

DISCHARGE TIMELINESS FOR MOTHER BABY :

A SIX SIGMA PROJECT TO IMPROVE THROUGHPUT

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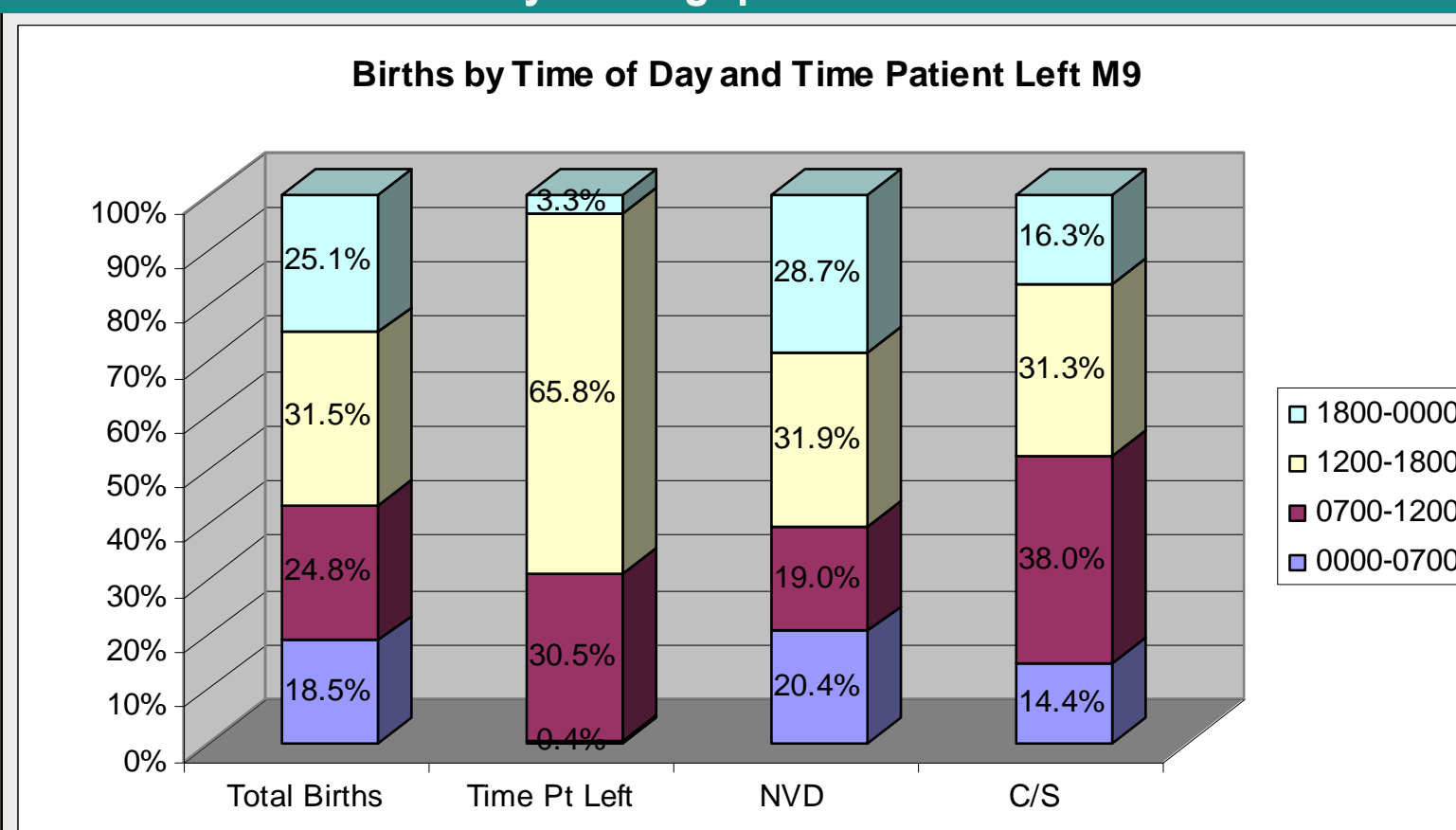
DEFINE

Opportunity/Problem Statement

Problem: Capacity on Postpartum Unit delayed care of patients coming into L&D for treatment and delivery. Delayed discharges compromised patient safety, patient and physician satisfaction, and facility revenues

Scope: An interdisciplinary team addressed processes that impacted timeliness of Mother/Baby discharges from the Postpartum Unit to expedite the discharge process and transfer of patients from L&D.

