



Performance Optimization in health care

How a customized approach can
improve quality of care, curb
inefficiencies and cut costs



EY

Building a better
working world





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Executive summary

What is Performance Optimization and why does it work?

Why organizations turn to Performance Optimization

Seeking better access: need to reduce waiting times and wait lists in the emergency department

Suffering from financial distress: lack of ability to invest, to balance the books and to manage the supply chain, often resulting in both care and regulatory struggles

Dealing with health reform: the uncertain future of the regulatory environment presents an unwanted organizational fog, obscuring the path toward building a successful and sustainable business model

Wanting to improve clinical quality performance: reduce failures in clinical delivery, unacceptable levels of patient incidents and/or a high variation in clinical practice

Wanting to improve operational quality performance: to confront failure to meet performance targets, poor patient throughput, high rates of occupancy or cancellations of procedures

Needing to go from good to great: a need to come together around a shared mission or change agenda; often triggered when two or more organizations merge

Current research suggests that the health care industry has a productivity level of approximately 43%. In a landscape where the demand for care is rapidly increasing, where budgets are continually strained and where regulations are becoming more uncertain and complex, this statistic is neither sustainable nor acceptable.

Performance Optimization (PO) is a collaborative methodology that addresses modern-day challenges in health care by improving care, accountability, resource management and transparency. It is customized to the needs of individual organizations to create a positive impact on the overall margin of the hospital.

Over the past 10 years, PO has produced significant and measurable improvements in the quality of care and efficiency at leading health care organizations in Europe, Canada and Australia. Hospitals that have implemented PO, with the help of EY, point to a wide array of reasons for its success. The most commonly cited include:

- ▶ Collaborative approach with client input and involvement every step of the way
- ▶ An EY team that includes hands-on health care practitioners, not just consulting generalists
- ▶ Relentless execution, where success is defined by client outcomes
- ▶ Customization – meeting clients where they are; no cookie-cutter approaches
- ▶ Balance – fine-tuning and meshing proven and innovative methodologies based on an individual organization's desired outcomes



PO is an objective, holistic approach. Objective because we are not married to any one framework, and holistic because we look at the whole picture. Otherwise, improving just one department may cause problems in another.

Finn Holm, Partner, Health People Advisory Services, EY



Health care organizations have experienced a wide array of positive outcomes from implementing the Performance Optimization methodology. Here are a few examples of the results they are enjoying:

- ▶ 6%-10% increase in speed of throughput
- ▶ 10%-15% reduction in number of operational beds (linked to increase in throughput)
- ▶ 20% increase in bed utilization
- ▶ 5% increase in operating room output
- ▶ 5%-8% annual savings in operating budget

Hospitals also point to these results stemming from their implementation of PO:

- ▶ Reduction of both financial and clinical risks
- ▶ Teams, across disciplines, work more closely together with increased cooperation and transparency
- ▶ Better patient satisfaction
- ▶ Decrease in re-admits
- ▶ Improved mindsets of clinical and nonclinical staff
- ▶ Improved patient experience
- ▶ Improved quality of care
- ▶ Standardization of protocols



PO has been proven to have a positive effect on the overall margin of a hospital through revenue optimization, cost reduction and strategic initiatives.

**Leisa Maddoux, US Health Performance
Optimization Leader, EY**



In the pages that follow ...

We will provide detailed information on EY's methodology for Performance Optimization, how it attacks the major problems plaguing hospitals today and how it has worked for leading health care organizations around the world.

Based on our extensive experience in the health care sector, we know that hospitals, like the patients they serve, have differing degrees of wellness. Wherever your hospital falls on the "wellness" spectrum, PO can prove to be a valuable ally.

Performance Optimization: solving four key challenges

While the specific challenges that individual health care organizations face vary from hospital to hospital, problems can be grouped into four major categories:

Access: Providing comprehensive access for patients and their families in an environment of fiscal constraint and increasing demand poses a major problem for health care organizations.

Quality: The ability to maintain quality care is a growing challenge based on three main factors: increasing complexity and sub-specialization of health care, increasing regulatory oversight and growing patient expectations for more personalized care.

Value: It is becoming harder and harder to demonstrate value in terms of patient outcomes and investments in an era of competing government priorities.

Margins: Working to improve margins across all pathways in the shadow of supply side cost pressures is an ongoing and escalating challenge.

