

"TECHNOLOGY AND DEMAND FORECASTING IMPLICATIONS"

NEW TECHNOLOGIES

New technologies are dramatically changing how healthcare will be delivered in the future.

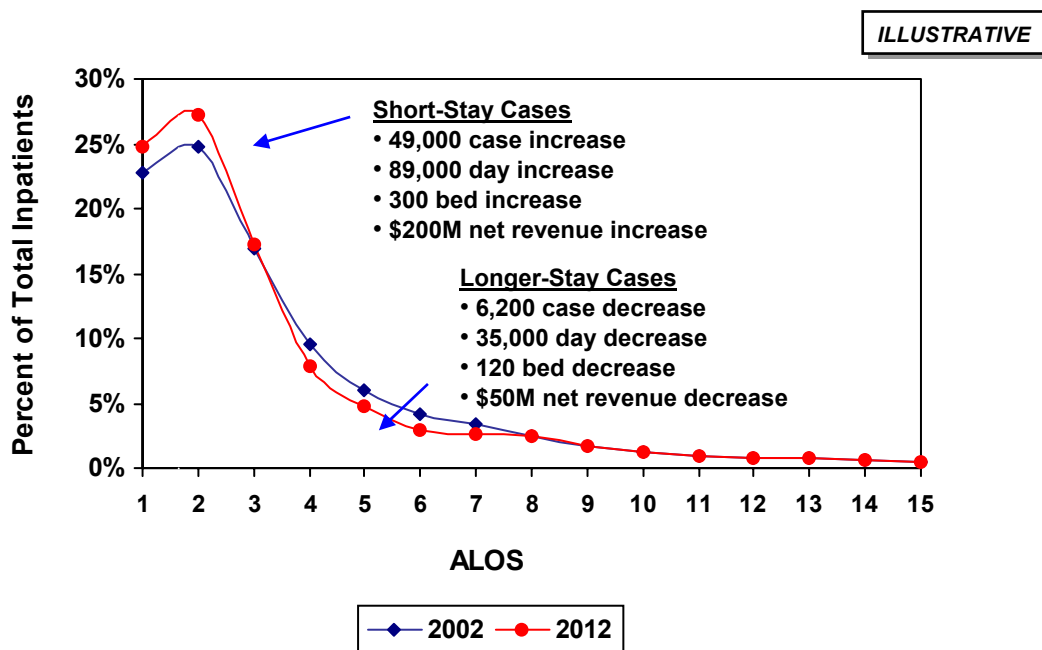
- The pace of technology development in healthcare is increasing, driven by record budgets for NIH research, supercomputers for bio-informatic analysis and predictive modeling of drugs, and the delivery of blockbuster drugs, biologics, and equipment.
- Satisfying consumer and government expectations regarding medical error reduction and patient safety will represent a long-term commitment for providers, and new technologies will supply some of the solutions.
- Many technological advances introduce new modalities of care with profound implications for clinical programs, facilities, human resource, and strategic decision-making.
- Major capital decisions regarding the size, bed configuration, and ambulatory capacity of health systems in the future requires an accurate reading of how emerging technologies will redesign the delivery of care.

IMPACT ON DEMAND AND PATIENT CARE

For the foreseeable future, a steady stream of innovations will disrupt established patterns of utilization and realign health care profit centers.

- ***Outpatient Shift.*** Whereas the ratio of inpatient to outpatient volume was 55% / 45% in 1997, outpatient volume is projected to surpass inpatient volume next year. This shift places hospital revenues under siege by small-scale, fast-moving ambulatory service competitors.
- ***Medical Case Growth.*** Medical cases are increasing—now over 58% of total patient days—and surgical volumes are decreasing.
- ***Short-Stay Increase.*** In many markets, the number of adult short stay cases with a length of stay less than 3 days are projected to increase significantly over the next ten years.

The following graph depicts the change in demand for inpatient hospital services in one major metropolitan service area analyzed by BDC Advisors, LLC.



- **Competitive and Operational Challenges.** Changing demand will create more of a bi-modal distribution of short-stay surgical and long-stay medical cases.
 - Competing for a greater volume of “turnstile” short-stay cases will be largely based on price / a lower cost structure, experience, and high-touch service.
 - Competition for medical cases with higher lengths of stay will be largely based on superior outcomes.
 - Operating a facility with such disparate requirements will intensify staffing challenges.
 - Cases with a one-day length of stay will be candidates for new modalities and increasing competition by new and existing market entrants.

HEALTH SYSTEM IMPLICATIONS

CEOs, SVPs of Strategic Planning, CFOs, Medical Directors, and Program Directors can manage the steady stream of new technologies by augmenting existing management processes.

- Strategic Planning, including Facilities and Human Resources Planning
 - Demand Forecasting
 - ◆ Evaluate tradeoffs among strategic positions (e.g., pioneer of new technology vs. fast-follower vs. conservative)

- ◆ Incorporate emerging technologies into volume forecasts
- ◆ Determine the aggregate demand for services (e.g., inpatient, outpatient, home care, long-term care, others) by site of care to inform facility and financial plans
- Facilities Planning
 - ◆ Build scenarios to compare and contrast different sets of services and sites of care that complement your technology positioning
 - ◆ Assess the longevity of programs and transition options
 - ◆ Develop the appropriate configuration of services (e.g., ambulatory care facilities, short-stay facilities, inpatient facilities)
 - ◆ Quantify space requirements
- Human Resources Planning
 - ◆ Identify customer expectations and skill requirements of emerging technologies
 - ◆ Evaluate human resource capacity against project requirements
- Clinical Program Development
 - Anticipate the timing of new and emerging technologies
 - Determine which new technologies can differentiate your service offerings
 - Quantify the impact new technologies will have on demand by service line
 - Link with developers of new technologies as appropriate
- Finance
 - Capital Budgeting
 - ◆ Use technology-based planning scenarios to adjust capital budget assumptions
 - ◆ Align capital expenditures with the technology adoption position chosen in the strategic planning process
 - Profitability
 - ◆ Identify revenue growth and cost reduction opportunities
 - ◆ Inform operating budget modifications
 - ◆ Align acquisitions with reimbursement prospects of new technology (e.g., outlier payments from Medicare)
- Other services specific to your health system's requirements

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BDC Advisors, LLC would be pleased to assist you and your organization to evaluate new technologies, forecast demand, and match your health system's resources with strategies. In order to stay current in this fast-breaking field, we have recently established a strategic alliance with the Health Technology Center, one of the nation's foremost resources which tracks advances in clinical technology. If you would like further information, please contact Richard E. Wesslund, Managing Director of BDC Advisors, LLC at (415) 247-1030.