

Saint Francis Hospital Laboratory

“Using the Step-by-Step Automation Approach to Achieve Sequential Performance Gains”



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Jay Hupp, MT(ASCP)SC *On a Personal Note...*

- 20 Years with Saint Francis
- Bench Tech, Lead Tech, Supervisor, and Manager
- Worked at Springer Clinic 11 years as a Med Tech
- Laboratory Director at National Occupational Health Service
- Hobbies including Hunting, Fishing, and the Outdoors.



“Achieving Sequential Performance Gains” ***Learning Objectives***

At the end of this discussion, you should understand:

- 1. The stepwise approach to laboratory automation**
- 2. The relationship between staffing and automation**
- 3. The challenges associated with laboratory transformation**
- 4. Ways to manage change through entity consolidation**



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Saint Francis Health System Accredited Facilities

Saint Francis Health System

Excellence • Dignity • Justice • Integrity • Stewardship

Saint Francis Hospital South 	Laureate Psychiatric Clinic and Hospital 	Warren Clinic 	Saint Francis Hospital 
Saint Francis Urgent Care at Elm 	Saint Francis Heart Hospital 	Children's Hospital at Saint Francis 	<ul style="list-style-type: none"> •SNF •Home Health •Hospice •DME



Saint Francis Hospital Laboratory Department Statistics

Chemistry
1400 K+/day

Hematology
1200 CBC/day

Microbiology
140 cans/day

Immunology
6,400 ANA Abs/year

Blood Bank
30,000 transfusions/year

Transplant/Donors
50 cases per year

Pathology
27,000 cases/year

Point-of-Care
1300 glucoses/day

Genetic
800 cases/month

Outreach
1500 requisitions/day

Volume

7.3M Performed Tests
 99% In-house Testing
 11% Stat Testing
 40% Outreach Testing
 267/76 Total Operations/Lab Med Tech FTE's

Average Daily Workload

1,500 Outreach Requisitions
 30,000 Results
 5,000 Specimens
 700 Hospital Blood Draws

Space

21,000 Laboratory (sq ft)
 12 Draw Stations



Saint Francis Hospital Laboratory Challenges and Strategy

- **Goals and Challenges**
 - **Increase volume**
 - **Lab space at capacity**
 - **Aging techs with increased demand**
 - **Consolidate platforms**
 - **Manage expense**
 - **Standardize methodology & reference ranges**
 - **Maintain laboratory turnaround time**
 - **Focus on throughput, early AM and stats (>90%)**
 - **Improve patient and employee safety**
 - **Standardize process and reduce variability**



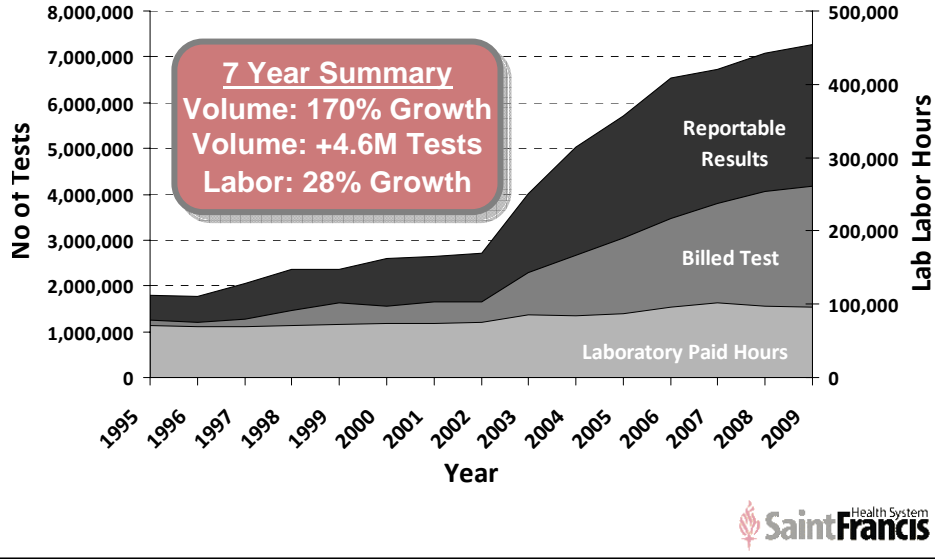
Saint Francis Hospital Laboratory Challenges and Strategy

- **Automate core laboratory to improve utilization**
- **Improve informatics and decision-based rules**
- **Implement technology in a stepwise approach**
- **Grow outreach program & revenue**
- **Support patient continuum of care through EMR**
- **Recruit and retain qualified technical staff**



