A Sample Dashboard Report

From the Great Boards Website, www.GreatBoards.org

"Comprehensive Dashboard Boosts Board's Effectiveness," reprinted from the *Great Boards* newsletter, Fall 2003

Complete Sample Dashboard developed by Middlesex Health System, Middletown, CT

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Comprehensive Dashboard Boosts Board's Effectiveness

By Barry S.Bader

Middlesex Health System in Middletown, Conn., over the last year has put in place a comprehensive, highly readable dashboard of key performance measures that not only has enhanced board effectiveness, but also has strengthened the hospital's ties with local businesses and health plans.

"We always had the information, but it was never in one place," explains Susan Menichetti, the health system's vice president for administration, who directed the dashboard's development. "The problem has always been culling down the list of indicators, and we have struggled with how to explain the indicators. It took discipline to say what each indicator meant and how the benchmarks were set."

Report Features

Many boards are adopting dashboards and balanced scorecards. Middlesex's approach includes a number of practices worth replicating:

- The board receives an integrated set of reports quarterly. First, a brief narrative summarizes the past quarter's performance, directs attention to trends of note and explains any newly added measures.

- An overall dashboard report shows key indicators of financial performance, operations, service to patients and physicians, human resources, quality of care, customer service and patient safety.

This report is color-coded (see an excerpt from the report, below) to show whether performance is on target (green), better than expected (blue) or worse than expected (red).

- Board members wanting more detail about a specific indicator can flip to a page showing—at a

see DASHBOARD, page 6

Excerpt: Financial Indicators from Middlesex Health System's Dashboard Report for the Governing Board

Target Key

■ Better Than Expected ■ Expected ■ Worse Than Expected □ N/A

Financial

1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	YTD	
■	■	■	□	■	Operating Margin
■	■	■	□	■	Days Cash on Hand
■	■	■	□	■	Days in Accounts Receivable
■	■	■	□	■	Debt Service Coverage Ratio

3rd Qtr.	YTD			
■ 7.70%	■	Operating Margin *3rd Quarter Budget = 2.3%* *3rd Quarter 2002 = 2.3%*	■ Above Budget ■ Budget ■ Below Budget	Measure of the hospital's financial viability absent investment income and charitable contributions;indicates the hospital's internal cash-generating ability essential for meeting debt service obligations. The 2% benchmark is internally developed and believed to be a reasonable target to fund future investments in technology and infrastructure. Historically, the average operating margin in the state has been 1%. In the last several years, however, the industry margins in Connecticut have been negative. For Fiscal 2001, the average operating margin in the state was slightly over breakeven at 0.2%.
■ 32.8	■	Days Cash on Hand *3rd Quarter Budget = 30.0* *3rd Quarter 2002 = 31.6*	■ >30 Days ■ 30 Days ■ <30 Days	Indicates the number of days the hospital could operate if no further revenue were received; reflects the hospital's ability to pay operating expenses with operating cash. Statewide statistics are not useful as a benchmark since hospitals account for portions of their cash differently. Some show all of it under the hospital while others apportion it between the hospital and a related entity.
■ 57	■	Days in Accounts Receivable *3rd Quarter Budget = 60* *3rd Quarter 2002 = 60.4*	■ <65 Days ■ 65 Days ■ >65 Days	Indicates the number of days revenue the hospital is owed by payors; an indicator of the strength of the hospital's cash flow. The 65 day benchmark is internally set. Statewide statistics are not useful as a benchmark because hospitals use different accounting methods.
■ 5.8	■	Debt Service Coverage Ratio *3rd Quarter Budget = 1.25* *3rd Quarter 2002 = 5.3*	■ >1.2 ■ 1.25 ■ <1.25	Measures the ratio of funds available for payment of year's principal and interest payment obligations; proxy for debt repayment ability or creditworthiness. The target of 1.25 is dictated by the debt covenants in the hospital's CHEFA bond documents.

DASHBOARD, from page 5

glance—a simple but technically accurate definition of the measure, an explanation of how the target was set, and another color-coded display comparing current and year-to-date performance against the target.

- Many indicators are staples of performance measurement, such as overall patient satisfaction, operating margin and sentinel events. Sometimes Middlesex adds indicators so the board can monitor specific priorities. For example, when medical technologists were in short supply, indicators tracked the turnover and vacancy rates in these personnel areas. Once management stabilized the staffing, the indicators were removed.

- The indicators are not produced just for the board. The board's committees, medical executive committee and management and supervisory staff get and use the same reports for oversight and improvement purposes, explains CEO Robert Kiely.