Responding to these challenges

PO takes a comprehensive and systematic approach that addresses these challenges and delivers change through:

- ▶ Improving the efficiency of all key functions and processes, especially by eliminating variability
- ▶ Improving productivity by increasing outputs for the same or fewer inputs
- ▶ Creating and maintaining services that are viable and sustainable for the long term

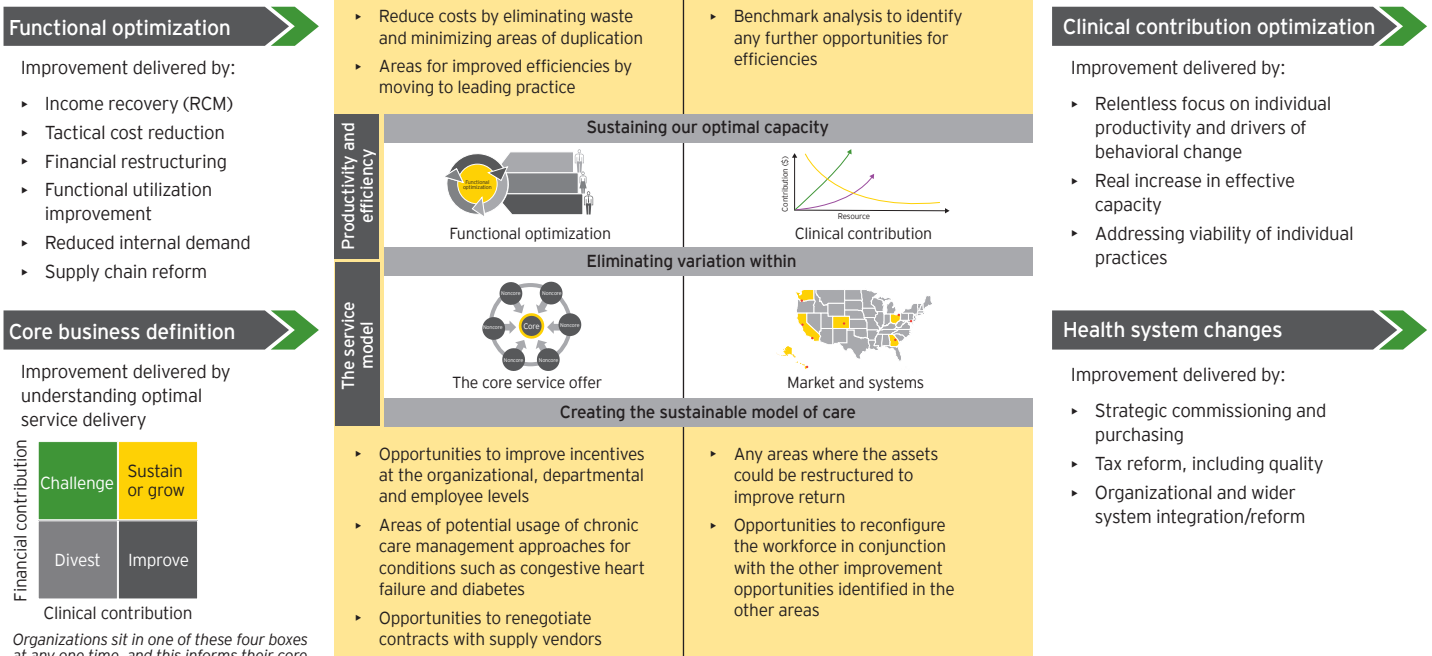


People are getting older, diseases are getting more complex, resources are limited, costs are up and there are more options from which patients can choose. You have to get the basics right if you want to be sustainable.

Jim Costanzo, Global Health Leader, EY



The Performance Optimization methodology drives both tactical and strategic transformation



EY case study: Major British university hospital chain

| Major challenges | Key methodologies | Major outcomes |
|---|--|--|
| Identify and implement cost reduction opportunities while improving patient care and outcomes across three hospitals that employ 10,000+ people and serve a population of more than 1 million. Hospitals were anticipating a deficit of £41m (approximately US\$53 million) for 2014-15. The deficit forecast for 2017-18 was a staggering £290m (approximately US\$377 million). | EY utilized both Performance Optimization and subject-matter professionals to assess demand and capacity, perform simulation modeling, create models for clinical care redesign and focus on financial restructuring. The specifics of this methodology included: <ul style="list-style-type: none"> Six-week diagnostic on 2014/15 plan to pinpoint £40M potential cost reduction (EY identified £43m) Twelve-month engagement to provide cost reductions Oversight of hospital reconfiguration program Support of delivery of four-hour accident and emergency (A&E) targets Identifying and imbedding cost reductions for 2016/17 Maintaining ongoing sustainability of initiatives following EY engagement | <ul style="list-style-type: none"> Identified £121m in cost savings over the five-year period Outpatient appointments increased by 56,000 through improved efficiency and throughput 15% increase in number of patients assessed within the four-hour A&E target 40% reduction in dropped operating theater sessions 60% reduction in additional premium pays |