Baseline Maternity Throughput Metrics from March 2008



Areas Stabilized Through Collaboration of Team Discharge order time for Pediatricians and Obstetricians

Services provided day before discharge

- Circumcisions
- Hearing tests
- Car Seat Safety instructions
- Photography services
- Social Services intervention
- Paperwork completed by patient evening before discharge

MATERNITY THROUGHPUT GOALS

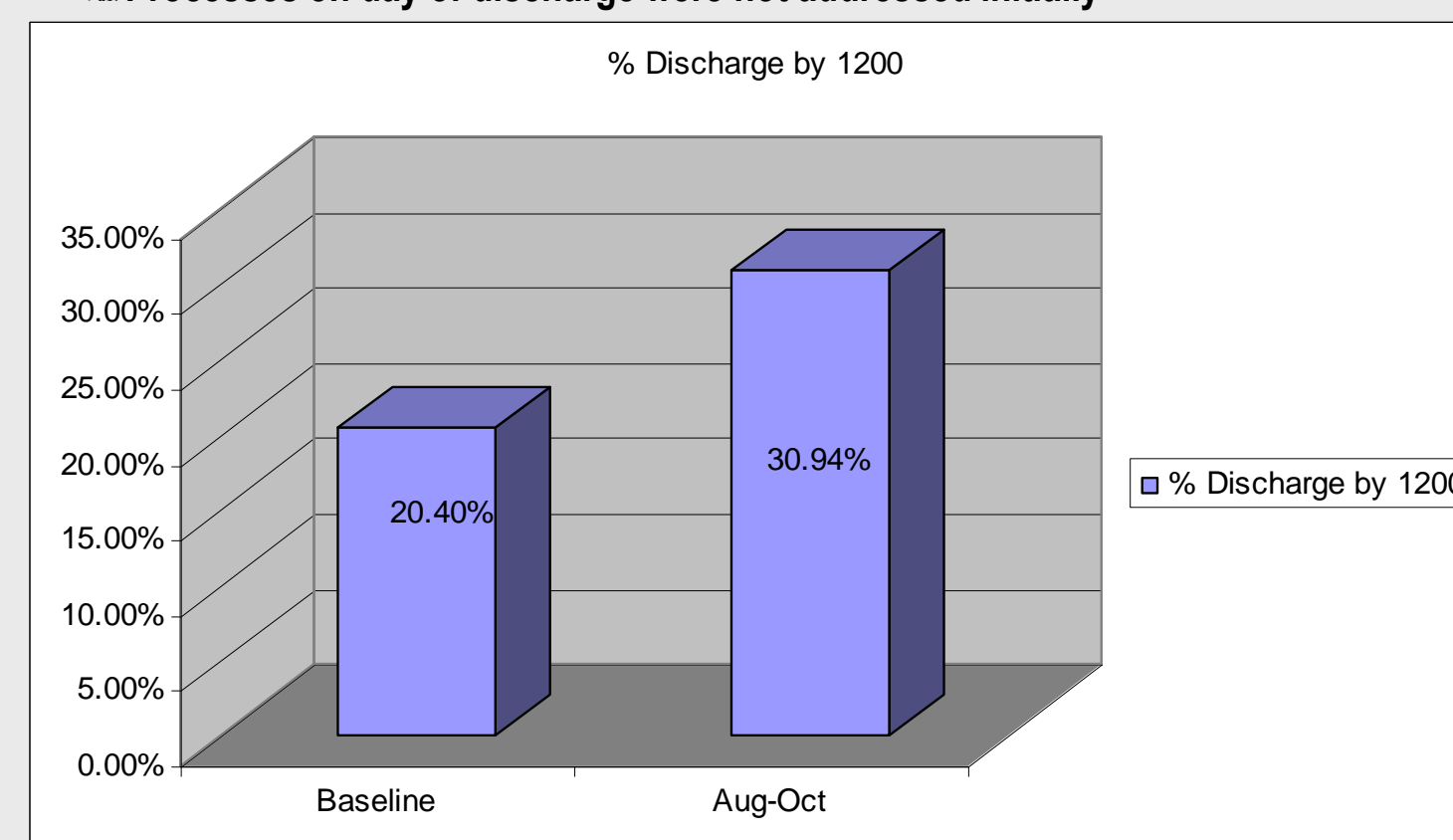
- Improve the time patient leaves the hospital by 1200 from 31.5% to 50%
- Decrease the time period between when the Mother/Baby couplet is discharged and when the couplet departs from the hospital : 75% of Mother/Baby Couplets will depart within 90 minutes of last discharge.
- Improve the skill level of charge nurse to manage throughput