Using the Information

How has the board responded? "The report allows the board to ask what about this and why that," says Kiely. "It is a stimulus for more discussion. We used to do detailed QI reports, and you lose the forest for the trees."

The board uses the dashboard to hold management accountable for meeting performance targets and to support improvement initiatives.

For example, the board asked for corrective action to resolve problems in accounts receivable, says Menichetti. After learning about the national patient safety goals, the board asked that an indicator be added for "surgical site marking."

"By the time the report is produced, the info is about three months behind, so often we've fixed problems that appear in the 'red zone,'" says Menichetti. In that way, "the report is like an insurance policy for the board that demonstrates management in fact fixes the problems it finds."

For example, Middlesex was running a $1 million deficit as of February of 2003. By the time the board received that report, management was well into implementing a set of initiatives that by the third quarter created a $3 million surplus.

For more information, contact Robert Kiely at (860) 344-6150 or Susan Menichetti at (860) 704-3001 or Susan_Menichetti@midhosp.org.

On the Web site

See a complelete narrative and dashboard report from Middlesex Health System at www.GreatBoards.org.

An Unanticipated Benefit

The dashboard has turned into a tool to enhance stakeholder communications.

Several years ago, Middlesex Health System and many of its physicians balked at a contract with a major health plan, arguing its rates were too low to provide quality care. Local businesses were concerned about possible disruption in coverage for their employees, and Middlesex needed their support while hanging tough on negotiating fair reimbursement, explains CEO Robert Kiely. But documenting the hospital's quality and efficiency to non-clinician business people wasn't easy.

That's where the dashboard comes in. "We use it whenever we want to tell the Middlesex story," says Kiely.

Today, under the aegis of the local Chamber of Commerce, a healthcare council has been formed that includes local businesses, medical directors of three managed care companies, insurance brokers, the hospital, physicians and others.

Middlesex officials can bring the dashboard reports to the healthcare council to document its results and compare its costs with other hospitals in the state and throughout New England, says Kiely.

MIDDLESEX HEALTH SYSTEM

Dashboard

October 2003

FISCAL 2003 – THIRD QUARTER & YEAR-TO-DATE
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REPORT OF MIDDLESEX HEALTH SYSTEM PERFORMANCE INDICATORS
FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2003

Target key

Better Than Expected	Expected	Worse Than Expected	N/A

Financial

1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	YTD	
					Operating Margin
					Days Cash on Hand
					Days in Accounts Receivable
					Debt Service Coverage Ratio

Human Resources

1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	YTD	
					Turnover All Employees
					Turnover Staff RNs
					Turnover Radiology Technologists
				N/A	Vacancies Staff RNs
				N/A	Vacancies Radiology Technologists
					Total FTEs per Adjusted Occupied Bed

Operations

1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	YTD	
					Average Daily Census
					Cost per Case Mix Equivalent Discharge
					Case Mix Index
					Medical/Surgical Length of Stay
					Overall Length of Stay (Excluding Newborns)
					Discharges
					Outpatient Surgeries
					Endoscopies
					Emergency Department Visits
					Radiology Visits
					Laboratory Visits

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Target key

Better Than Expected	Expected	Worse Than Expected	N/A

Quality of Care

1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	YTD	
■	■	■	□	■	Patient Satisfaction – *Inpatient, Outpatient Surgery, Surgical Center, Outpatient Tests and Treatments*
■	■	■	□	■	Patient Satisfaction – *Emergency Departments: Middletown, Marlborough, Shoreline*
■	■	■	□	■	Medication Errors
■	■	■	□	■	Patient Fall Rate
■	■	■	□	■	Percent Usage of Pathways
■	■	■	□	■	Total Unadjusted Mortality Rate
■	■	■	□	■	15 Day Readmission Rate
■	■	■	□	■	Primary Cesarean Birth Rate
■	■	■	□	■	Overall Cesarean Birth Rate
■	■	■	□	■	Vaginal Birth After Cesarean (VBAC) Rate
□	■	■	□	■	Cesarean Birth Surgical Site Infection Rate
□	■	■	□	■	Vaginal Birth Infection Rate
□	■	■	□	■	Newborn Nosocomial Infection Rate – Sepsis

1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	YTD	
■	■	■	□	■	Nosocomial Infection Rate - Surgical
□	■	■	□	■	Critical Care: Central Line Bloodstream Infections
□	■	■	□	■	Critical Care: Ventilator-related Pneumonia
□	■	■	□	■	Critical Care: Multi-drug Resistant Organism Isolates
□	■	■	□	■	Peripherally Inserted Central Catheter Bloodstream Infections
■	■	■	□	■	Sentinel Event
■	■	■	□	■	Near Miss
■	■	■	□	■	Incident Reports
■	■	■	□	■	Total Cases in Litigation
■	■	■	□	■	New Lawsuits
■	■	■	□	■	Total Cases in Litigation Not Previously Identified