Key components of our Performance Optimization methodology



Eliminating variation

EY's experience shows that the elimination of variation is one of the key enablers of transformation and change – but not if the focus is just on operational variation. To truly achieve change, and to reduce the potential for harm, we address and eliminate variation in clinical practice by:

1. Improving clinical and care pathways and, when relevant, examining the pathway across the whole system
2. Changing the culture and the behaviors that do not fit with clinical consensus and leading practice

Our collaboration with the Johns Hopkins Armstrong Institute for Patient Safety and Quality enables us to bring deep insight into clinical transformation to help eliminate avoidable patient harm.

As a result, EY has helped numerous organizations reduce variation at the function, pathway, specialty and individual clinician level. For example, we are currently working with a leading children's hospital to integrate three existing pediatric hospitals into a single entity to provide leading-class clinical care.



Developing digital approaches

Around the globe, the highest-performing health care organizations demonstrate the ability to embrace innovations in digital health solutions. To truly drive efficiency and sustainable improvements, health care organizations must seamlessly connect across the entire patient pathway, regardless of organizational boundaries. In this way, they can enable patients and their health care providers to engage more dynamically with each other.

Embracing these technologies not only creates operational efficiencies but also challenges the existing models of care delivery, opening up the potential for new and innovative ways of working.



Leveraging analytics and simulation

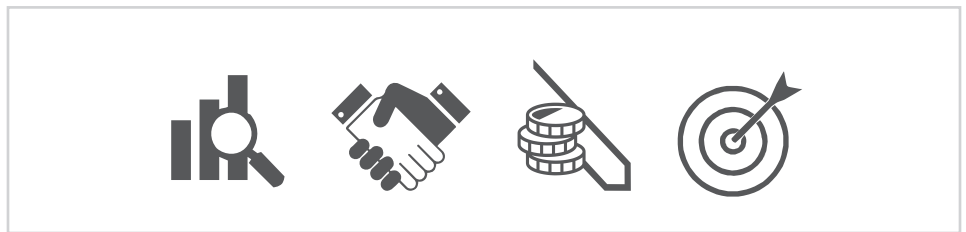
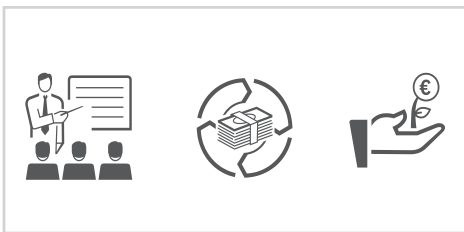
Key to any behavior or transformational change is the ability to demonstrate where the potential for improvement lies. In this era of big data, any successful approach must be driven by the power of real-time data analytics, enabling decision-making to be both evidence-based and transparent.

In addition, the use of data analytics in the field of performance improvement allows changes in practice to be measured rigorously and consistently, enabling “like for like” comparisons across functions, locations and even whole health economies.

EY brings to the table a suite of analytical methods and tools to identify and provide quick turnarounds; for example: performance improvement dashboards with a proven track record in scores of health care organizations; and simulations accessible for both technical and nontechnical staff that pinpoint the key drivers of good and poor performance.

EY case study: Large UK National Health Service (NHS) hospital trust in the East of England

| Major challenges | Key methodologies | Major outcomes |
|--|---|---|
| Identify and implement cost reduction for a major hospital that was facing a £22m (approximately US\$29 million) deficit for 2014-15. Additionally, the hospital's two sites were merging into one, effective 2016. Turnaround and improvements were needed in all major areas: governance, cost-cutting, efficiency and patient care. | EY customized all key aspects of Performance Optimization to meet the transformation required to achieve sustainable success. Among the specific methodologies: <ul style="list-style-type: none"> ▶ Developed the framework for organization-wide quality improvement and performance management ▶ Provided baselines to support a cost reduction plan that was sufficiently robust ▶ Revised emergency department sepsis policy ▶ Developed front-door streaming model ▶ Implemented Complex Discharge Hub | <ul style="list-style-type: none"> ▶ Identified £121m in cost savings ▶ Identified cost reduction plans amounting to £17.9m ▶ 8% improvement in operating theater utilization ▶ 9.3% improvement in A&E wait time with 95% waiting less than four hours ▶ Reduced average length of stay ▶ 3.2% improvement in booking slot utilization ▶ Only 1% of endoscopy patients wait more than six weeks for testing – 27% above national average ▶ Zero “never events” |



Adapting turnaround strategies

Our experience around the globe has shown that organizations with ambitions to be world-class can benefit from the techniques that, to date, have been used for the purposes of turnaround. The concept of “grip and control” concludes that leading practice must involve implementing a series of basic control measures that protect the organization from unnecessary financial inefficiencies.

