.1 billion |
| Estimated Indirect Cost  | \$ 54.1 billion |
| Reference Year   | 1997            |
| IC Providing the Estimate  | NIDDK           |
|  |                 |
| Direct Costs Include: Other related nonhealth costs  | No              |
| Indirect Costs Include:  |                 |
| Mortality costs  | Yes             |
| Morbidity costs: Lost workdays of the patient  | Yes             |
| Morbidity costs: Reduced productivity of the patient   | Yes             |
| Lost earnings of unpaid care givers  | No              |
| Other related nonhealth costs  | Yes             |
| Interest Rate Used to Discount Out-Year Costs<br>(Lifetime Incidence Model)  | 4%              |
|  |                 |
| 2. Category code(s) from the International Classification of Diseases, 9th Revision, Clinical Modification, (ICD-9-CM) for all diseases whose costs are included in this estimate: <u>250(1)</u> . |                 |
| 3. Estimate Includes Costs:  |                 |
| Of related conditions beyond primary, strictly coded ICD-9-CM category   | Yes             |
| Attributable to the subject disease as a secondary diagnosis   | Yes             |
| Of conditions for which the subject disease is an underlying cause   | Yes             |
| 4. Population Base for Cost Estimate (Total U.S. pop or other)   | Total U.S. pop. |
| 5. Annual (prevalence model) or Lifetime (incidence model) Cost:   | Annual          |
| 6. Perspective of Cost Estimate (Total society, Federal budget, or Other)  | Total Society   |
| 7. Approach to Estimation of Indirect Costs  | Human Capital   |
|  |                 |
| 8. <u>Source of Cost Estimate</u> : (Reference published or unpublished report, or address and telephone of person/office responsible for estimate)  |                 |

1) American Diabetes Association, Economic Consequences of Diabetes Mellitus in the U.S. in 1997. *Diabetes Care* 1998;21(2):296-309.

2) Diabetes in America, 2nd. Edition, NIDDK 1995.

3) Hodgson TA and Cohen MA, Medical Care Expenditures for Diabetes, Its Chronic Complications, and Its Comorbidities. *Preventive Medicine* 1999;29:173-86.

Note: This new study uses a different methodology to derive the cost of illness estimate, but produces results quite close to the ADA estimate.

#### 9. Other Indicators of Burden of Disease:

--Total prevalence of known, diagnosed diabetes in 1997 is estimated to be 8-10 million; prevalence of undiagnosed diabetes is estimated to be 4-5 million. An additional 13 million persons are estimated to have impaired fasting glucose and 21 million to have impaired glucose tolerance.

--Non-insulin-dependent diabetes affects U.S. minority groups disproportionately, with rates in blacks being 1.6 times as high as in whites, rates in Hispanics 2-3 times as high, and rates in American Indians up to 7 times as high.

--Insulin-dependent diabetes is the most common chronic disease in children in the U.S., affecting about one in every 400-500 children.

--Diabetes is the leading cause of blindness, renal disease, and nontraumatic amputations in the U.S.

--Patients with diabetes are 2 to 6 times more likely to have heart disease than people without diabetes. Rates of stroke, peripheral vascular disease, and neuropathy are similarly elevated.

--Rates of disability are 2 to 3 times those of the nondiabetic population.

--About 6 percent of people with known diabetes die each year, including 14 percent of those age 75 years or older. These rates are substantially greater than mortality rates in the general U.S. population.

#### 10. Commentary:

The figures recommended for use by NIDDK are taken directly from the most recent cost of illness study sponsored by the American Diabetes Association. These figures incorporate significant changes in the healthcare system (reduced hospitalizations) and a greater burden of disability due to diabetes. Also, a more accurate approach is used to estimate costs attributable to diabetes.