MIDDLESEX HEALTH SYSTEM

Dashboard

October 2003

Target key

Better Than Expected	Expected	Worse Than Expected	N/A

National Voluntary Hospital Reporting Initiative

July 2002 through December, 2002

	Heart Attack (AMI) Care
☐	Ace Inhibitor for Left Ventricular Systolic Dysfunction (LVSD)
■	Aspirin at Arrival
■	Aspirin at Discharge
■	Beta Blocker at Arrival
■	Beta Blocker at Discharge
	Heart Failure (CHF) Care
■	Ace Inhibitor for Left Ventricular Systolic Dysfunction (LVSD)
■	Assessment of Left Ventricular Function
	Pneumonia Care
☐	Average Minutes Until First Antibiotic (less is better)
☐	Oxygenation Assessment
☐	Pneumococcal Vaccination

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Financial

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57		Days in Accounts Receivable 3rd Quarter Budget = 60 3rd Quarter 2002 = 60.4	<65 Days 65 Days >65 Days	Indicates the number of days revenue the hospital is owed by payors; an indicator of the strength of the hospital's cash flow. The 65 day benchmark is internally set. Statewide statistics are not useful as a benchmark because hospitals use different accounting methods.
5.8		Debt Service Coverage Ratio 3rd Quarter Budget = 1.25 3rd Quarter 2002 = 5.3	>1.25 1.25 <1.25	Measures the ratio of funds available for the payment of year's principal and interest payment obligations; proxy for debt repayment ability or creditworthiness. The target of 1.25 is dictated by the debt covenants in the hospital's CHEFA bond documents.

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Human Resources

3rd Qtr.	YTD		3rd Qtr.	YTD	
3.30%	10.70%	Turnover All Employees 3rd Quarter Budget = 2.5% 3rd Quarter 2002 = 3.0%	<2.5% 2.5% >2.5%	<12% 12% >12%	Measure of employee satisfaction/retention. Connecticut Hospital Association is beginning to track this statistic. Benchmark represents a stretch goal for improvement based on internal historical trends.
2.90%	8.75%	Turnover Staff RNs 3rd Quarter Budget = 2.0% 3rd Quarter 2002 = 1.59%	<2.0% 2.0% >2.0%	<10% 10% >10%	Measure of employee satisfaction/retention. Benchmark chosen based on experience in other Magnet Hospitals.
0.00%	1.60%	Turnover Radiology Technologists 3rd Quarter Budget = 2.5% 3rd Quarter 2002 = 3.0%	<2.5% 2.5% >2.5%	<15% 15% >15%	Measure of employee satisfaction/retention. Benchmark represents a stretch goal for improvement based on internal historical trends.
2.55%	N/A	Vacancies Staff RNs 3rd Quarter Budget = 11.5% 3rd Quarter 2002 = 10.2%		<11.5% 11.5% >11.5%	Measure of ability to attract new staff. Benchmark based on Connecticut Hospital Association average. Vacancy rate is computed on of the last day of the quarter.
1.78%	N/A	Vacancies Radiology Technologists 3rd Quarter Budget = 11.5% 3rd Quarter 2002 = 17%		<11.5% 11.5% >11.5%	Measure of ability to attract new staff. Benchmark based on Connecticut Hospital Association average. National statistics show an 18% shortage of technologists nationwide. Vacancy rate is computed on of the last day of the quarter.
5.04%	5.02%	Total FTEs per Adjusted Occupied Bed 3rd Quarter Budget = 4.63 3rd Quarter 2002 = 4.9		<Bdgt. Bdgt. >Bdgt.	This is a traditional measure used in the health care industry to measure staffing productivity. A hospital with a lower number calculated for this statistic is generally thought to be more efficient than a hospital with a higher number. An internal performance benchmark has been selected based upon the budgeted staffing level and patient volume incorporated in the hospital's current year operating budget. While Middlesex has historically performed at the state average for this measure, an internal benchmark has been selected because industry statistics have been skewed in recent years by the increased use of contracted labor which is not considered by this statistic.

