



# Streamlining the NICU Admission Process

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## Introduction

Admitting an infant to the Neonatal Intensive Care Unit (NICU) can be a challenge for the entire staff. To improve this process and provide the best care for these infants, there was multi-disciplinary collaboration. This included purchasing new admission carts to have available at the bedside, pre-admission of pending patients, and use of STAT Admission Order Sets.

## Purpose/AIM

To streamline admissions by standardizing practice to increase Golden Hour success rates, decrease staff stress levels, and ultimately improve patient outcomes.

## Team Members

- NICU Physicians and Nurse Practitioners
- NICU Nurses
- NICU Educator
- NICU Service Coordinators (Unit Secretaries)
- Pharmacy

## Education

Education was provided to staff via the hospital's Learning Management System regarding how to pre-admit pending patients, STAT Admission Order sets and new workflow of weighing patients in delivery room. Staff in-services were provided on the new admission cart for nursing and physicians. Unit Secretaries were provided education on how to stock cart efficiently.

## Golden Hour/Admission Checklist

NICU Admission Checklist		Patient Sticker
Place completed form in the "Golden Hour" envelope in Lindsey's Mailbox at Nurse Center		
*Faceted info/MARs to use NICU Stat Admission Medications Order Panel		
Time of Birth: _____	Admit Time: _____	
Temp before leaving L&D: _____		
Temp on arrival to NICU (in transport isolator): _____		
Thermal Hat Used? Yes No		
Time of 1 <sup>st</sup> PIV Attempt: _____		
Type of Access (circle): PIV UVC MAC		
Time of ACCESSUAL PIV/UVC Insertion: _____		
Weight: _____		
Is there a long cord segment for blood work? Yes No		
How long did pt. remain in neonate? Yes No		
Was pt. pre-admitted successfully? Yes No		
LABS (Drawn in this order/Time and Site)		
ROP/DOX 04 (ml): Time drawn _____ Site _____		
T&S 1 (ml): Time drawn _____ Site _____		
(Color strip color with your ID & time drawn on it)		
ARG 0.3 ml: Time drawn _____ Site _____		
Glucose: Time drawn _____ Site _____		
(Wave neonate)		
PKU 0.7 ml: Time drawn _____ Site _____		
MDS (Remember NICU STAT Admission Med Order Panel) for data collection: Please ensure times entered are the times the med WAS STARTED, and pencil times to MARs		
Ampicillin Time Started: _____		
Gentamicin Time Started: _____		
D5W Time Hung: _____		

NICU Admission Checklist		Patient Sticker
Place completed form in the "Golden Hour" envelope in Lindsey's Mailbox at Nurse Center		
APGARs: _____ / _____ / _____		
Length: _____		
HC: _____ CC: _____ AC: _____		
Oxygen Requirements (circle):		
VENT RAM CPAP HFNC RA		
Oxygen Settings:		
ETT Size: _____ Taped at _____ cm		
MG/DO2 taped at: _____		
Other Modifications:		
Starter TPN (D7.5 & D10)		
Open Taper to order in TPN taken out on overnight		
D 5 NS with heparin or Na Acetate x 2		
D 45 NS flushes (x 3kg)		
Identify primary learners (in Patient Education)		
Give Patient Handbook to family (include WBC or Late Preterm Pamphlet, if applicable)		
Give Patient Rights and Responsibilities to parents, document in Neo/NB Admission Data Base		
Obtain parent signature on Parent Information Form (2 copies: 1 to parents, 1 in patient chart)		
Give Hepatitis B Vax and document in Patient Education Record		
Consent signed and indicated on Patient Care Summary		
Bring discharge folder to bedside		
Bring pumping kit to bedside if mother plans to pump		
if ventilated patient (ETT/NP): Bring NeoPuff/LeakPuff to bedside so readily accessible with PP & PEEP set		

## Methods

### PRIOR TO BIRTH

Prior to birth, infants of mothers in L&D are pre-admitted into the system so that pending orders can be placed. Detailed gestational age-based order sets were created by our NICU team to standardize practice and eliminate confusion. The ordering provider completes the gestational age/weight-based admission order set as well as the STAT Admission Order Set for Ampicillin, Gentamicin, and D10W.

The NICU charge nurse designates two nurses each shift to take admissions. Their assignments consist of two to three stable infants who are each pre-assigned to another nurse for pick-up in the event of an admission. This eliminates confusion and ensures safe patient assignments. When an admission is imminent, hand-off report is completed at the bedside of each patient and care is now transferred to the pick-up nurse. This allows the admit nurse to have a one-to-one patient ratio in order to focus on the admission process. The charge nurse is often free-floating and available to help.

A rolling admission supply cart was created to bring the stock room to the bedside, with all necessary supplies neatly organized and visible. Each compartment is labeled with the item name and quantity to make restocking easier. This cart provides enough supplies for two to three admissions.

Incubators in the NICU are set up in a standardized manner to receive new admissions. This includes providing basic supplies as well as pre-warming the bed.



### AT TIME OF DELIVERY

Once the infant is delivered, a call is placed to the NICU unit secretary with the gender and time of birth. Once this information is received, the patient can be moved from the pre-admission list to the NICU census and pending orders may now be activated.

A birth weight is obtained in the delivery room and promptly recorded in the computer as the dosing weight. This enables pharmacy to start working on the infant's fluid and antibiotic orders immediately to decrease wait times.

### ONCE IN THE NICU

The admission nurses follow a standardized Golden Hour "cheat sheet" that outlines exactly what care needs to be provided and documented for each infant with space to do so. This will guide the nurses as they complete each task. Items include vital signs, measurements, times of procedures, medication administration, and time sensitive required tasks.

#### Time sensitive hospital required tasks

- Real time MAR charting
- 4 eyes in 4 hours skin check
- Interdisciplinary Patient Plan of Care
- Golden Hour

These sheets are later collected and audited to monitor our Golden Hour metrics. On the other side of this sheet is a detailed checklist to ensure the entire admission process is completed and is reviewed during shift handoff.

Once the infant is stabilized and time-sensitive tasks have been completed, the charge nurse will re-assess patient assignments to balance workload throughout the unit.

## Limitations

- Loyola is a teaching institution. Pediatric residents have several one-month rotations through the NICU during their program. It can be a challenge to keep them up to date on changing policies.
- Walk-in or emergent deliveries that occur in the obstetric and emergency departments provide no time to pre-admit infant, which creates a lag time.
- With the current high turnover rates in hospitals, there are many new staff members who are not familiar with our structured admission process.
- During off-shifts, the pediatric pharmacy is closed and the main pharmacy handles orders for the entire hospital. Depending on the acuity of the house, NICU admission medication orders may be delayed.

## Results

Staff have reported decreased stress and confusion with admissions. Nurses have specifically cited the practice of handing off their patients in order to be one to one with the new admission as a unique method that enables them to concentrate completely on the task at hand. Loyola has successfully used this process for over forty years.

We will continue to collect data and ideally would like to see an increase in Golden Hour success rates.

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