We have developed a specific module of work designed to rapidly improve grip and control in health care organizations. It contains a range of controls that have been successfully implemented elsewhere; the controls are tailored to the needs of the specific organization and can be put into place immediately.

In the past year, we have successfully completed numerous turnaround engagements without compromising patient safety or performance standards.

Practicing “relentless execution”

The Performance Optimization framework has been designed to drive methodologies that provide both tactical and strategic improvements over a structured period of time. We also recognize that implementing any improvement program requires extreme organizational focus. Underpinning our approach is the principle of “relentless execution,” our single-minded focus that gives our clients additional support and capacity to help them succeed.

What exactly do we mean by “relentless execution,” and why is it so often cited by clients as a key component to the success of PO for their organization? It means the EY Performance Optimization teams:

- ▶ Harnesses and adapts leading practices from around the globe to help our clients optimize the quality of care while reducing costs and inefficiencies
- ▶ Works with our clients to achieve unprecedented levels of care for their patients
- ▶ Acknowledges that success is defined exclusively by the achievement of our stated objectives
- ▶ Continually monitors results to maintain sustainable outcomes



Solutions don't have to be complicated; they just have to work. PO at its core is about execution and healing. That's why it is relevant to any health care facility in any environment.

Gary Howe, Global Health Performance Optimization Leader, EY



EY's methodology at work

The success of Performance Optimization lies in its relevance and adaptability to all the major areas in a health care organization that affect costs and quality of care.

It is important to note that PO can be applied to one or more functions or departments individually or simultaneously depending on the hospital's particular needs. Often, hospitals will engage EY to bring PO to a particular area. Once, they see the results, they will then ask for a more broad-based approach.



PO is an exercise in change management. We have compelling information that it works. We can demonstrate it initially, without the hospital having to go for the whole pie.

Kirsten Tisdale, Partner, Performance Improvement Advisory, EY



PO in action

Cost improvement

| Objectives | Outputs | Time frame |
|---|---|--|
| To produce a broad high-level productivity analysis (mainly at trust level) of potential opportunities for savings, and assess this against the client's current cost improvement program (CIP) | <ul style="list-style-type: none"> ▶ Diagnostic summary (PowerPoint) with overview of diagnostic analysis and potential opportunity for savings ▶ Detailed outputs from analysis (PDF, Excel, PowerPoint) ▶ Estimate of savings opportunity for trust through validation against current trust schemes ▶ Proposal for supporting cross-cutting work streams | <ul style="list-style-type: none"> ▶ Eight weeks, assuming modeling and analytics team resources are provided for key analytics |

CEO of a leading UK NHS hospital trust:

"The EY team really understand how to do successful and sustainable cost improvement delivery. They work alongside teams, coaching and encouraging individuals to deliver more than they realized they could. Importantly, they listen and then flex their style and approach to ensure they deliver."

Medical productivity

| Objectives | Outputs | Time frame |
|--|--|---|
| <ul style="list-style-type: none"> ▶ To control premium spends ▶ To reconcile current programmed activities, job plans and rotas ▶ To embed a consistent and sustainable job planning policy and process that: <ul style="list-style-type: none"> ▶ Aligns clinical capacity to demand ▶ Drives increased returns from investments ▶ To improve the productivity of the medical workforce through a set of agreed productivity metrics and individual consultant measures | <ul style="list-style-type: none"> ▶ Short-term measures to reduce premium spends ▶ Analysis and reconciliation of pay, existing plans and rotas ▶ Agreed job planning policy with rigorous set of Supporting Professional Activity tariffs and guidelines on clinical sessions ▶ Robust process for annual job planning aligned to business planning, including demand and capacity analysis ▶ Agreed productivity metrics and supporting analysis for dashboard to monitor individual performance | <p>Month 1: baseline (identify and diagnose)</p> <p>Month 2: design</p> <p>Months 3-6: deliver and sustain</p> |

Chief executive of a major teaching hospital in central England:

"... Work has been undertaken in a collaborative and consultative style, so much so that clinicians frequently tell me how much they enjoy working alongside EY and how beneficial their support has been. A particular strength of EY is their strong commitment to building the capacity and capability of the organization so that we can succeed without them in the future."