To meet these goals the DMAIC (Define, Measure Analyze, Implement/Improve, Control) methodology of Lean Six Sigma was applied.

MEASURE//ANALYZE

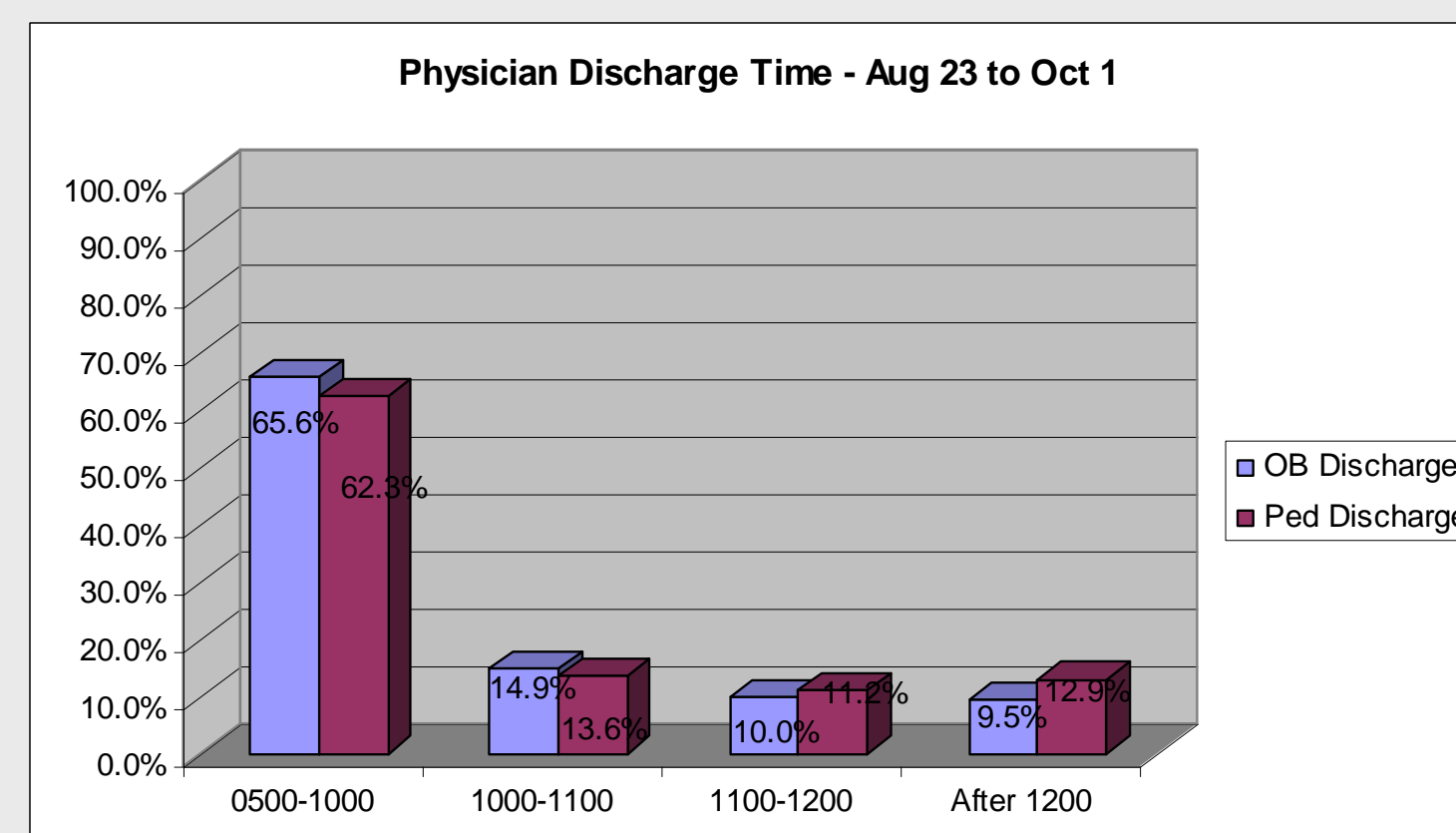
The analysis of the baseline throughput metrics:

- ≤ 69.1% of discharged patients left after 1200 through afternoon and evening hours of each day
- ≤ 55% of the infant deliveries occurred during the time frame
- ≤ indicates a low throughput daily
- ≤ Lack of capacity during certain times of the day.
- ≤ Stabilization of services before the day of discharge did not significantly improve throughput
- ≤ Processes on day of discharge were not addressed initially



PROCESSES ON DAY OF DISCHARGE

- Charge Nurse:** Effectiveness to manage throughput impacted Timeliness of discharges
- Staff nurses:** Not aware when discharge written by either Pediatrician or Obstetrician
- Patient Readiness for Discharge:** Patient delays to departing on day of discharge included transportation arrival time, knowledge of discharge Time of 1200 to depart, completion of education to prepare for care of self and infant
- Services received on day of discharge:** Discharge instruction completion, Diagnostic testing on some infants, Equipment delivery for infant home photo therapy for treatment of hyperbilirubinemia, Lactation needed for pump rentals or consultation
- Physician discharge times after 1200:** 12.9% for Pediatricians, 9.5% for Obstetricians



IMPLEMENTATION

Designate Charge Nurse Role

The Charge Nurse is a pivotal role in the promotion of an efficient Postpartum Throughput process. The Charge Nurse role was being rotated among nurses with different understanding and skill levels and it was preventing the standardization of Postpartum Throughput. Designating a core group of Charge Nurses with superior skills based on the *Charge Nurse Characteristics Evaluation Tool*, were assigned to the role on downshift. They were educated about throughput, instructed to relate discharged patients to each staff nurse. Throughput improved to 39% with mother/baby couplets leaving the unit within 90 minutes of the last discharge written, either mother or baby in Rapid Cycle 1. Delayed discharges were due to infant diagnostic testing, patient readiness, transportation to home, Lactation Consult needed but not done, and circumcision not done

Maternity Discharge Work flow

Rapid cycle II maintained the utilization of the charge nurse core group. An alert was created and implemented within the electronic documentation system to alert the nurse when the mother/baby couplet were discharged by the physician. Throughput improved to 47% of mother/baby couplets leaving the unit within 90 minutes after the discharge was written for either mother or baby in Rapid cycle II.. Delayed discharges due to infant diagnostics, patient readiness, and circumcision done on day of discharge.

