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Prospectus Summary Brief: NICU Communication Improvement

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Abstract

Joy Lawley RNC, NICU Communication Improvement: A prospectus summary brief. Effective communication in the neonatal intensive care unit (NICU) not only reduces errors and adverse patient outcomes but also create an environment that promotes staff satisfaction. The purpose of this prospectus is that of improving the process of communication between the perinatal departments. The specific aim is was to improve communication to the NICU through standardize communication tools (SBAR) from patient delivery to discharge starting April 1, 2015. With 100% participation of all staff members within a three month period and a 95% staff satisfaction related to improved communication from staff survey and reduction of missing information from chart audits by June 1, 2015. A form of structured standardized communication Situation, Background, Assessment, and Recommendation (SBAR) was used to develop communications tools for admission and delivery nurse handoff report. The SBAR tools were integrated into the NICU and maternal child department of a 366 bed non-profit acute care hospital with a 22 bed community level III NICU. Lewin's change theory was the framework. Evaluation methods yielded both quantitative and qualitative results through chart audits, direct observation and staff survey.

Keywords: NICU, SBAR communication, staff satisfaction

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Specific Aim: We aim to improve communication to the NICU through standardize communication tools (SBAR) from patient delivery to discharge starting April 1, 2015. With 100% participation of all staff members within a three month period and a 95% staff satisfaction related to improved communication from staff survey and reduction of missing information from chart audits by June 1, 2015.

Background: The institution is a 366 beds non- profit acute care hospital. The institution is JCAHO accredited and meets standards for staffing ratios. It is the largest hospital in Stockton, California and serves as a regional hospital specializing in cardiovascular care, comprehensive cancer services, and women and children's services, including neonatal intensive care. The microsystem is a 22 bed level III community Neonatal Intensive Care Unit (NICU). Providing all levels of care from critical to step down with the exception of neonatal surgery. Problems with ineffective communication were identified through microsystems analysis, input from the staff and leadership team.

Supportive Data: 2014 hospital consumer assessment of healthcare providers and system (HCAPS) Avatar scores Figure 1 in Appendix A were reviewed in February 2015. Incidence reports from 2014 revealed issues with communication as the under lying cause in 16% of the total reports. The Fishbone diagram Figure 2 in Appendix B indicates fourteen issues associated with ineffective communication, the areas highlighted in orange were addressed in this project.

Microsystem Status Relative to the project: The SWOT analysis figure 3 in Appendix C indicates four strengths of positive support of the project. Weakness from the analysis will be addressed within the project. The project is of interest to staff and the institution as an aspect of patient safety and satisfaction of both patients and staff. Improvement in the communication process provides both qualitative and quantitate benefits to all stakeholders.

Summary of Evidence:

Search Strategies: The references in this review support the project of the use of SBAR communication tools to improve communication in the Neonatal Intensive Care Unit. The term "Improving communication in the NICU" "SBAR communication NICU" "improving communication in healthcare, nursing" led to the following selections ranging from 2011-2014 publications. With one article publication from 2009.

Databases Used: PubMed, Wiley, Science Direct, CINAHL, Cochrane library, and google scholarly

Evidence: Beckett and Kiptnis (2009) demonstrated the effectiveness of the structured communication tool, Situation, Background, Assessment and

Recommendation (SBAR) in improving quality care, patient safety and creating work environment that sustain open and supportive communication (p <.05).

Samra et al (2011) assert the use of Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) improve the team process, decrease medical errors and create a culture of safety in the NICU.

Gephart and Cholette (2012) demonstrate how structured communication compliments the PURE process improve outcomes for high risk mothers and their newborns.

Petersen et al (2013) assert nurses perceptions of the handover process improved with the intervention of standardized SBAR reporting process.

Smeulers and Vermeulen (2014) identify when redesigning nursing handoff process face to face communication and structured documentation are important principles.

Theoretical Direction: Lewin's theoretical framework for change unfreezing, moving and refreezing allows for the understanding of nurses behavior during the change process (Bozak, 2003). Figure 4 in Appendix D indicates the application of the three change concepts to this project.

Business Case: A Joint Commission root cause analysis of 2,455 U.S. hospital sentinel events found over 70% of the adverse patient occurrences were due to a failure in communication (Beckett & Kipnis, 2009). Nursing turnover and low moral are major issues associated with poor communication in the health care setting (Hunt, 2009). High staff turnover is costly for the organization, the current average cost of turnover for a bedside RN is around $48,000 (Trossman, 2015). This does not include the added cost of orientation into a specialty area such as the NICU. Which can double the cost to $96,000. The cost of the project includes $200 for paper and copying of communication tools.