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Operations

3rd Qtr.	YTD			
139	143	Average Daily Census 3rd Quarter Budget = 148 3rd Quarter 2002 = 141	Above Budget Budget Below Budget	Average number of patients receiving inpatient care as of midnight each day. Decreasing volumes may signal deteriorating financial performance and creditworthiness; trends also indicate effectiveness of marketing strategy, ability to attract patients and physicians, and changes in the way care is delivered.
$5,772	$5,780	Cost Per Case Mix Adjusted Equivalent Discharge 3rd Quarter Budget = $5,453 3rd Quarter 2002 = $5,874	Below Budget Budget Above Budget	Measure of efficiency which takes into consideration inpatient and outpatient volume fluctuations as well as inpatient acuity fluctuations. Historically, Middlesex has been a top performer in comparison to the rest of the hospitals in the state. In Fiscal 2001, the latest time period available, Middlesex is the second lowest cost hospital in the state. As a result, an internal benchmark based on the budget makes the most sense.
1.1	1.1	Case Mix Index 3rd Quarter Budget = 1.1 3rd Quarter 2002 = 1.055	Above Budget Budget Below Budget	A numerical value that indicates the severity of the illness of the total patient population. The base value is 1. The higher the value, the more serious the illnesses. Each patient is assigned a value corresponding to his or her illness based on DRG (Diagnosis Related Group). All the values are added together and then divided by the total number of patients to obtain the CMI. There are more than 500 DRGs, but considerable variations in severity of illness and resource intensity can exist within each DRG, making this index an indication of severity without being a true measure.
3.98	4.08	Medical/Surgical Length of Stay 3rd Quarter Budget = 4.20 3rd Quarter 2002 = 4.23	Below Budget Budget Above Budget	Proxy for resources used per medical/surgical admission, the largest source of inpatient revenue; average length of stay significantly longer than median group values indicates operational inefficiencies. The average medical/surgical length of stay for the state for the second quarter of Fiscal 2002 was 5.10.
4.02	4.16	Overall Length of Stay - Excluding Newborns 3rd Quarter Budget = 4.30 3rd Quarter 2002 = 4.30	Below Budget Budget Above Budget	Key indicator of utilization. Proxy for average resources used per admission for all types of inpatient admissions: medical/surgical, maternity, psychiatric, pediatric. The statewide average overall length of stay (excluding newborns) for the second quarter of Fiscal 2002 was 5.37.
3,275	9,725	Discharges 3rd Quarter Budget = 3,286 3rd Quarter 2002 = 3,047	Above Budget Budget Below Budget	Tracks trends in overall inpatient volume, the largest source of hospital revenue.

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Operations

3rd Qtr.	YTD			
2,329	7,207	Outpatient Surgeries — 2003 — 3rd Quarter Budget = 2,697 3rd Quarter 2002 = 2,628	Above Budget Budget Below Budget	Tracks trends in outpatient surgical volume, combining statistics for the surgery center on Saybrook Road as well as the hospital.
1,342	3,615	Endoscopies — 2003 — 3rd Quarter Budget = 1,407 3rd Quarter 2002 = 1,152	Above Budget Budget Below Budget	Tracks trends in the volume of endoscopic procedures, an increasing source of outpatient revenue for hospitals.
18,930	52,979	Emergency Department Visits — 2003 — 3rd Quarter Budget = 19,521 3rd Quarter 2002 = 18,527	Above Budget Budget Below Budget	Proxy for utilization of the Emergency Departments in Middletown, Essex, and Marlborough. Particularly important, given the fact that the hospital receives more than 50% of its inpatient admissions from the Emergency Departments.
31,091	90,869	Radiology Tests — 2003 — 3rd Quarter Budget = 33,299 3rd Quarter 2002 = 27,648	Above Budget Budget Below Budget	Indicates trends in the volume of radiology testing at the hospital, MMC Shoreline, MMC Marlborough, and the Saybrook Road facility including MRI, CT Scanning, Ultrasound, Nuclear Medicine, etc.
198,549	594,910	Laboratory Tests — 2003 — 3rd Quarter Budget = 213,192 3rd Quarter 2002 = 202,576	Above Budget Budget Below Budget	Indicates trends in volume of laboratory tests performed throughout the hospital system, as well as trends in the number of laboratory specimens sent to the hospital laboratory for processing.