Maternity Expected Discharge List

Maternity Expected Discharge List was developed. Patients for potential discharge the next day were listed. Staff nurses provided the patients information about discharge time before 1200, to secure transportation home, and completion of individualized education based on The Maternal Education Assessment, completed by each postpartum patient. 52% of mother/baby couplets departed the unit by 1200 and 49% departed within 90 minutes of last mother or baby discharge in rapid cycle III. Delays were due to mother with NICU baby, transportation home, circumcision and infant diagnostics

Lactation Consultation

Electronic consultation was developed within EMR. Consultation was initiated by nursing assessment of potential or active problems with breastfeeding. Lactation Consultants used a portable laptop to prioritize work list, document assessment, education and plan of care, with nursing and pediatrician accessibility for review. Initial consultations on the day of discharge declined, communication improved as well as quality of interdisciplinary care

Photo Therapy Equipment Consignment

Agreement with Equipment company provided storage of bili-blankets for home photo therapy eliminating waiting for delivery

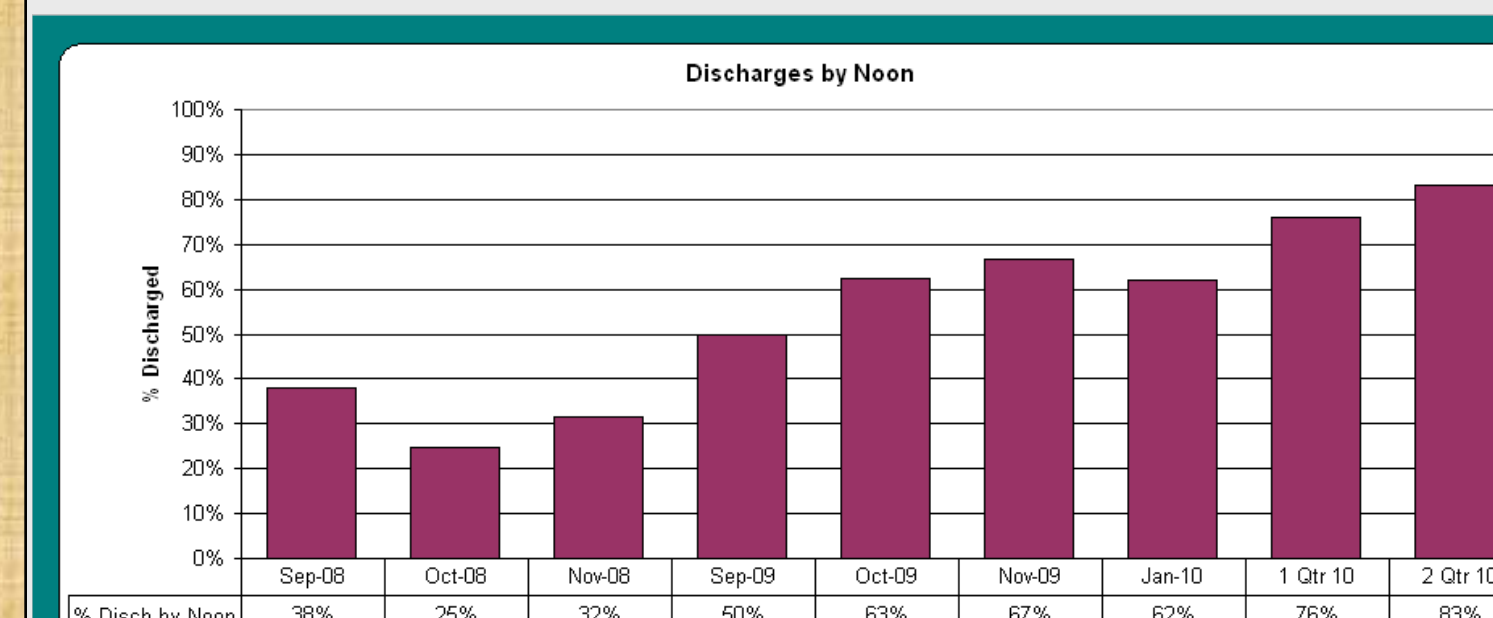
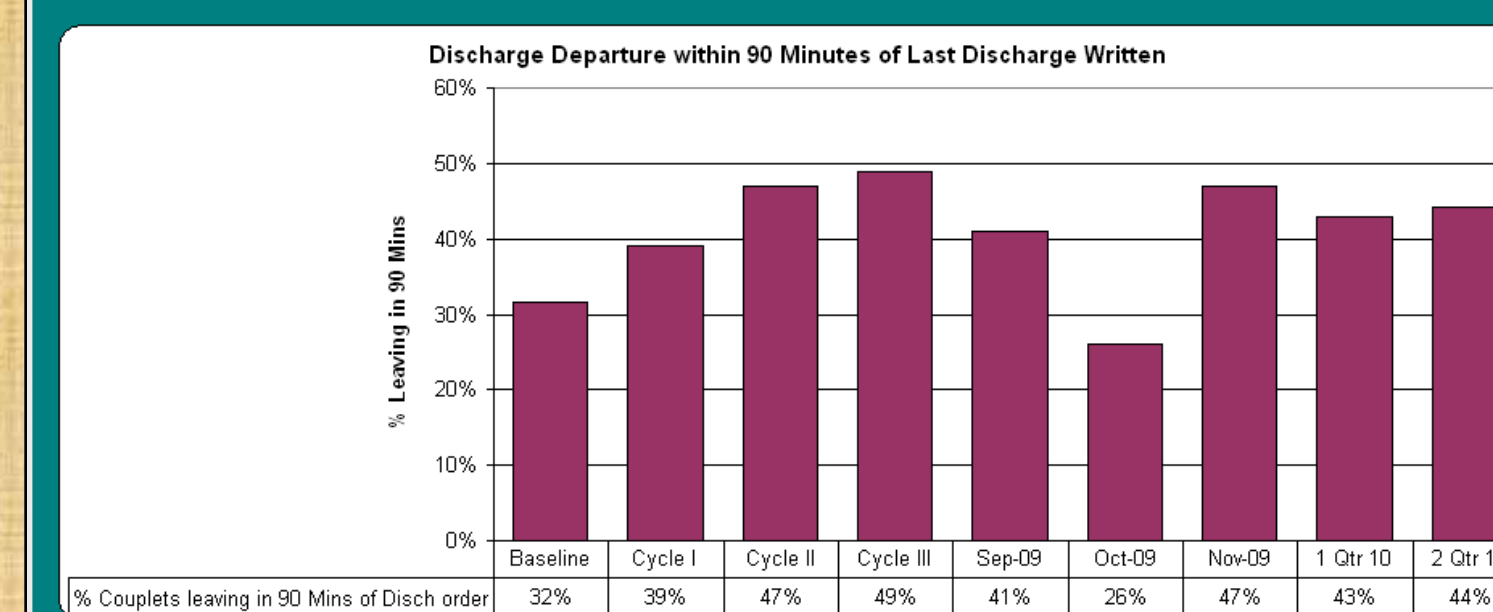
Use of Teletracking with Transport Aide

Next day discharges were entered in electronic system. Activated alert to transport of readiness to depart. Patient escorted to transportation within 10 to 20 minutes.

