

# Intelligent process at work: Genpact helps Miami Children's Hospital deliver a Superior patient experience

## About the client

Miami Children's Hospital: A world leader in pediatric healthcare.

## Industry

Healthcare

## Business need addressed

Enhance the patient experience by reducing waiting and discharge times and improving efficiencies across multiple departments, resulting in bottom-line impact.

## Genpact solution

- Identify and optimize core processes
- Create clinical support in key areas

## Result

Genpact's solution enabled a 4X return on investment for the hospital through:

- Increased utilization of equipment and infrastructure, generating additional capacity
- 18% decrease in patient wait times
- 3% increase in customer satisfaction

Miami Children's Hospital (MCH), a top pediatric facility with over 600 attending physicians, was experiencing low patient satisfaction due to long wait times and a lengthy discharge process. Understanding the need for patient loyalty, MCH approached Genpact to analyze their current hospital operations and identify areas for improvement. Genpact's innovative approach applied the Lean, Six Sigma and Smart Enterprise Processes (SEP<sup>SM</sup>) methodologies, typically reserved for business processes, to core hospital functions with the goal of improving hospital efficiency and enhancing the patient experience and levels of care. The result: happier patients and a more intelligent enterprise.

## Business challenge

Miami Children's Hospital had experienced an increase in patient volume, escalating the scheduled monthly visits to 4,800 patients. In addition, the hospital experienced an unscheduled volume of 1,900 patients per month. This added volume drove up wait and discharge times, negatively impacting satisfaction levels and, most importantly, patient care. Key issues faced by the hospital included:

- High patient wait times, particularly in the areas of triage, admissions, data entry and insurance verification
- Long discharge process: As long as eight hours from the time a decision to discharge was made to the time when the bed became available for the next patient
- High expiration rate of medical supplies and medications
- Low inventory of supplies, leading to stock pile-up and underutilization of medical supplies
- Low equipment efficiency

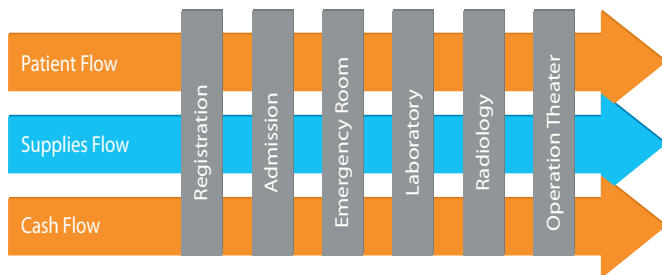
At the same time, MCH was preparing to deploy an Electronic Medical Record (EMR) management system. Hospital functions needed to operate at optimized levels in order to implement the new system without causing further degradation to the patient experience and levels of care.

## The Genpact approach

Using our proprietary methodology, Smart Enterprise Processes (SEP<sup>SM</sup>), along with proven Six Sigma and Lean practices, we evaluated and mapped all end-to-end hospital processes, breaking them down into three horizontal workflows: patient flow, cash flow and supply flow. Over 450 improvement areas across these three workflows were identified, and a multi-phase improvement road map was developed for the hospital.

### End-to-End Approach Improves Performance 2-3X

#### Genpact Deconstructs Hospital Processes into Three Horizontal Flows



## The Genpact solution

Genpact deployed the solution in two stages: The first phase focused on patient flow and cash flow, and the second phase emphasized creating clinical support and developing solutions for supply flow.

### Phase one: Identify and optimize

#### Core processes

In the first phase of the project, Genpact utilized SEP<sup>SM</sup> to identify 72 metrics used to manage core hospital processes. This enabled us to compare facility metrics against best-in-class enterprises to identify gaps and areas in need of improvement, allowing us to optimize 140 processes across the three key workflows:

#### Patient flow

##### Patient Wait and Discharge Time Reduction

Multiple solutions, such as using a visual management board, reducing the number of required registration forms, and standardization of outpatient pre-registration, insurance verification, and registration and discharge procedures were deployed to streamline the processes directly tied to the patient experience. These improvements allowed the hospital to reduce patient discharge times by 60%.

#### Walk optimization

During its evaluation, Genpact identified several areas of inefficiency in staff and physician processes, including the number of steps taken by doctors, nurses and staff to reach patients. By redesigning these activities, walk times were reduced by 40%,

improving patient flow from admissions through discharge. In addition to impacting patient flow, walk optimization also improved cash flow, enabling medical staff to get more done during a shift, thereby increasing productivity.

