



Analytics for Service Line Planning

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An exceptional hospital service line allows a hospital or health system to better serve its patients and differentiate itself in the market. Building such strong service lines requires careful planning that addresses physician capabilities, operational efficacies, market factors, accessibility, and integration of care models.

Although there are many elements that go into effective service line planning, this article focuses on the data and analytics required to build superior service lines. After all, great decisions are driven by reliable and well-presented data. This is especially true when disparate information is needed to understand the whole picture. This is the case in service line planning which requires understanding of the market, competitors, and internal operations including inpatient, outpatient, and physician practice components. Consider the following diagram, which consolidates relevant questions and metrics from a variety of areas.



AREA	KEY QUESTIONS	POTENTIAL ANALYTIC INDICATORS
Market and Competitors	 What market factors are affecting this service line? What is the competitive landscape? What market forces are influencing referral patterns? How do patients perceive our services? 	 Total size of market Population growth Market and sub-market demographics Market share over time Market share by procedure HSG Physician Network Integrity Analytics[®] Consumer perception studies
Physician/Provider Team	 Do we have enough providers to achieve market share and growth goals? Are we effectively utilizing advanced practice providers (APPs)? How strong is our alignment with key physicians/practices? 	 Physician supply and demand Ratios of PCPs to medical and surgical specialists Provider productivity analysis APP/physician ratios Provider surveys HSG Physician Network Integrity Analytics[®]
Clinical Performance and Outcomes	 Do we have gaps in our current service offerings? Can we prove superior clinical outcomes? Are patients satisfied with our services? Do we have standardized clinical process and pathways? 	 Comparison of service mix to local/regional competitors and national centers of excellence. Quality and outcome metrics Patient satisfaction measures Internal performance data Practice variation assessment EMR and/or claims based analysis
Operational	 Do we provide superior access for patients and providers? Do we have operational barriers to growth? Can we support growth in our existing facilities? 	 Access point mapping Scheduling process assessment Practice access metrics Provider satisfaction surveys Virtual visit capabilities
Financial	 How will service line growth impact the bottom line? 	 Payer mix and rates Revenue cycle process assessment Contribution margin by service Fixed expense structure Practice losses/subsidies

Now let's review a few cases on how these data can be tied together to illuminate service line strategic planning.

EXAMPLE ONE

An independent community hospital in the Midwest sought to improve its already strong cardiology service line which was driven by its group of employed cardiologists.

Analytic Findings

- Each of the employed cardiologists and APPs were producing wRVUs above the 75th percentile
- Claims-based HSG Physician Network Integrity Analytics[®] suggested that the employed primary care providers were highly loyal but patients from independent providers were more likely to out-migrate to the larger, regional system. Qualitative investigation suggested this was due to potential access issues.
- By comparing population-based demand models and an inventory of physicians and APPs in the market, we conclude there is need for general and interventional cardiologists. Demand for electrophysiology was already being met.
- Operational metrics indicated additional staff and space would be required to support volume growth.

Strategic Direction and Results

Client leadership recognized that additional provider resources were required to drive volume growth and service expansion. As a result, a significant emphasis was placed on physician recruitment. Additionally, the client expanded its satellite clinic program to alleviate space constraints and enhanced practice staffing resources to improve scheduling and appointment availability. A business development program was initiated to reach out to independent primary care providers, introduce the newly recruited cardiologist, and address access concerns. The client has also expanded cath-lab capacity and experience significant growth as a result of these efforts.

EXAMPLE TWO

During its regular strategic planning process, an independent hospital in the South identified significant opportunities to strengthen its primary care base. As a result, special strategic emphasis was placed on developing a primary care service line strategy.

Analytic Findings

- Provider supply and demand analysis indicated a need for additional PCPs, with some portions of the market severely undersupplied.
- There was inconsistent geographic dispersion of primary care providers; a large portion of the market's
 population did have not have convenient access to a primary care practice location.
- Provider age analysis indicated potential for imminent succession planning issues.
- Market share analysis showed consistent downward trend across multiple key service lines with outmigration to regional metropolitan area.
- Claims-based HSG Physician Network Integrity Analytics identified opportunities to decrease patient leakage from primary care to specialty providers.

Strategic Direction and Results

Client leadership developed an aggressive primary care recruitment strategy with total number of primary care providers increasing from 18 to more than 70 over a 5-year period. Practices were better distributed based on market demographics. Focus on referral patterns identified and addressed key drivers of outmigration. As a result, total health system revenue grew by 75% over the same 5-year period. This improved financial footing has allowed the hospital to upgrade facilities and recruit additional specialists, further reducing patient outmigration.

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EXAMPLE THREE

A small system in the Southeast sought to identify opportunities for growth in the cardiology service line where most volume came from two independent cardiology groups.

Analytic Findings

- Supply and demand analysis suggest very minimal net need for medical cardiology and a slight oversupply for interventional cardiology.
- Service line revenue stable but cath-lab profitability has been decreasing due to rising supply costs.
- Quality measure analysis suggests opportunity for improvement in key outcomes areas, particularly median minutes to immediate PCI for STEMI patients as measured by the National Cardiovascular Data Registry (NCDR).
- Market share analysis suggests opportunity for growth, with cardiology market share underperforming most other specialty services by 10% - 20%.

Strategic Direction and Results

The client initially preferred to recruit and employ new incremental cardiologists in order to more tightly control the provider compliment within the service line. However, after reviewing the analytic findings it was concluded that such recruitment was not prudent due to lack of market demand. Any new physician would either 1) fail to ramp up; or 2) ramp up at the expense of the independent groups, which would likely impact overall service-line volume.

The client, therefore, decided to engage the independent groups in a co-management arrangement which provided incentives for managing and improving the service line. Specifically, the agreement included NCDR metrics and a supply-cost metrics, both of which improved significantly during the first year of the agreement. These improvements resulted in better outcomes and a better bottom line, both of which were leveraged into marketing efforts to further increase volume and gain market share.



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