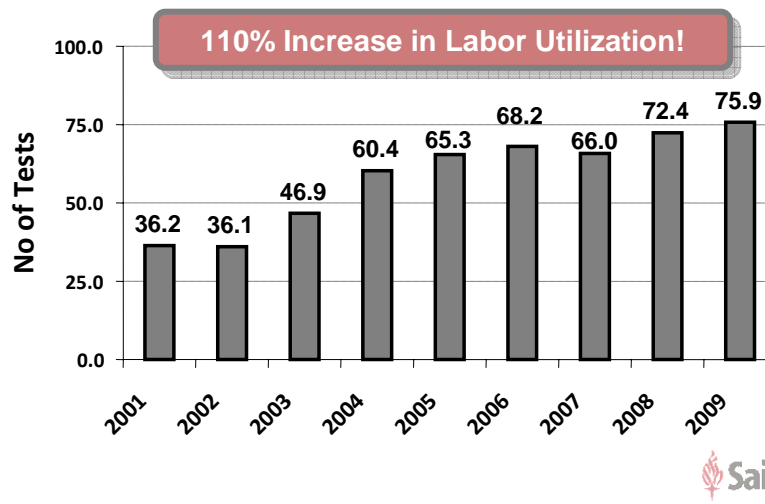
Saint Francis Hospital
Saint Francis Annual Performance

Saint Francis Volume by Year



Saint Francis Hospital
Saint Francis Results

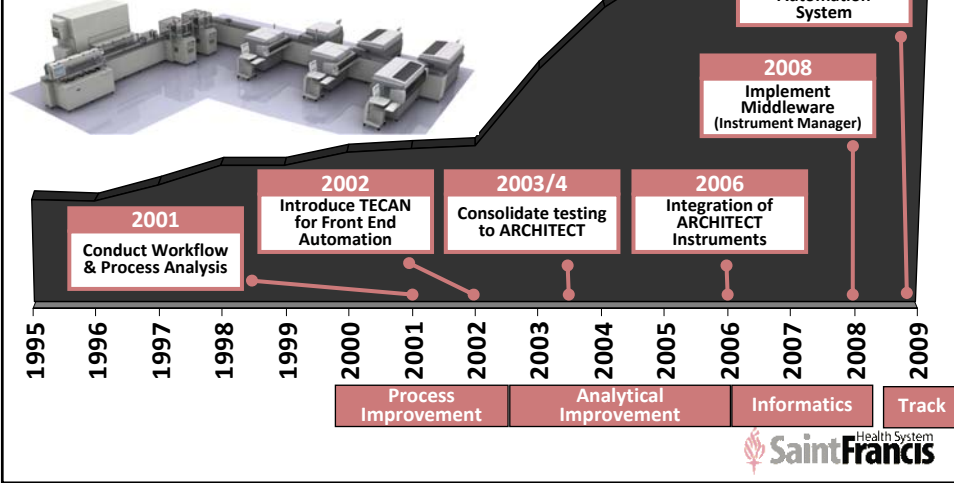
Saint Francis Hospital
Reportable Results/Laboratory Labor Hour



Saint Francis Hospital Laboratory Striving for Continuous Improvement

Phases of Automation

- Stepwise implementation
- Maximum return on investment
- Minimum interruption to operation

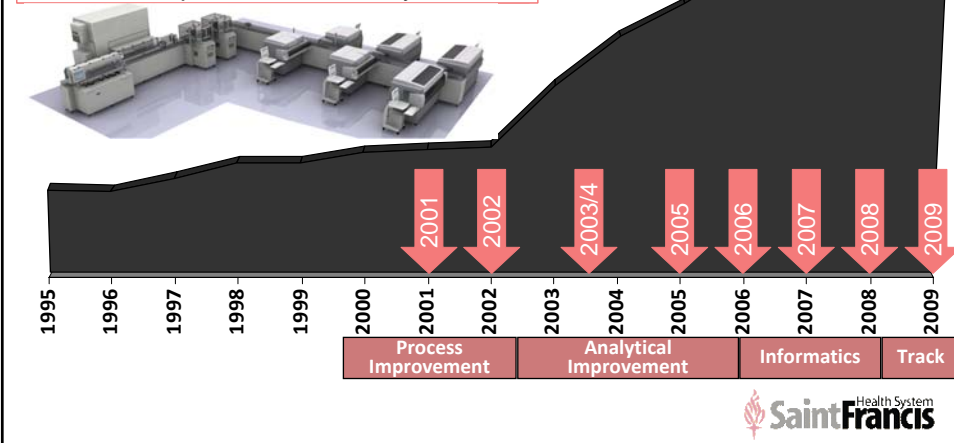


Saint Francis Hospital Laboratory Striving for Continuous Improvement

2009

Total Lab Automation

- Project management drives success
- 90 days start to go live
- Leadership and accountability



Saint Francis Hospital Laboratory A Model for Success

Saint Francis Core Laboratory

- ✓ Run pediatric samples on the line.
- ✓ Run stats on the track. No offline analyzer, No manually loading.
- ✓ Use the IOM like an ARCHITECT RSH. Automated reflex/retest.
- ✓ Use the IOM as a front-end sorter to accession, sort, and centrifuge if needed, every tube coming into core lab.
- ✓ Have maintained stat turnaround times while using the track.