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Quality of Care

3rd Qtr.	YTD			
97.90%	97.95%	**Patient Satisfaction –** *Inpatient, Outpatient Surgery, Surgical Center, Outpatient Tests and Treatments* 3rd Qtr. Expected = 80 - 90% 3rd Quarter 2002 = 97.8%	91-100% 80-90% <80%	Measure of patient perception of the quality of care and satisfaction with services. Score represents the mathematical mean (average) for all questions asked on the survey. The four areas surveyed are Inpatient, Outpatient Surgery, Surgical Center, and Outpatient Tests and Treatments. Benchmark represents the score recommended by the satisfaction survey vendor as indicative of high performance.
87.76%	86.28%	**Patient Satisfaction –** *Emergency Departments: Middletown, Marlborough, Shoreline* 3rd Qtr. Expected = 75 - 85% 3rd Quarter 2002 = 86.3%	86-100% 75-85% <75%	Measure of patient perception of the quality of care and satisfaction with emergency department services. Score represents the mathematical mean (average) for all questions asked on the survey. The three areas surveyed are the Middletown, Marlborough, and Shoreline emergency departments. Benchmark represents the score recommended by the satisfaction survey vendor as indicative of high performance.
0.07%	0.009%	**Medication Error Rate** Number of 3rd Qtr. Errors 2003 = 19 3rd Qtr. Expected = 0.01% - 0.07% 3rd Quarter 2002 = 0.01%	< .01% .01 - .07% >.07% (or isolated case with critical negative outcome)	A measure of quality and patient safety. The rate of error reflects variation in the systems or processes of physician ordering, pharmacy dispensing, and nursing administration of medications. The rate is calculated by dividing the number of errors by the total number of doses dispensed. An error is defined as the wrong drug, dose, route, time, or patient. Although error is inherent in all human processes, the benchmark was set to reflect a goal of as close to 0% as possible. There are no national standard benchmarks for medication error rates.
3.45%	3.96%	**Patient Fall Rate (per 1000 patient days)** Number of 3rd Qtr. Falls = 43 3rd Qtr. Expected = 3.5 - 4.5% 3rd Qtr. 2002 = 5.57%	< or = 3.4% 3.5 - 4.5% > or = 4.6% (or isolated case with critical negative outcome)	A measure of quality and patient safety. Falls generally result, at least in part, from patient condition and are most often caused by disease state, weakness, confusion, and medications. Physician and nursing measures to assess for and prevent falls reduce the number of falls in the larger population of those patients with a potential for falls. The rate is calculated by dividing the number of falls by the number of patient days. The benchmark was established by reviewing our own internal, historical fall rates. The hospital recently began participating in a national reference database for fall rates and will establish new benchmarks on the basis of this in the future.
85%	79%	**Percent Usage of Pathways** 3rd Qtr. Expected = 70 - 84% 3rd Quarter 2002 = 78%	85 - 100% 70 - 84% <70%	A measure of physician use of established, standardized practice guidelines for selected diagnoses. The use of clinical pathways is not mandated, but recommended. Clinical pathways serve to lower length-of-stay and cost and ensure care meets a maximum standard. Patient condition is a legitimate reason to not utilize a specific pathway. The percent usage is established by dividing the number of patients on a pathway by the total number of patients with the pathway diagnosis. Literature suggests that 85% of patients with a designated diagnosis may be appropriate for a clinical pathway.

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Quality of Care

3rd Qtr.	YTD			
2.37%	2.34%	Total Unadjusted Mortality Rate 3rd Qtr. Expected = 2.6 - 3.0% 3rd Quarter 2002 = 2.16%	<2.6% 2.6 - 3.0% >3.0%	The rate is calculated by dividing the total number of inpatient deaths by the total number of inpatients. Hospice patients are not included in either the numerator or denominator. It is an unadjusted or raw mortality rate as the cases of death have not been adjusted by a clinical severity system to predict which deaths are anticipated. The hospital is in process of selecting a software system, which will clinically and statistically adjust and predict rates of mortality. The benchmark has been established utilizing the Maryland Indicator Project, a national clinical reference database.
3.01%	2.79%	15 Day Readmission Rate 3rd Qtr. Expected = 3 - 4% 3rd Quarter 2002 = 1.95%	<3% 3 - 4% >4%	The rate is calculated by dividing the total number of patients readmitted within 15 days for the same or related condition by the total number of inpatient discharges. Because it is an unadjusted or raw rate, it reflects both those cases in which the readmission is unavoidable, or patient condition based, and those which may be due to premature discharge or a complication of the first admission. The benchmark has been established, utilizing the Maryland Indicator Project, a national clinical reference database.
14.45%	15.95%	Primary Cesarean Birth Rate 3rd Qtr. Expected = 16.1% 3rd Quarter 2002 = 13.32%	< 16.1% 16.1% >16.1%	Measures the number of deliveries in which the patient has had a cesarean for the first time. Keeping the rate of primary cesarean births low (by performing only medically necessary cesarean births) subsequently lowers repeat and overall cesarean birth rates. The rate is calculated by dividing the total number of first-time cesareans by the total number of deliveries. The benchmark reflects the primary cesarean birth rate for the nation in the year 2000 (this rate is 4% higher than 1999 and 10% higher than the low reported for 1996-1997 nationally).
25.50%	26.50%	Overall Cesarean Birth Rate 3rd Qtr. Expected = 23.0% 3rd Quarter 2002 = 22.18%	< 23% 23% >23%	The rate is calculated by dividing the total number of cesarean births (primary or first time cesareans and repeat) by the total number of deliveries. The benchmark reflects the recommendations of the American College of Obstetrics and Gynecology.
7.14%	10.71%	Vaginal Birth After Cesarean (VBAC) Rate 3rd Qtr. Expected = 20% 3rd Quarter 2002 = 10.34%	> 20% 20% <20%	The rate is calculated by dividing the total number of VBACs performed by the total number of patients eligible for VBAC in accordance with the clinical criteria. The benchmark reflects the recommendations of the American College of Obstetrics and Gynecology. Because of recent clinical evidence relative to the rate and severity of maternal and newborn complications with VBACs, there has been a national downward trend in VBAC rates, although the benchmark remains unchanged.