The project director is a contribution by the CNL student and include 220 hours at a rate of 69 dollars per hour = 15,180. The effort includes research, data collections, meetings, staff education and collaboration, creation of communication tools, timeline and professional presentation. The possible benefit to the project is realized if one turnover is prevented at a savings of $80,820. The qualitative benefits for staff include improved moral, nurse satisfaction and increased time spent providing direct patient care thus, improving HCAPS scores.

Methods: Staff nurses from all shifts in the neonatal intensive care unit and maternal child department participated in structured communication approach to address the current issue of ineffective communication. Processed identified on the Fishbone diagram Figure 2 in Appendix B that could contributed to improving communication were addressed in the moving phase of the change process included providing evidence based information on structured communication and including staff input on the communication tools.

Steps for Implementation: The timeline Figure 5 in Appendix E indicates the first meeting occurred in February with the leadership team. Follow up collection of staff input on communication issues was done by the CNL student. The next phase began in

March and consisted of the development of new SBAR communication tools for the delivery nurse Figure 6 in Appendix F and maternal child department for communication handoff for NICU admission Figure 7 in Appendix G. In April introduction and in services for the new tools were provided to staff by the Firstline Supervisors and the CNL student during shift change huddles. The tools were used from early April 2015 through the end of May 2015. Follow up audits were started three weeks after the implementation of the communication tools. The evaluation phase of the project involved obtaining the staffs perspective regarding communication to be completed June 1 2015.

Evaluation: Evaluation data included staff surveys, direct observation of SBAR usage and audit of missing documentation on admission.

Results: Actives indicated in the timeline Figure 5 in Appendix E to May 11, 2015 are up to date. The new communication tools were placed in all NICU staff mail boxes prior to the start date. In-services were done during shift change huddles for three days after implementation of the new communication tools. The communication tool for admission hand off reporting was reviewed with Maternal Child staff during a mandatory staff meeting. Staff response was positive. After the third week of using the new tools NICU staff input resulted in minor changes to the delivery RN communication tool. Ongoing coaching was needed with NICU staff encouraging use of the delivery RN communication tool. Some staff drifted to old way of giving report. Chart audits were started within the timeline implementation.

Outcomes: The staff survey is scheduled to begin last week of May 2015 and finish on June 1, 2015. The initial phase of chart audits and direct observation of the SBAR tools was completed according to the timeline.

Recommendations: Use the results of the chart audits, direct observation and survey results for additional PDSA improvement projects. Employ a CNL to provide continuation of this project and development of other projects needed in the microsystem.

Appendices:

Appendix A: Avatar Graph Communication with Nurses –Neonatal Intensive Care Unit

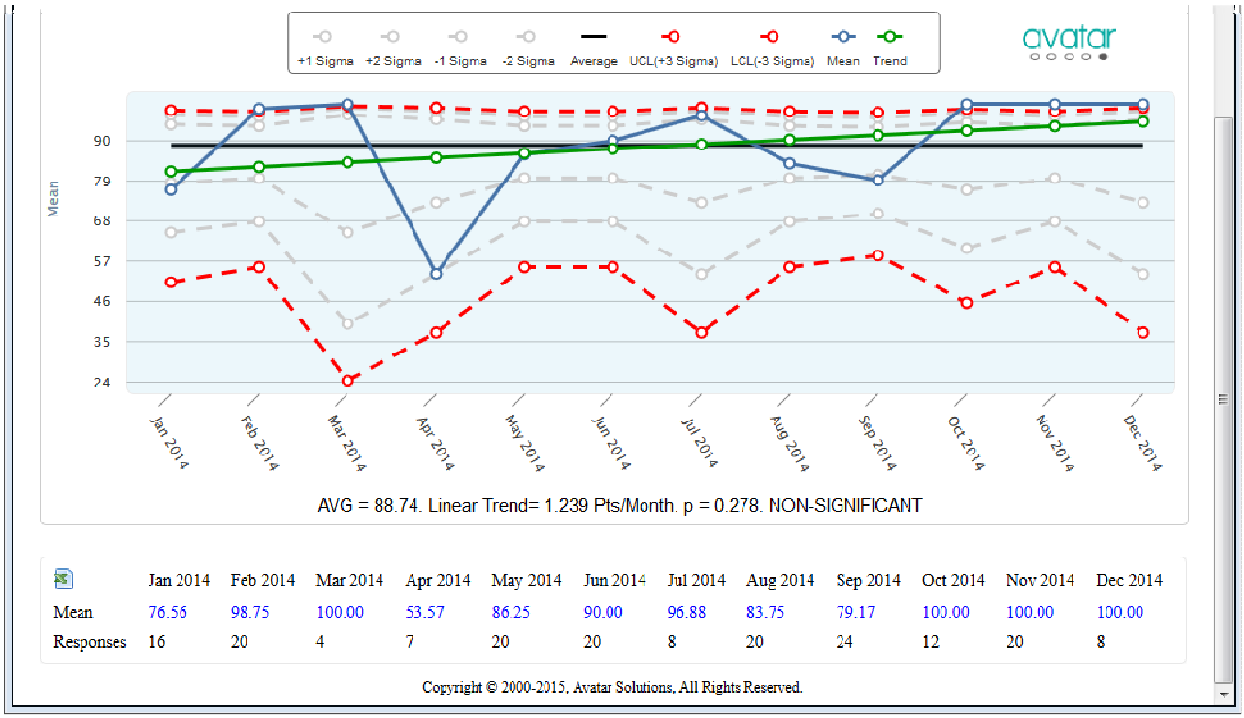

Figure 1. Avatar graph communication with nurses. This figure illustrates the NICU Avatar scores for the year 2014.