Operating rooms

| Objectives | Outputs | Time frame |
|--|---|--|
| <ul style="list-style-type: none"> ▶ To support identification of productivity and efficiency opportunities within operating theaters ▶ Provide engagement managers with a definitive guide to facilitate effective planning and rapid mobilization with clients ▶ Facilitate quality assurance knowledge transfer to less experienced health consultants ▶ Reduce variation in approach to drive maximum impact for clients | <ul style="list-style-type: none"> ▶ Theaters analysis document with opportunities against utilization, productivity and workforce (PowerPoint, Excel, PDF) ▶ Leading practice dashboard for reporting ▶ Implementation and delivery plan for theater productivity gain ▶ Theater Productivity Output document at end of engagement to provide a strong narrative and clear line of sight to financial/quality improvements | <ul style="list-style-type: none"> ▶ Rapid diagnostic – up to six weeks if modeling team available to complete analytics ▶ Program management (governance and setup) – up to six weeks ▶ Program management (delivery) – 12 or more weeks and run in parallel with the governance element |
| Benefits | | |
| <ul style="list-style-type: none"> ▶ Increases volume ▶ Decreases elective case delays ▶ Decreases overtime ▶ Decreases waiting times for urgent patients ▶ Improves placement of patients in appropriate post-op units ▶ Improves quality of care | | |

Nursing

| Objectives | Time frame |
|--|---|
| <ul style="list-style-type: none"> ▶ The nursing workforce is usually the first cohort of staff to be reviewed in terms of improving efficiency; this is for a number of reasons. ▶ Reducing spend through making redundancies is difficult, as nursing is heavily regulated, unionized and politically sensitive. ▶ When making recommendations for changes in nurse staffing levels or skill mix, it is vital that we do not make recommendations that would in any way jeopardize patient safety or quality of care. Any recommendations made must be verified with the director of nursing. ▶ There are four specific areas in which EY supports the review of the nursing workforce <ol style="list-style-type: none"> 1. Temporary staffing 2. Management structures 3. Ward-based nursing 4. Nonhospital-based nursing | <ul style="list-style-type: none"> ▶ This will vary depending on the module selected. ▶ If a diagnostic is completed, this would typically take up to six weeks: <ul style="list-style-type: none"> ▶ One to two weeks to get data from client ▶ Two to three weeks to complete diagnostic analysis ▶ One week to produce final diagnostic summary ▶ Two to three days to assess quality and sign off diagnostic packs with heads of nursing |
| Benefits | |
| <ul style="list-style-type: none"> ▶ Achieve steadier nurse-to-patient staffing ratios ▶ Improve quality of care and patient safety ▶ Decrease the use of overtime and float pool nurses ▶ Improve patient placement in appropriate units ▶ Decrease inter-unit transfers ▶ Decrease health care costs | |

Inpatient

| Objectives | Outputs | Time frame |
|--|--|---|
| <ul style="list-style-type: none"> Identify productivity opportunities Quantify, validate and plan: <ul style="list-style-type: none"> Cost avoidance/cost control through optimization of the existing bed base to reduce unbudgeted spend: <ul style="list-style-type: none"> Cost reduction through bed closures, supporting associated reduction in pay and non-pay spend Productivity/income through greater throughput of the existing bed base (note: may require funding agreement) Develop plans to track cost reduction through managed change program | <ul style="list-style-type: none"> LOS productivity analysis. Specialty and divisional-level activity/LOS opportunity analysis, including external and internal benchmarking Quantified and qualified bed reconfiguration/reduction CIP opportunity. Clinically, operationally and financially validated opportunity Program governance framework Delivery plan. Detailed, supporting milestone plans Benefit tracking tool. Hospital/specialty/divisional tracking tool for live-monitoring LOS/activity delivery | <ul style="list-style-type: none"> Identify: 2 weeks Diagnose: 6 to 8 weeks Design: 6 to 12 weeks Deliver: 6 to 24 months Sustain: 6 to 24 months |

Benefits

- | | |
|--|---|
| <ul style="list-style-type: none"> Reduced medical errors Improvements in patient safety Greater staff satisfaction | <ul style="list-style-type: none"> Higher quality of care Increased revenues Decreased costs |
|--|---|