Pediatrics



STAT Handling



Reflex/Retest



Sorting

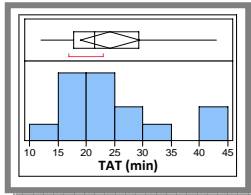


Fast Results



Saint Francis Hospital Saint Francis Results

%
BMP
Orders

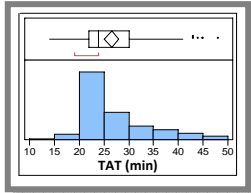


Turn-Around-Time Performance

90% 42.5 min
Mean: 24.2 min
Std Dev: 9.1 min

Goal
90% ED STAT orders
< 45 Minutes

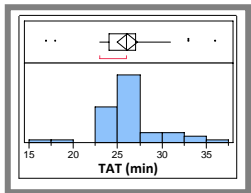
%
CMP
Orders



90% 38.3 min
Mean: 26.6 min
Std Dev: 7.2 min

**TAT Goal
Achieved
100%**

%
TNI
Orders

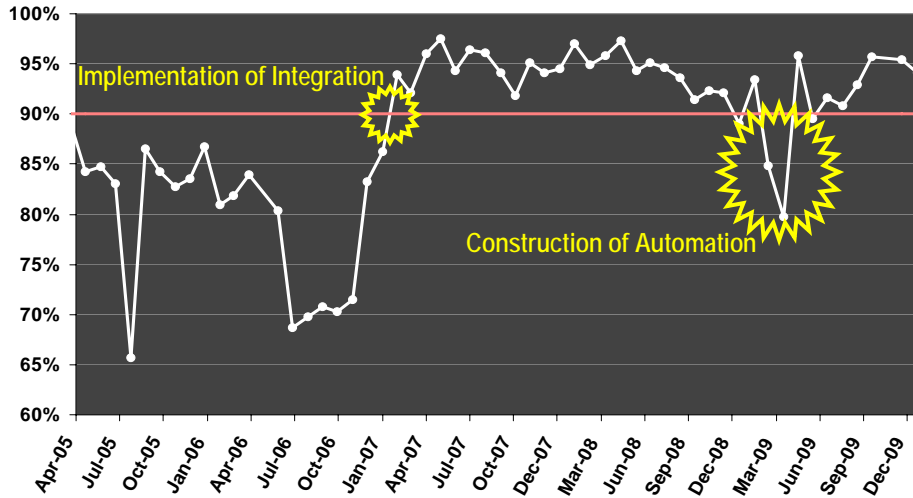


90% 30.9 min
Mean: 26.1 min
Std Dev: 3.5 min



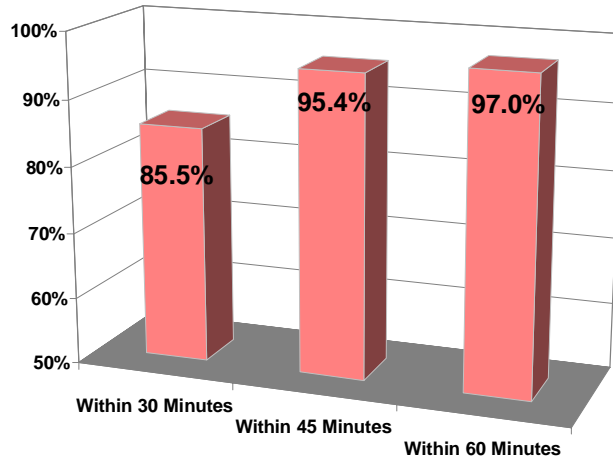
Saint Francis Hospital
Saint Francis Results

Troponin TAT Goal Achievement



Saint Francis Hospital
Saint Francis Results

Troponin I Turnaround Time
December 2009



Saint Francis Hospital ***Areas of Excellence***

- **Workstation Consolidation**
- **Standardized Chemistry and Immunoassay with one vendor**
- **Continued to operate throughout renovation with acceptable TAT**
- **Management of employees throughout change**
- **Working within the established timeline**
- **Accountability by lab leadership**



Saint Francis Hospital ***Areas of Improvement***

- **Promotion of the laboratory within the Health System**
- **Consolidation of Reference and Processing Departments**
- **Quicker turnaround time on Information Systems projects**



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