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Quality of Care

3rd Qtr.	YTD			
0.99%	1.16%	Cesarean Birth Surgical Site Infection Rate Number of 3rd Qtr. Infections = 1	< 1.4% 1.4% >1.4%	Measures the number and rate of infections acquired post-delivery and reflects the impact of infection control techniques and procedures. The rates are calculated by dividing the number of post cesarean infections (surgical site) by the number of cesarean births. The target was established first by evaluating national rates as published by the CDC, and then setting more rigid targets, based on internal historical rates which have been lower than CDC rates.
0.0%	0.0%	Vaginal Birth Infection Rate Number of 3rd Qtr. Infections = 0	< 1% 1% >1%	Measures the number and rate of infections acquired post-delivery and reflects the impact of infection control techniques and procedures. The rates are calculated by dividing the number of vaginal infections (endometritis) by the number of vaginal births. The CDC does not track this statistic. We have chosen 1% until we have more internal data and are able to establish our own benchmark.
0.0%	0.0%	Newborn Nosocomial Infection Rate - Sepsis Number of 3rd Qtr. Infections = 0	<1.0% 1.0% >1.0%	Measures the number and rate of septic infections in newborns and reflects the impact of infection control techniques and procedures. The rates are calculated by dividing the number of septic infections by the number of newborn patient days per thousand. The target for newborn sepsis has not been established by the CDC and will be determined internally once enough data has been collected to establish a benchmark.
0.51%	0.44%	Nosocomial Infection Rate – Surgical Number of 3rd Qtr. Infections = 14 3rd Qtr. Expected = 1.0% 3rd Quarter 2002 = 0.45%	<1% 1% >1%	Measures the number and rate of infections which occur in patients in the critical care unit. Critical care patients are the most severely ill patients and, as such, are compromised, and more likely to acquire infection. The rate is established by dividing the number of critical care infections by the total number of critical care patients. The target was established first by evaluating national rates as published by the CDC, and then setting more rigid targets, based on internal historical rates which have been lower than CDC rates.
2.84%	3.68%	Critical Care: Central Line Bloodstream Infections Number of 3rd Qtr. Infections = 1	< 3.80% 3.80% >3.80%	Measures the number and rate of central line related bloodstream infections in the critical care unit. Critical care patients are the most severely ill patients and, as such, are compromised, and more likely to acquire infection. The rate for bloodstream infection is established by dividing the number of bloodstream infections by the number of device days per 1000 (number of days patient has a central line). The targets for these are the national rates as published by the CDC.

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Quality of Care

3rd Qtr.	YTD			
3.05%	9.28%	Critical Care: Ventilator-related Pneumonia Number of 3rd Qtr. Infections = 1	< 8.7% 8.7% >8.7%	Measures the number and rate of ventilator-related pneumonia in the critical care unit. Critical care patients are the most severely ill patients and, as such, are compromised, and more likely to acquire infection. The rate for ventilator-related pneumonia is obtained by dividing the number of pneumonias by the number of device days per 1000 (number of days patients are on a ventilator). The target represents the national rates as published by the CDC.
2.23%	5.35%	Critical Care: Multi-drug Resistant Organism Isolates Number of 3rd Qtr. Infections = 2	< 7% 7% >7%	Measures the number and rate of multi-drug resistant organism isolate infections in the critical care unit. Critical care patients are the most severely ill patients and, as such, are compromised, and more likely to acquire infection. The rate for MDRO is obtained by dividing the number of MDRO Isolates by patient days per thousand. The CDC does not track this statistic. We have chosen 7% until we have more internal data and are able to establish our own benchmark.
0.00%	1.36%	Peripherally Inserted Central Catheter Bloodstream Infections Number of 3rd Qtr. Infections = 0	<4.3% 4.3% >4.3%	Measures the number and rate of Peripherally Inserted Central Catheter (PICC) related blood stream infections. The rate for PICC bacteremia infection is established by dividing the number of infections by the number of device days per 1000. The CDC does not track this statistic. We have chosen 4.3% until we have more internal data and are able to establish our own benchmark.