Outpatient

| Objectives | Outputs | Time frame |
|---|--|--|
| <ul style="list-style-type: none"> To provide a cost-efficient outpatient service with appropriate capacity to meet demand within the 18-week referral to treatment target This is achieved by improving utilization of clinic resources and generating appropriate income from outpatient activities | <p>The methodology supports delivery of improvement across:</p> <ul style="list-style-type: none"> Outpatient capacity and demand Clinic slot utilization Alignment of clinics provided to medical job plans New or follow up ratios Clinic template standardization Coding of outpatient activity | <ul style="list-style-type: none"> Depending on the size of the organization, specifically the number of specialties, the outpatient methodology can be provided within six to nine months from identification to delivery of outputs |

Benefits

- | | |
|---|---|
| <ul style="list-style-type: none"> Reduced waiting times and improved overall access for patients Reduced physician overload and overtime Greater patient throughput Improvements in patient safety and quality of care | <ul style="list-style-type: none"> Improvements in staff satisfaction Reductions in waste and cost Increased revenue |
|---|---|



Health care is workforce driven. You want to keep your staff happy. PO done well improves the quality of doctor care and reduces staff frustration.

Sean Lowry, Director, Performance Improvement Advisory, EY





EY case study: Canadian teaching hospital provider

| Major challenges | Key methodologies | Major outcomes |
|---|---|--|
| <p>The center is a 1,000+ bed teaching hospital with 3 sites, an operating budget of CAD1.2 billion and a deficit for 2017/18 of CAD32 million. EY was asked to focus on the four areas that would result in the greatest cost savings: beds and patient flow, operating rooms, supply management and pharmacy, and workflow.</p> | <p>EY undertook a three-phase process to address the major areas of concern:</p> <ul style="list-style-type: none"> ▶ Phase 1: Assessment – review of the entire organization with special emphasis on the four key areas for further drilling down ▶ Phase 2: In-depth analysis – development of specific opportunities aligned with the four key areas and completion of four workshops with operational and strategic stakeholders ▶ Phase 3: Implementation – establishment of a Sustainability Program Office manned by client-owned working groups | <ul style="list-style-type: none"> ▶ Sustainability Program Office is operative as a client-owned improvement infrastructure ▶ Client-led groups are putting forward specific improvement plans and suggestions ▶ Customized methodology is in place to reduce unused “white space” in the operating room schedule; CAD250k savings per operating room ▶ Implementation of a new bed footprint with identified savings of CAD2.5 million ▶ Revenue opportunities from increasing preferred accommodations for the Women and Babies program will result in CAD750k ▶ Savings from cutting waste and variances offer the opportunity for a cost reduction of CAD4 million. |

Conclusion

In the previous pages, we’ve looked at the EY approach to Performance Optimization and how it has helped health care organizations worldwide improve the quality of care, cut costs, decrease variation and increase transparency across all areas of an organization.

The success of the EY approach to Performance Optimization lies in a number of key differentiators. We employ both proven and innovative methodologies to address the particular needs of each health care organization. Our teams includes seasoned medical professionals who understand both the clinical and administrative sides of health care organizations. We stay with our clients until the agreed-upon goals are achieved. We have more than 10 years of experience in applying and fine-tuning Performance Optimization and have measurable success with both thriving and struggling health care organizations.

As health care administrators look for successful strategies to meet the challenges of an aging population, increased regulation, decreased budgets and a variety of other troubling uncertainties, it is clear that Performance Optimization can play a critical role in not just weathering the difficulties, but in improving outcomes.

Moving forward



As you strive to provide quality health care amid escalating challenges, here are some questions to consider about the possible role of Performance Optimization in resolving problems and pinpointing opportunities:

- ▶ How many initiatives have you identified for the current financial year? How many are planned for and ready to deliver? How many are you already delivering?
- ▶ What percentage of your initiatives are recurrent vs. nonrecurrent?
- ▶ How central are your clinicians to owning and driving the financial sustainability of your organization?
- ▶ How often do you analyze, plan and optimize the demand for your clinical services, at a specialty level, to proactively match capacity to anticipated demand?
- ▶ What mechanisms (if any) do you use to compare the productivity of individual clinicians, managers and administrators?
- ▶ Is your performance management framework set up to deliver continuous improvement?
- ▶ How successfully are you using data, leading practices, benchmarking and clinical guidelines to create a view of what is feasible and desirable for your organization?
- ▶ How well do you control and manage the risks and opportunities that arise from the interdependency of clinical quality, operational performance and financial sustainability?

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