Evolution of a Computerized Support System for Health Care Capacity Planning*

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This paper describes the evolution of a computerized support system for health care capacity planning within the Veterans Administration (VA) health care system. The VA's early attempts at computerization are described, along with the subsequent refinements made necessary by the deficiencies in those early attempts. The evolution of both the planning logic and the software configurations is set forth, along with some plans for future development.

INTRODUCTION

The Veterans Administration operates the largest single health care system in the United States, with 172 hospitals, 117 nursing homes, and 56 independent or satellite clinics throughout the country. These facilities served 1,327,728 hospital inpatients and provided 20,188,132 outpatient visits in fiscal year 1986. The VA represents an important source of care for many veterans without health insurance and with service-connected disabilities. Under review of the Office of Management and Budget (OMB) and the General Accounting Office (GAO), the VA has attempted to improve both the sophistication of its planning methods and the responsiveness of its planning process to different geographical regions of the country. The purpose of this paper is to report on some of the improvements in the computerized planning support systems used by the VA for health care capacity planning. The effort to develop and incorporate these improvements presents an interesting case study of how one organization improved its decision support capabilities.

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The VA has pursued a formal policy of decentralized health care planning since 1980. This planning process, known as the Medical District-Initiated Planning Process (MEDIPP), covers 7 separate regions and 27 individual planning districts located throughout the United States, as shown in Fig. 1. Each district is responsible during each planning cycle for developing a comprehensive plan for the allocation of VA health care programs within each district. The VA's decentralized approach to planning is designed to ensure that plans are responsive to the particular health care needs of the veterans within each medical district. 4

Such a decentralized approach presents formidable planning challenges to individual VA districts that possess only limited planning resources. In particular, VA planners require tools for determining how VA resources should be allocated in the future. In addition, the VA Central Office requires some standardization and control over the planning process to ensure consistent analyses of the health care needs of veterans. To this end, the VA has sought to develop planning methods and software to aid in the decentralized planning process. Through central development of such tools, all VA planners can be provided with standardized, high-quality software that increases the computational capabilities of VA planners and provides the VA Central Office with interpretable results of the decentralized planning process.

ORIGINAL SYSTEM

Introduction

While the VA has been conducting formal capacity planning for some time, a major change occurred in the late 1970s when the General Accounting Office reviewed VA