



compirion
hospital solutions

Duke University Hospital

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Synopsis

House-wide project to grow net revenue through better flow, capacity and service, while reaching and sustaining record-breaking Patient Satisfaction levels. Approximate ROI 23:1 .

Duke had experienced a small financial downturn for the prior two years . Their internal initiatives to improve patient flow and capacity (Margin Improvement Project) and patient satisfaction (Patient Satisfaction Initiative) were persistently showing stagnant metrics despite exhaustive efforts. As a result, Duke began searching for assistance and chose Compiron.

The Compiron process did not introduce a new program, but instead offered to re-develop and invigorate Duke's existing internal initiatives around specific identified targets and a better system of operations management at all levels.

This is in keeping with Compiron's principles – sustainability comes from building excellence into existing resources.

The financial trend was reversed and all metrics reached unprecedented levels of performance, as noted in the popular press.



New Systems and Management Coaching

Principle components included a Care Coordination and Bed Management system inclusive of all major service lines: heart, oncology, orthopedic, surgical, medicine, intensive care and Emergency Services.

Compirion helped Duke implement clinical and multi-disciplinary care plans and build patient schedules coaching managers, physicians, charge nurses, nurses and care coordinators on the floor daily, rotating through all shifts and weekends for ten months.

We helped our client create and fully install a leading edge shift-to-shift professional resource, patient care, satisfaction and flow management system. Better and more timely clinical documentation, supervision, rounding and intervention were all coached skills that developed beautifully among staff.

The results included a better direct admissions service provided to outpatient clinics and MD offices who admit their patients to the hospital; better admissions service to the Emergency Services department and to Surgical Services.

Better Care and Flow

Additional benefits included better quality care and all core measures at 100% compliance; a total inpatient length of stay reduction to 5.5 days (average LOS house-wide dropped down from 6.2 to 5.5 days); greatly improved utilization of Observation Status; and time-of-day inpatient discharge reduced from 3 PM to twelve noon average across all 38 specialty units.

Additional improvements in Emergency Services which helped satisfaction, flow and new billable revenue included:

- LOS for Emergency Services outpatients cut almost in half to 3.5 hours;
- Patients admitted to the Hospital through the Emergency Department had their Emergency Stay LOS cut from nearly 10 hours to 5 hours;
- LWBS went from a base of over 7.5% to under 3%. Billable volume increased by 6%.

Length-of-stay reduction and absorption of additional patient volume in both the Emergency Services Center and the Inpatient areas were completed with better management and teamwork of existing professional resources, including ancillary, clinical RN and physicians.



Better Patient Satisfaction

The project also improved inpatient satisfaction from the 65th percentile to the 91st percentile ranking on Press Ganey house-wide; in Emergency Services Press Ganey rankings went from 35th percentile to the 82nd percentile ranking and these figures have held on average for the last two years, since the project. Press-Ganey gave Duke three separate letters of recognition for remarkable growth in satisfaction in Emergency Services, Inpatient Areas and Clinics all during the first six months of the project. Frank DeMarco, Director of Emergency Services, presented his department's work at the Press-Ganey national conference in 2009.

New Operating Income from...

Better supervision, collaboration and daily management helped to yield better documentation, reimbursement, and productivity improvement on a net cost-per-patient basis.

Significant financial improvements, confirmed by Client's own calculations, were brought about by:

- Reduced LOS, both in ED and on Key IP Units
- Increased Billable Patient Volume
- Co-pay revenue
- Improved Charge Capture / Charting
- Improved Observation Patient designation
- Improved diagnostic utilization
- Reduced labor cost per patient from...
- better throughput and new billable volume and / or
- reduction of overtime, agency and per diem usage
- Improved utilization of Tech, Paramedic and other support services.
- labor resources Daily Management
- Labor cost reduction of some vacant positions



Financial Results ...

The Compirion project ran from October of 2008 through July of 2009.

From Duke's Financial Report for that Fiscal year (July 1, 2008 through June 30 2009).

The fiscal 2009 net operating income of \$220.3 million for DUHS represents an increase of \$44.9 million, or 26%, over fiscal 2008.

Duke Financial Statements 2008/2009 p.4

Financial Results ...Sustained and Growing

From Duke's Financial Report for the Fiscal year (July 1, 2009 through June 30 2010).

In an effort to improve efficiency and patient throughput, particularly at Duke University Hospital where capacity constraints exist, DUHS embarked on a margin improvement initiative to increase operating income beginning in March 2008. The original margin improvement initiative was expanded due to the worsening economic climate in late 2008 and early 2009. The margin improvement effort continues and is anticipated to generate \$91 million of ongoing annual savings in fiscal 2011 over the base program year fiscal 2009 budget. As a result of these initiatives, fiscal 2010 financial performance was improved by approximately \$65 million relative to fiscal 2009 actual results.

Duke Financial Statements 2009/2010 p.8

And an independent financial vote of confidence from Fitch:

Fiscal year ended June 30, 2009 was another year of strong operating performance for DUHS with operating profitability one of the strongest among Fitch's 'AA' rated hospital credits. For fiscal 2009 DUHS earned approximately \$155.1 million from operations on total revenues of \$2.02 billion, an improvement over the 2008 operating income of \$111.7 million, despite higher interest costs resulting from the market disruption in late 2008 and stepped up support for teaching and research.

The improved operating performance is the result of strong volumes during fiscal 2009 and the margin improvement initiative launched in the spring of 2008, which addressed all aspects of the organization's operations, and is estimated to reduce expenses and enhance revenues by approximately \$70 million on an annual basis in future periods. During fiscal 2009 discharges increased by 2.2%, outpatient visits grew by 8.6%, emergency visits by 6.3% and surgeries were 5.8% ahead of the prior year.

The Business Wire, September 22nd, 2009



During the final month of the project, Kevin Sowers was promoted to CEO.

Duration of the Project

The engagement was originally contracted for eight months. Compirion stayed on site at no cost an additional six weeks to assure metric achievement and sustainability.

Organizational Transformation

We were simply amazed at the pool of talent at Duke and took full advantage of that opportunity to initiate a substantial and permanent change in culture.

Working with Duke's internal Performance Improvement team, Compirion helped grow greater competencies in cleaning up metrics. We established a model for rapidly building flexible and valid Performance Management Dashboards around future initiatives.

Working directly with senior and middle management, we established a model for working together on new projects with objective targets, cleaner lines of communication, structured and frequent reporting and accountability.

We worked with department management and front-line care-givers to identify and develop new management talent within their own areas while helping work teams across departments collaborate better, more effectively in real-time.

The early successes of the project inspired people to initiate all sorts of other improvement efforts using the same management engine of reporting structure and tools established for the formal project.

Several other initiatives of earlier years that had never received adequate development, training or implementation now became successful realities, such as patient rounding, and daily huddles that were now highly effective.



At every level of the organization, the unleashed potential to succeed took its own course in all sorts of areas, even to the extent that the Performance Improvement team at Duke cloned the model to other Duke Health Network hospitals with positive outcomes. And today this has now become part and parcel of the “Duke way”.

For example, in the two years since the project, Duke Children’s Hospital, with the support of their internal Performance Improvement department, cloned the management systems and tools developed by Compirion, and coached Children’s Hospital management in the methods we had instilled with the result of similar benefits in quality, service and cost.

Every project brings its challenges and rewards. We were amazed at the management skill and depth, the sense of mission, purpose, and dedication of Duke’s people. These are their results.