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Quality of Care

3rd Qtr.	YTD			
0	3	Sentinel Event 3rd Qtr. 2003 Expected = 0 3rd Quarter 2002 = 0	0 >0	A measure of patient safety, a sentinel event is any unexpected occurrence involving death or serious physical or psychological injury, or risk thereof. An event is only sentinel if it is not related to the natural course of the patient's illness or underlying condition. They include death (preventable or resulting from treatment); major permanent loss of function (preventable or caused by treatment); infant abduction or infant discharged to wrong home; confirmed rape of a patient by another patient or staff; hemolytic transfusion reaction due to major blood incompatibility; surgery on the wrong patient or body part; suicide in a 24 hour care setting. A target of zero is set.
0	4	Near Miss 3rd Qtr. 2003 Expected = 0 3rd Quarter 2002 = 0	0 >0	A measure of patient safety, a near miss is any variation in the process of care which did not result in an adverse outcome, but for which a recurrence carries a significant chance of serious adverse outcome. The target is set at zero (0) because significant variation in care should be eliminated. However, since a major goal of the new patient safety program is to encourage reporting of near misses as potential safety threats which should be corrected prior to an actual event; and there is no way of predicting how many near misses actually occur, this report should not be negatively interpreted if near misses occur and are reported.
285	968	Incident Reports Quarterly Target 2003: 292 Quarterly Target 2002: 248	Increase in # Same # Decrease in #	This is a raw data measurement of patient safety. An incident is defined as any event which is not consistent with usual operations and may result in an injury or perceived injury to a patient or visitor. The goal is to encourage reporting, however, since this report is generated by staff and may require self-reporting, it can be influenced by time constraints, culture and staff awareness. Presently, the incident report format is being revised to enhance ease of reporting, timeliness of reports and provide anonymity for the reporter. There is no benchmark data available regarding volume of incidents, however, since there is an inherent value in open and honest reporting, it is anticipated that this number will increase and should not be perceived negatively. Increases in the number should be viewed as a positive change in the culture of the organization toward eliminating potential errors.

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Quality of Care

3rd Qtr.	YTD			
18	18	Total Cases in Litigation 3rd Qtr. 2002 = 9	<14 14 >14	The volume of cases in litigation indicates the potential for liability and financial risk to the hospital. Given the litigious climate, this is a raw data measurement and may not indicate the merit of the lawsuit. Additional review of individual cases for breaches in the standard of care, trends of claims/allegations, indemnity reserves and current jury awards would also need to be considered. There is no benchmark measure available for this indicator aside from our own lawsuit history. Therefore ranges have been established based on the average volume of lawsuits.
0	1	New Lawsuits 3rd Qtr. 2002 = 3	<3 YTD 3 YTD >3 YTD	The volume of new lawsuits reflects the possibility of liability and financial exposure to the hospital. Since it is difficult to anticipate the likelihood of cases which will proceed to suit and no benchmark data exists, this measurement has been based on our history of average number of suits opened per year.
0	0	Total Cases in Litigation Not Previously Identified as a Potential Claim 3rd Qtr. 2002 = 2	0 >0	This indicator evaluates the effectiveness of the Risk Management Program's risk identification process. The goal of the program is to identify potential claims in a timely fashion in order to reduce financial risk and to rectify areas of potential risk in a timely fashion. The internal goal is 0.