Appendix B Fishbone Diagram

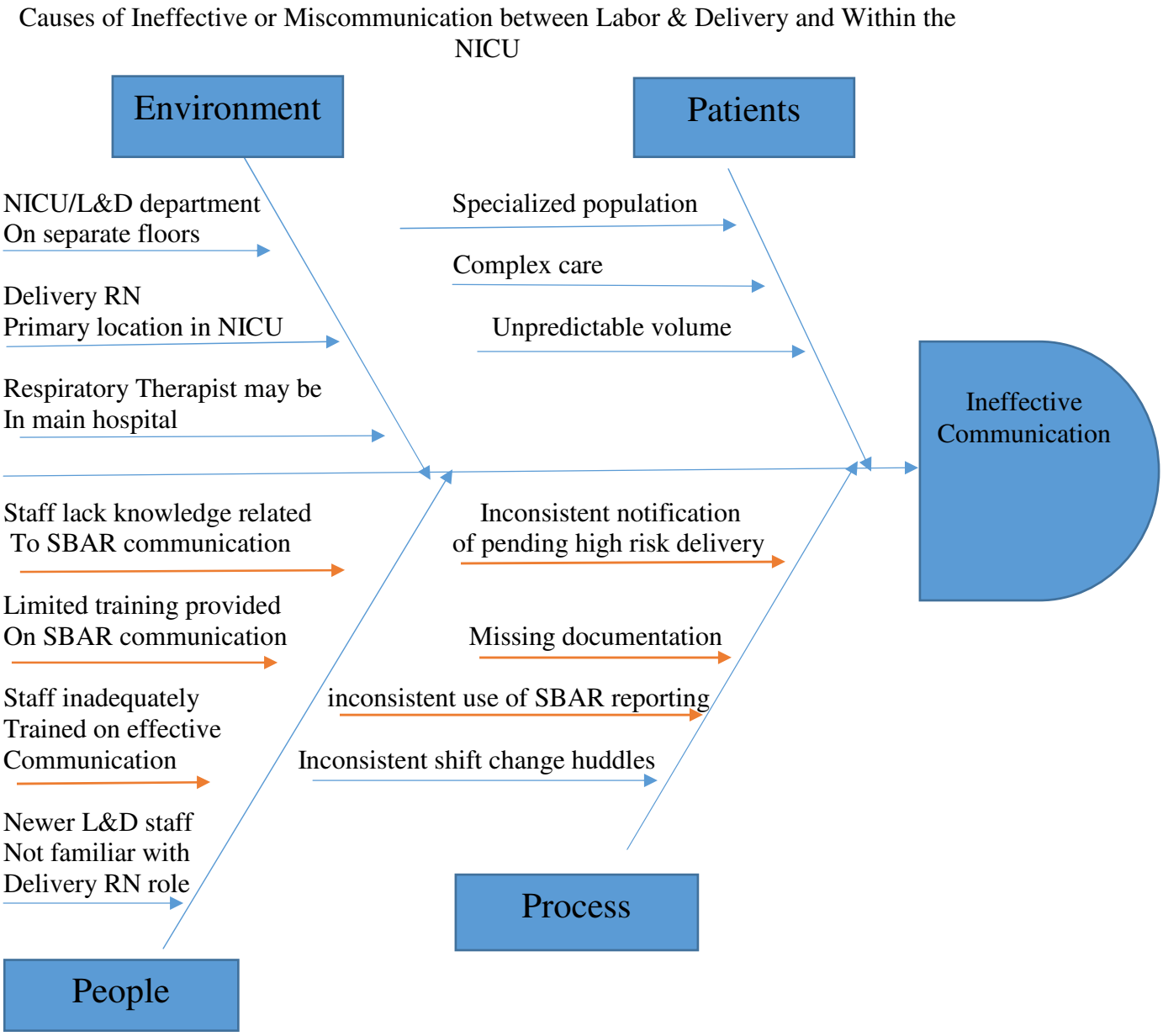

Figure 2. Causes of Ineffective or Miscommunication between Labor & Delivery and NICU. This figure illustrates the potential areas at risk for communication failures.

Appendix C SWOT Analysis

Strength	Weakness	Opportunities	Threats
Skilled staff specializing in care and stabilization of neonates SBAR report used in unit New leadership team New NICU CNS	High staff turn over Drifting from current standard of practice Inconsistent communication among leadership team and staff members Low unit morale	Increasing amount of monthly deliveries/ potentially increasing need of NICU care OB physicians hospital of choice to delivery high risk patients for NICU services	OB physicians delivering increased number of high risk mothers, increasing NICU patient volume High turnover of staff to other local community NICU's
INTERNAL		**EXTERNAL**	

Figure 3. SWOT Analysis. This figure illustrates the potential positive and negative issues that could affect project outcome both internally and externally.

Appendix D Lewin's Change Theory

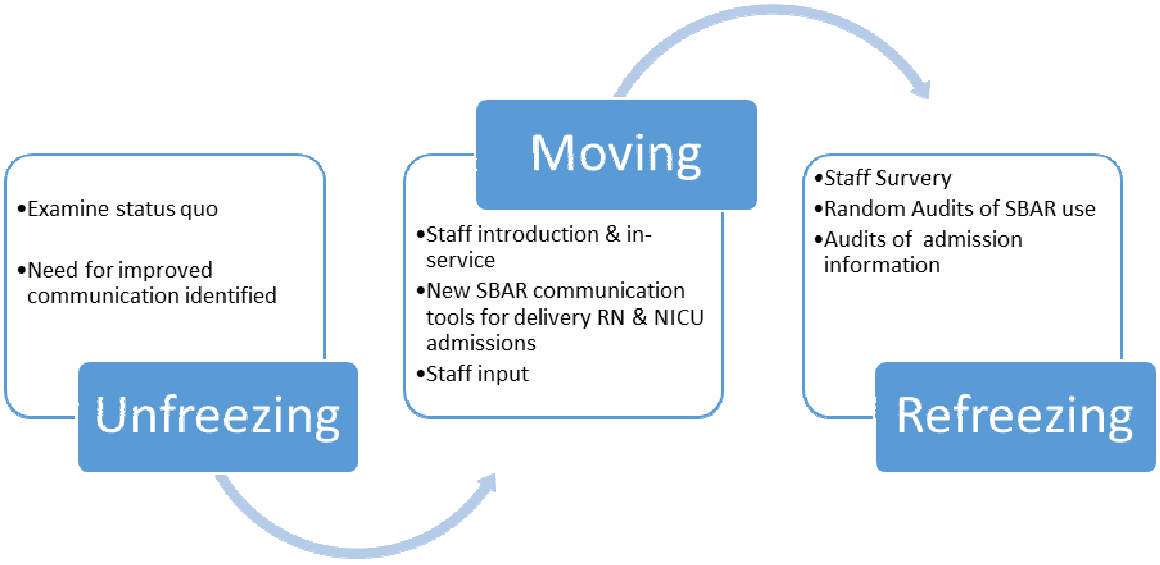

Figure 4. Lewin's Change Theory. This figure illustrates the application of the three change concepts to this project.

