This paper discusses and shows examples of how databases can be manipulated to position medical groups favorably in today's marketplace.

INTRODUCTION

California Primary Physicians Medical Group (CPP) is a multispecialty medical practice comprising most of the specialties of medicine and surgery. The group is located in the central business areas of Los Angeles and has been in existence for over 8 years. The medical group prides itself on its group practice model and its innovations in health care. Over the last 5 years CPP contracts with local hospitals to operate a 24-hour emergency room, a 24-hour in-patient medical service, and employee health services. In the office practice there is an industrial clinic component as well as multi-specialty private practice. The office houses a laboratory, radiology, physical therapy, pharmacy, cardiac rehabilitation, a preventive medicine center and a specialized diagnostic cardiac unit. There are approximately 170 patient encounters per day in the office. The group contracts with an HMO for the care of 3,000 patients. CPP has a total active population of more than 20,000 lives.

Many of the physicians in the group have had a strong active interest in preventive medicine and health promotion. The practice has also developed an emphasis in clinical research, called Clinical Trials, Inc. (CTI). All of the programs and sub-specialties that encompass the medical practice have been enhancing the group's position in the marketplace. CPP is a successful medical practice and to a significant degree TMR (The Medical Record) has been instrumental in this success.

TMR is a comprehensive medical information system which provides total administrative, financial and medical management capabilities for all patient encounters. TMR creates an integrated medical and accounting database which allows detailed review of both health and financial history. TMR consists of a set of functional modules which may be used separately or as a coordinated system, allowing staged implementation into a totally computerized medical information system. TMR is a data dictionary system that allows a clinic to define and modify characteristics of the system without the help of a programmer. TMR is the result of 12 years of development.

In January of 1981 CPP purchased the TMR system used by several ambulatory care clinics at Duke university. The system captures and reports both financial and medical data in a real time sequence. CPP converted from a batch oriented system that processed only appointment and financial information. The acquisition of TMR was motivated by the Medical Director's desire for the state of the art clinical information system which could meet the organization's financial, medical and marketing objectives. Since the system has been installed considerable financial and marketing benefit has been realized by the group.

IMPACT

A major advantage of TMR is that all the information is captured in a single data base and then used for multi-faceted purposes. TMR can be easily viewed as a high level report generator. The information offers a polymorphic potential which in CPP's case has been investigated and thoroughly used. By analyzing the medical data base, sorting problems using detailed utilization and stacking it in a hierarchal order the management team has been able to discover areas for growth potential. The practice has added preventive medicine (InnerHealth), Cardiac Rehab (Vital), Clinical Drug Research (CTI), Invasive Cardiology, and transportation, and is currently in the process of adding Pulmonary Medicine, Pulmonary Rehab, Orthopedic Surgery, General Surgery, ENT and Ophthalmology. Based upon practice needs obtained from TMR utilization reports, all of the programs have been fully subscribed, even at start up. During each of these phased additions there has been very little lag due to patient volume or scheduling. The patients for these services were internally marketed prior to the start of the
additions. All the additions resulted in incremental revenue that had been pre-screened by a financial matrix. The process required to analyze the data was non-labor intensive. The sorts and displays were computer generated and the decisions were apparent. A similar process was created to internally monitor and expand the lab and radiology. The stated objective was to perform at least 90% of all ancillaries where volume and practicality dictated. All ancillaries were viewed monthly and if a significant volume of sendouts appeared, a sort was performed and decision made whether to bring in-house or not.

The impact of using this methodology for CPP has been financially rewarding. The practice has grown by more than 5% per month for the last 18 months. At the same time that the practice was expanding one would have expected an incremental increase in the expense side, specifically, in the areas of billing, clerical and data entry. This did not occur. In fact, the business staff functions were stabilized with no new significant labor additions. Incremental revenue far exceeded incremental expense.

By understanding the total data base involved in the CPP medical practice, the management team was able to internally market without guessestimates. All the programatic decisions worked out to be sound with resulting economic success.

TMR offers, in addition, standardized medical record formats for charting and audit. This has definitely improved the quality of the care. Patients are impressed by the look and computer generation of their record. This is difficult to quantitate and measure, but the "word of mouth" effect on the marketing of the medical group. All things taken into consideration, TMR as an internally oriented marketing system for a medical group practice is able to bypass the normal constraints that often hamper effective management of a marketing enterprise.

CASE STUDY:

CPP's preventive program, Innerhealth (IH), was instituted before the advent of TMR. Innerhealth did not receive very much market acceptance and we found it especially difficult to identify potential patients/clients. Upon implementation of the TMR system and the loading process, the managers of the group realized that amongst the then 12,000+ existing patients, should be many possible candidates for the program. We used the report generator in TMR to sort the names of patients with specific diagnosis and clinical presentation which would be suitable candidates for the IH program (Illustration 1). We proceeded by sorting all of these names by insurance companies and financial balance. We then used the word processing capabilities of TMR to again sort the patients and a form letter (Illustration 2) was generated to each of the qualified patients signed by their own doctor. This method of patient identification and qualification proved to be extremely successful. The program benefited and prospered accordingly.