National Voluntary Hospital Reporting Initiative

July 2002 through December, 2002

N/A*	**Heart Attack (AMI) Care** Ace Inhibitor for Left Ventricular Systolic Dysfunction (LVSD)	>93% >=77% <77	A measure of the quality of care in treating congestive heart failure. In CHF, the heart is a weak pump and ACE inhibitors prevent further weakening. The rate is determined by dividing the number of patients who receive an ACE inhibitor by the number of patients that should have. Top 10% of JCAHO-accredited Hospitals scored equal to or higher than 93%;Top 50% scored equal to or higher than 77%; CT benchmarks not yet available.
	Aspirin at Arrival 95% of 85 patients	100% >=94% <94%	A measure of the quality of care in treating a heart attack. It prevents further clotting in heart attack patients. The rate is calculated by dividing the number of patients given aspirin by the total number of patients in which aspirin was indicated.Top 10% of JCAHO-accredited Hospitals scored equal to or higher than 100%;Top 50% scored equal to or higher than 94%; CT benchmarks not yet available.
	Aspirin at Discharge 91% of 45 patients	>=98% >=93% <93%	A measure of quality in the long term care of patients who have had a heart attack. Maintenance dosing of aspirin on a daily basis is helpful in preventing additional heart attacks. The rate is calculated by dividing the number of patients discharged with a prescription for aspirin by the total number of patients in which aspirin was indicated. Top 10% of JCAHO-accredited Hospitals scored equal to or higher than 98%;Top 50% scored equal to or higher than 93%; CT benchmarks not yet available.
	Beta Blocker at Arrival 98% of 74 patients	>=97% >=87% <87%	A measure of the quality of care in treating a heart attack. During a heart attack, the heart tries to compensate for its weakened pumping action by beating faster, which puts more strain on it. Beta blockers reduce the heart's tendency to beat faster. The rate is calculated by dividing the number of patients given a beta blocker on admission by the number of patients appropriate for a beta blocker. Top 10% of JCAHO-accredited Hospitals scored equal to or higher than 97%; Top 50% scored equal to or higher than 87%; CT benchmarks not yet available.
	Beta Blocker at Discharge 95% of 43 patients	>=98% >=89% <89%	A measure of the quality of care in the long term treatment of a heart attack. Maintenance dosing of a beta blocker is helpful in keeping the heart from beating faster, thereby enhancing its pumping ability. The rate is calculated by dividing the number of patients discharged with a prescription for a beta blocker by the number of patients in which beta blocker is indicated. Top 10% of JCAHO-accredited Hospitals scored equal to or higher than 98%; Top 50% scored equal to or higher than 89%; CT benchmarks not yet available.
	Heart Failure (CHF) Care Ace Inhibitor for Left Ventricular Systolic Dysfunction (LVSD) 82% of 45 patients	>=92% >=75% <75%	A measure of quality in treating heart attack patients with left ventricular systolic dysfunction. ACE inhibitors prevent further weakening of the heart in patients who already have weakening. The rate is calculated by dividing the number of patients who receive ACE inhibitors by the number of patients who should receive ACE inhibitors. Top 10% of JCAHO-accredited Hospitals scored equal to or higher than 92%; Top 50% scored equal to or higher than 75%; CT benchmarks not yet available.
	Assessment of Left Ventricular Function 90% of 121 patients	>=96% >=81% <81%	A measure of the quality of care in diagnosing congestive heart failure. A test is performed to determine if the lower left chamber (1 of 4 chambers) of the heart is pumping appropriately. Dysfunction indicates the heart as a pump is too weak. The rate is calculated by dividing the number of patients with the assessment done, by the number of patients in which it should have been done.Top 10% of JCAHO-accredited Hospitals scored equal to or higher than 92%; Top 50% scored equal to or higher than 81%; CT benchmarks not yet available.

National Voluntary Hospital Reporting Initiative

July 2002 through December, 2002

N/A*	**Pneumonia Care** Average Minutes Until First Antibiotic (less is better)	<=169 minutes <=241 minutes >241 minutes	A measure of quality of care in treating pneumonia. Antibiotics should be given within 4 hours of diagnosing community acquired pneumonia. The rate is calculated by dividing the number of patients given antibiotics within 4 hours by the number of patients who are appropriate for antibiotics. Top 10% of JCAHO-accredited Hospitals scored equal to or less than 169 minutes; Top 50% scored equal to or less than 241 minutes; CT Benchmarks not yet available.
N/A*	Oxygenation Assessment	100% >=97% <97%	A measure of the quality of care in diagnosing patients with CAP. The RN administers a test (pulse oximetry) which determines hot saturated the patient's blood is with oxygen. The rate is determined by dividing the number of patients in which the assessment was done by the total number of pneumonia patients. Top 10% of JCAHO-accredited Hospitals scored equal to 100%; Top 50% scored equal to or higher than 97%; CT Benchmarks not yet available.
N/A*	Pneumococcal Vaccination	>=98% >=93% <93%	A measure of the quality of care in preventing pneumonia. A pneumococcal vaccine can prevent future occurrence of pneumonia. If a patient admitted with pneumonia has not had a vaccine (given by private doctor or convalescent home), the hospital administers the vaccine. The rate is determined by dividing the number of patients in which the vaccine was given by the number of patients eligible for the vaccine. Top 10% of JCAHO-accredited Hospitals scored equal to or higher than 98%; Top 50% scored equal to or higher than 93%%.

* If fewer than 25 cases are reported, the data is not shown

** Middlesex Hospital started abstracting this data in May, 2003