

## The Growing Importance of Data in Healthcare

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Every executive knows that data are essential for managing healthcare organizations. Hospitals could not deliver care or get reimbursed without an ever-increasing collection of numbers that measure every aspect of operations. Indeed, quantitative information is so pervasive that we seldom take time to think about it. The data base tends to get about as much attention as the physical plant. It could use some improvements, of course, but the existing structure seems to be adequately supporting daily operations.

Current trends in healthcare suggest that our data – the numbers themselves – deserve a second thought ASAP. The numbers in our data bases are going to become more important than ever before, which means that we need to take the time to evaluate the quality of the numbers we use. The information infrastructure, beginning with data, is at least as important as the buildings in which we operate.

### Quantity of Data

The need for data in healthcare has never been greater. The rising importance of **pay-for-performance reimbursement** compels hospitals and physicians to collect even more information to show that patients received the right care at the right time. Health plans and consumers want to see numbers that show they get what they are paying for and providers will need related data for **patient accounts and contract management**. Hospitals will find a corresponding revenue opportunity to use their expanded stores of clinical and financial data for **translational research**.

**Patient safety initiatives** and **public health surveillance** programs are requiring collection of more data. In addition, the growing importance of **evidence-based medicine** means that more information must be made available to caregivers, even though it comes from outside the organization (e.g., practice protocols published by medical specialty associations and research results in National Institutes of Health databases). Government agencies and academic institutions also demand more numbers for their studies of **health**

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## The Growing Importance of Data in Healthcare (Continued...)

**policy.** Finally, the coming era of **molecular medicine** will add unprecedented volumes of data to patient records, as will the expansion of healthcare delivery to more points of care (e.g., clinics in retail locations and hospital-in-the-home programs).

### Quality of Data

Having ready access to lots of numbers does not necessarily mean that the managers have all the resources they need to make decisions. Good decisions require good data. Working with bad data can do more harm than working with no data at all, so successful executives recognize the need to focus on the quality of their information resources.

Several factors define the quality of data and their value for decision-making. **Validity** of data is a measure of the extent to which data actually measure the object of interest. Valid data are meaningfully representative of the thing being measured. Invalid data are poor and misleading proxies – and they are altogether too common. **Reliability** refers to the accuracy of data. If numbers are collected inaccurately or imprecisely, they are inaccurate. Unreliability often occurs when two or more observers report different values after measuring the same thing. **Currency**, as in up-to-date, is also essential. Even valid and reliable data can lead to bad decisions if they measure a situation that no longer exists. Data, like prescription pharmaceuticals, should be marked with an expiration date.

### Difference between Data and IT

Executives must not assume that they have good data because their organizations have good information technology (IT). "Garbage in-garbage

out" is as relevant today as it was when it became the programmer's mantra back in early days of computing. For example, a state-of-the-art electronic health record (EHR) will not improve the efficiency or effectiveness of patient care if the record contains inaccurate numbers.

### Conclusion: Strategic Data Plan

For all these reasons, an organization's data base – much like its physical plant – will become a significant competitive differentiator in the marketplace. Current trends are starting to confer strategic importance on data as an organizational asset. Just as they recognize the importance of facilities planning, forward-looking executives owe it to themselves to prepare a strategic data plan in response to the changing demands for quantity, quality and currency of data.

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