IMPROVE

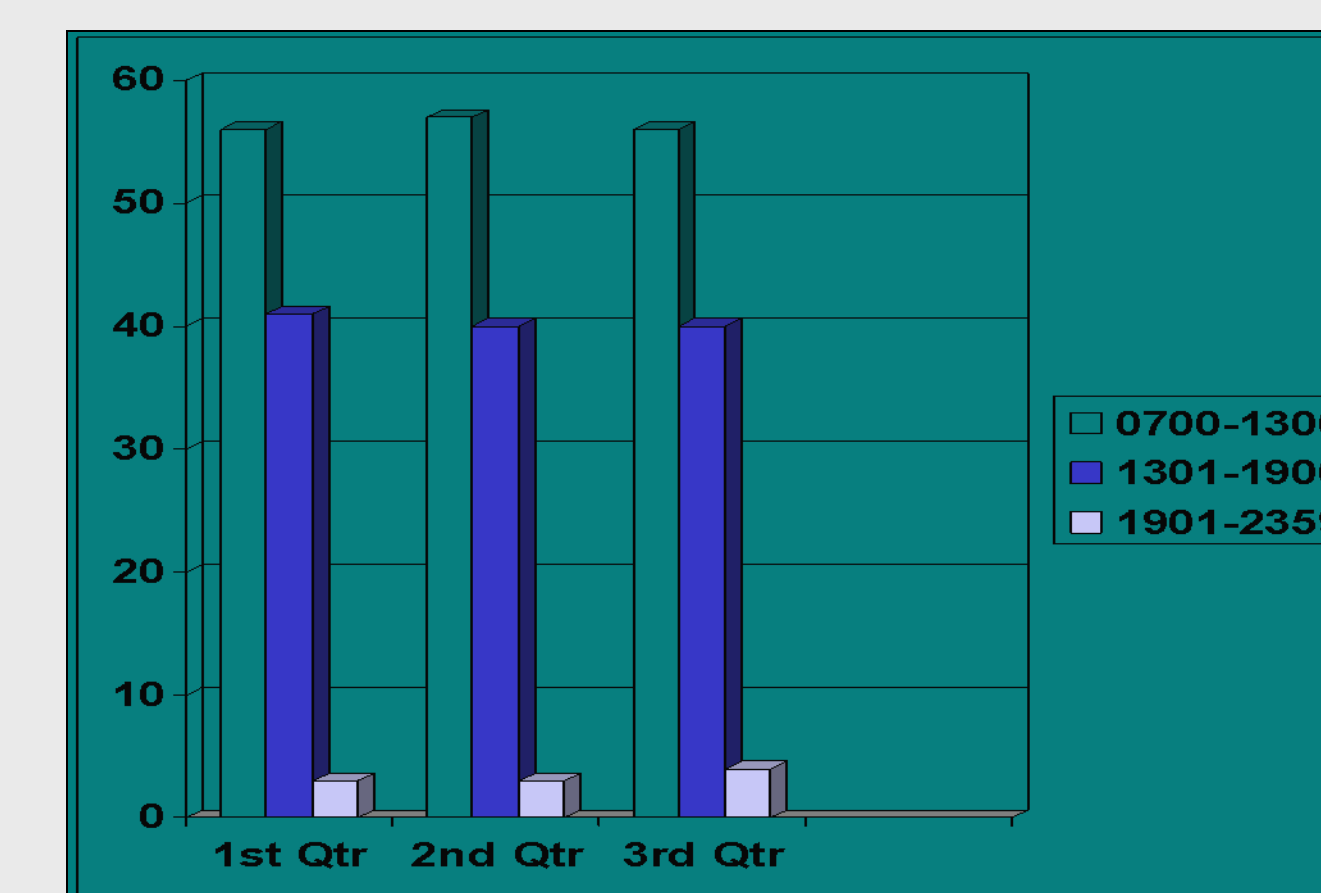
Rapid Cycle Progression depicts optimal outcomes with 47% of mother/baby couplets leaving the unit within Rapid Cycle Three.

Discharge departures within 90 minutes of last discharge in last quarter of 2009 and first two quarters of 2010 declined. Individual couplet services and personal choice impacted the data. Open beds at 1200 was more important for throughput. Couplet discharge time by 1200 percentages improved through the second quarter of 2010 to 83%.



CONTROL

Teletracking electronic data collection assists to monitor couplet discharge times. Discharge time by 1200 has been normalized by stakeholders. This set of data depicts the time the couplets were in transport to home with the transport aide ending the transaction.



Control reports are critical in the DMAIC cycle to gain consistency in performance and sustain the gains.