

AN ANALYSIS OF THE BENEFITS OF TECHNOLOGY IMPLEMENTATION IN THE HEALTHCARE INDUSTRY

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ABSTRACT

The healthcare industry has been slow to implement healthcare information technology (HIT) due to perceived barriers, one of which is the benefits derived. This paper summarizes case data from healthcare providers of diverse size and function and provides testimony to the benefits they have received from investment in HIT.

INTRODUCTION

The health care sector has lagged the industrial sector when it comes to implementing efficient Information Technology (IT) infrastructures. While the healthcare sector has been coming under increasing pressure to reduce overall costs, healthcare providers have been slow to implement, install, or upgrade to the latest IT systems. A potential explanation for this lag is a failure of the entity to understand and appreciate the benefits that can be derived. HIT has the potential to facilitate vast improvements in patient care, efficiency, quality, and safety of medical care. Implementation of HIT has been hindered by concerns that include financial and time commitments, insufficient computer skills, concerns about confidentiality, apprehension about change, and lack of awareness of potential benefits (Naylor, Kudlow, Li, and Yuen, 2011).

One of the barriers to HIT implementation is a failure to recognize the benefits that can be derived. Much of previous health care research in this area has been limited to large hospital studies. The preponderance of favorable empirical evidence comes from a few large organizations (Goldzweig, et al, 2009). In order to provide evidence of HIT benefits to a broader spectrum of health care providers this paper analyzes case reports of health care partners of diverse size and function. The results provide case support for both qualitative and quantitative benefits associated with increased IT implementation.

SUMMARY OF SOFTWARE SYSTEMS

The Microsoft Dynamics software products that were implemented in these cases included Great Plains (GP), AX, NAV, and CRM. Of these systems, GP, AX, and NAV are accounting systems; GP is a fairly standard system while AX and NAV are customizable. A Customer Relationship Management (CRM) system, which is not an accounting information system, was also discussed in the cases that were analyzed. CRM produces more management accounting information beyond cost containment.

SUMMARY OF BENEFITS FROM INVESTMENT IN IT

Data from 28 cases were analyzed. The size of health care providers included in this case analysis was extremely diverse. Size of the entity is measured in terms of number of employees. Of the 28 cases that have been analyzed to date, 7 had 500 or fewer employees; 8 with between 500 and 2,500; 4 with over 2,500 and less than 10,000; 9 with 10,000 or more. The number of employees ranged from 27 to 40,000.

The outcomes of implementing the software, as reported by the health care providers, were extremely positive. Quantitative benefits included cost reduction, improved billing efficiency, improved payables, reduced cycle time, and overall time saving. Qualitative outcomes included improved medical decision support, better physician/patient decision making, increased security of data, flexibility for growth, increased efficiency of operational processes and enhanced competitive advantage. In addition, increased productivity was reported in terms of ease of operations, increased reliability, ease of data transfer, improved mapping of processes, improved workflow, and improved patient support and customer service. Of particular interest, the findings reported indicated that even the smallest health care providers obtained a wide range of benefits from IT implementation. This finding should be encouraging to those small healthcare providers that are not convinced they would benefit from investment in IT.

SUMMARY AND CONCLUSIONS

Health care costs in the United States and world-wide continue to increase and pressure to control cost has also escalated. Wide spread implementation of HIT provides an opportunity for controlling healthcare costs, improving quality of healthcare, and enhancing patient satisfaction. However, due to uncertainty regarding the benefits of HIT investment, many healthcare providers have been reluctant to invest money and human capital. Reported benefits of HIT implementation have been primarily limited to large healthcare providers or integrated networks. Relatively little data is available regarding the benefits of HIT in smaller provider networks. This paper provides support that HIT benefits also accrue to small and medium size health care providers. This information should contribute to a reduction in the uncertainty surrounding benefits associated with HIT implementation, thereby reducing a perceived barrier and encouraging investment in HIT systems in the future.

REFERENCES

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AVAILABILITY

A complete copy of this paper with references is available from the authors, upon request.