ILLUSTRATION 1: I/H SORT EXAMPLE

ENTER RETRIVAL
1 PR - HBP, UNCONTROLLED
2 PR - CAD, UNSTABLE
3 SA - CLAUDICATION, MODERATE
4 SA - ANGINA, INCREASING
5 MD - ALL
6 PA

LOGIC STREAM
(12134)45:3

OUTPUT
1 DEM - LAST NAME PR - PROBLEM
2 DEM - FIRST NAME SA - SUBJECTIVE/
3 DEM - I.D. OBJECTIVE
4 DEM - STREET # MD - DOCTOR
5 DOCTOR NAME PA - PERMANENT PATIENT
6 PROBLEM CATEGORY
7 AGE ! - OR ! - NOT

ILLUSTRATION 2: SAMPLE LETTER

DEAR MR. DISNEY:

IN REVIEWING YOUR MEDICAL RECORD WITH DOCTOR MRB AND OUR CLINIC DIRECTOR OF PREVENTIVE MEDICINE, WE FEEL THAT YOU WOULD BE VERY WELL SUITED TO PARTICIPATE IN OUR INNERHEALTH PROGRAM. WE WOULD ENJOY THE OPPORTUNITY TO DISCUSS THIS WITH YOU AT YOUR NEXT VISIT, ON XX/XX/XX AT 0:00.

MARSHALL R. BERNES, M.D.
MEDICAL DIRECTOR
CALIFORNIA PRIMARY PHYSICIANS

MB:AN

DISCUSSION

When any new program is created by a marketing directed organization, the following conditions are mandatory for it to succeed in the medical marketplace:

A. The quality of care must be maintained at a high level and be extremely visible.
B. The cost of care must be competitive and affordable.
C. Care must be easily accessible and convenient.
D. A broad spectrum of services must be offered.
E. The care must be effective and efficiently delivered.
F. There must be incentive for cost moderation, and this must be apparent to the consumers and payors.
G. Physicians' expectations must be met.

Computer software is usually not thought of as a marketing tool. CPP's experience with TMR shows what a valuable asset it can and should be. TMR insures that patients receive high quality care by mandating format, audits, data collection and eliminating common error. TMR is visible to all that enter the facility and this visibility and proven accuracy promote patient confidence. TMR helps keep the cost of care down and affordable by allowing the managers to actively screen what the providers and revenue center are producing and allowing them to concentrate on volume instead of individual case management. TMR creates good medicine and therefore good economics. CPP has been able to be cost moderate because of TMR's efficiency which has become apparent to the consumer and third party payor. Finally, the physicians in the group are fully committed to the use of computers in medicine and enjoy the association.

TMR has enhanced the CPP medical practice and allowed us to develop a long term strategy for marketing. We initially concentrated on:
- understanding our patients/clients
- understanding our organizational structure and visualizing our goals

With our successful implementation we were then able to focus on the external, and analyze our competition. Then we were better able to develop a long term strategic marketing management plan.

TMR has allowed us to thoroughly examine and understand the needs of our patient population. In addition, TMR responds, demonstrates and moderates organizational cost containment. TMR also does standard productivity based incentive system (fee for service) with amazing accuracy and detail. Cost containment and fee for service are miles apart in the broad spectrum of health care today. TMR addresses these diametrically opposed philosophies satisfying the needs of both manager and physicians alike.

Medicine is in transition. In the past the more we have spent, the more doctors and hospitals received. Now we have new rules and the public and the private sector are becoming vocal and active. The cushion between revenue and expense is forever severed. The relationship between the standard productivity model and cost containment model have no common bridging elements. The practitioner who has made a living in a fee for service environment is having difficulty adapting to cost containment. The path through transition is not easy. The organizations that encompass fee for service, pre-paid and PPO business that hope to market successfully will definitely need the assistance of a computerized medical management system.

CPP characterizes itself as a marketing oriented medical organization. We feel comfortable in understanding our client mix and organization. It has taken been the underpinning of our success.

CONCLUSION

TMR has helped make CPP a successful marketing organization that has fingertip real time access to its data base. We have met the needs of the consumers and positioned ourselves successfully in a very competitive business atmosphere. We believe that the emerging model of a multi-specialty group that has an integrated medical and financial data base, will become a new growth industry in health care. These groups will live or die on the basis of whether they are efficient in managing health produced per dollar spent. "Good economics will have to be good medicine", and "Good medicine will necessarily have to be good economics". It is our opinion that a marketing directed medical group will have an integrated data base. We also believe that this new emerging growth industry will dramatically change the face of organized medicine. The emphasis in medicine over the next ten years will be cost containment. Medical groups are ideally situated to control this. The computerized data base will be the ones that are successful.

REFERENCES

1. Database, Inc.; The Medical Record, TMR; Durham, N.C.
3. Jasper, W.M.; "Hospital Based Primary Care Group Practice", Hospital Forum; August 1976.