#### Cash flow

##### Reduction of medication errors

A reduction of 65% in medication errors was achieved by correcting faulty work allocation and non-timely coverage. This significantly mitigated potential risks associated with these errors, eliminated instances of missed dosages and reduced the expense associated with substituting higher-cost medications in cases where a lower-cost medicine was prescribed.

#### Overall equipment efficiency

Efficient utilization of high-cost medical equipment is essential in keeping costs down and recouping the expense of equipment acquisition. By creating more efficient processes around use of critical diagnostic equipment, such as level case loading and accurate capacity assessment, utilization increased by 15%.

#### Training

In addition to the process changes implemented over the two workflow areas, Genpact acknowledged the importance of training hospital employees to evaluate their own processes and improve their own flows going forward. To date, over 400 people have been trained through 300 hours of intensive, hands-on methods, allowing for continuous improvement in flows throughout the hospital with a focus on more efficient quality care.

### Phase two: Create clinical support in key areas

In the second phase of the project, Genpact created clinical support in three key areas: Pharmacy, Clinical Supply, and Surgical Supply and Equipment. Solutions included:

- Supply inventory obsolescence and expiration management: Reduced inventory costs (Clinical, Surgical)
- Elimination of overstocked pharmaceuticals and non-pharmaceutical supplies that went unused for long periods of time: Reduced hospital costs from high expiration rates without impacting patient care (Pharmacy)
- Inventory storage space optimization and consolidation of stock holding locations (Clinical, Pharmacy, Surgical): Improved staff productivity by reducing the time spent finding items or reaching storage locations

## Business impact

By using an end-to-end business process approach, Genpact introduced significant process improvements across MCH's multiple work streams.

FINANCIAL IMPACT	4X IMPACT RECOGNIZED
Capacity Enhancement	<ul style="list-style-type: none"><li>• Capacity addition equivalent to 12 doctors and 30 nurses: Discharge time decreased 60%</li><li>• Increased capacity for an additional 550 surgeries: Utilization increased 6%</li></ul>
Operational Performance	<ul style="list-style-type: none"><li>• 18% decrease in patient wait times</li><li>• 3% increase in customer satisfaction</li></ul>
Materials Availability	<ul style="list-style-type: none"><li>• Increased materials inventory turns by 4</li><li>• 25% reduction in inventory across pharmacy, clinical and surgical supply</li></ul>

## The road ahead

Genpact's long-term collaboration with MCH will incorporate process training at the management level as well as throughout the hospital.

Key focus areas include:

- Training and mentoring internal teams to work on the next cycle of improvements
- Developing enterprise-level dashboards to monitor continuous improvement and transformation initiatives
- Developing and deploying an enterprise-wide communication strategy to engage and deploy Lean at the grassroots level
- Creating and distributing a reference guide and Standard Operating Procedures (SOPs) for future reference and effective knowledge transfer

The results of this process improvement journey will become the foundation for the next phase of transformation as Miami Children's Hospital implements an EMR system. These process changes are already being used by the internal teams within MCH to identify the next generation of improvement drivers.

## A rewarding partnership

Genpact's partnership with Miami Children's Hospital helped the hospital win four business improvement and Six Sigma awards from Worldwide Conventions and Business Forums (WCBF) in 2009.

"Genpact provided MCH with a unique opportunity to operationalize Lean while learning the methodology. We thank all of them for a job very well done. They are part of the MCH family." - Dr. Narendra Kini, *President and CEO* of Miami Children's Hospital.

"This has been an incredible journey, and I certainly look forward to continuing our improvements as we move forward in pursuit of new innovations that will allow us to better serve our patients." - Jackie Gonzalez, *Senior Vice President and Chief Nursing Officer* at Miami Children's Hospital.

#### **ABOUT GENPACT:**

Genpact, a global leader in business process and technology management services, uses process to help its clients power intelligence across their enterprise to run smarter operations, make smarter decisions and use smarter technology. Genpact's Smart Enterprise Processes (SEPSM) framework, its unique process thought leadership combined with deep domain expertise in multiple industry verticals, results in better business outcomes. Genpact's Smart Decision Services deliver business insights to its clients through targeted analytics, reengineering expertise, and advanced risk management. Making technology more intelligent by embedding it with process and data insights, Genpact also offers a wide range of technology services. Driven by a passion for process innovation and operational excellence built on its Lean and Six Sigma DNA and the legacy of serving GE for more than 14 years, the company's professionals around the globe deliver services every day to its more than 600 clients from a network of 58 delivery centers across 17 countries supporting more than 25 languages. For more information, visit [www.genpact.com](http://www.genpact.com), Follow Genpact on Twitter, Facebook and LinkedIn.

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