Appendix E Timeline

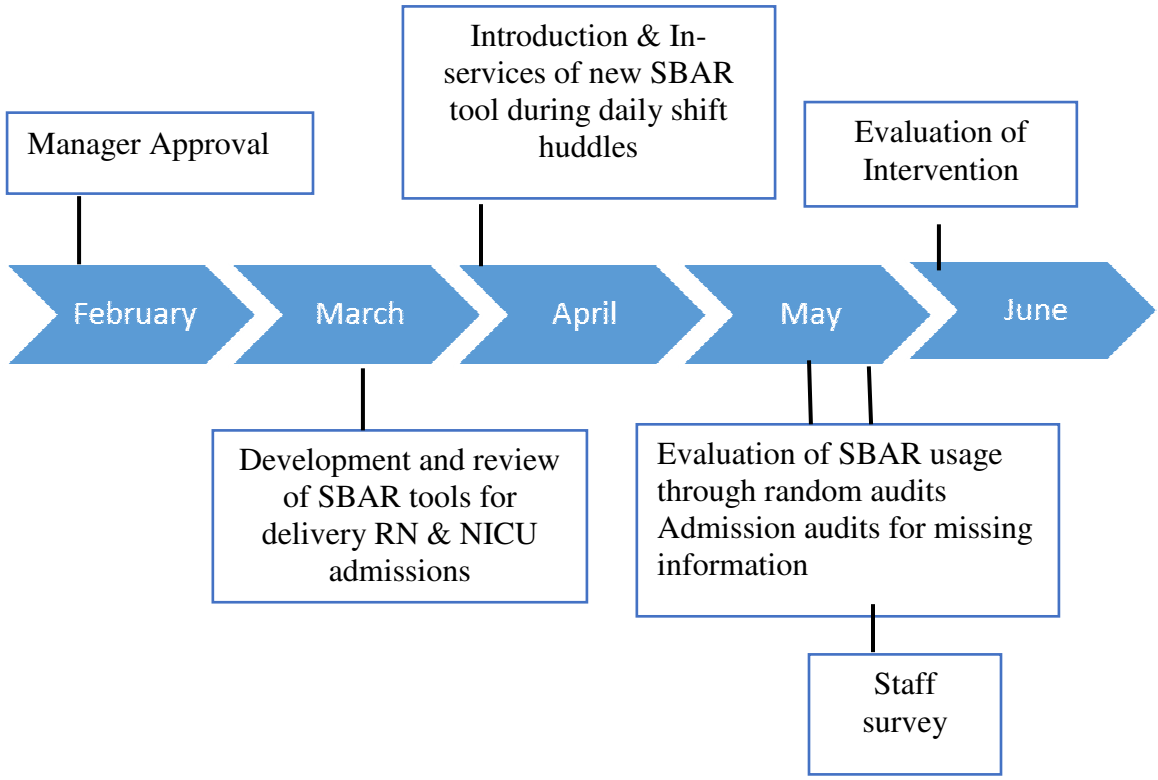

Figure 5. Project timeline. This figure illustrates the projected steps for implementation of this project.

Appendix F NICU Delivery RN SBAR Reporting Sheet

S	Situation # of patients in L&D Term _____Preterm_____ Mec_____ Pending C/S_____
B	Background Preterm in L&D Room #_____Name_____ Gestation _____ ROM_____ Dilation ____ Bulging Bag _____ Mg+ _____ neuro/contractions/BP Betamethasone 1st Dose_____ 2nd Dose _____ Antibiotic Doses_____ NEO consult_____ Viewed Video _____ March of Dimes Fact sheet given_____ Room #_____Name_____ Gestation _____ ROM_____ Dilation ____ Bulging Bag _____ Mg+ _____ neuro/contractions/BP Betamethasone 1st Dose_____ 2nd Dose _____ Antibiotic Doses_____ NEO consult_____ Viewed Video _____ March of Dimes Fact sheet given_____ Room #_____Name_____ Gestation _____ ROM_____ Dilation ____ Bulging Bag _____ Mg+ _____ neuro/contractions/BP Betamethasone 1st Dose_____ 2nd Dose _____ Antibiotic Doses_____ NEO consult_____ Viewed Video _____ March of Dimes Fact sheet given_____
A	Assessment Pending Deliveries for NICU Attendance _____ Newborns to f/u_____ Blood Sugar_____ Transition _____
R	Recommendations Carts checked last _____ Supplies needed_____

Figure 6. NICU delivery RN SBAR reporting sheet. This figure is an example of the communication tool used by the delivery RN for shift change report.

Appendix G SBAR Handoff for NICU Admission

S	**Situation (*infant)*** Transfer from L&D ___ Operating Room ___ Mother-baby ___ Resuscitation at birth_____ Reason for NICU admission _____ Admitting physician _____ Time called _____
B	**Background (*mother)*** G___P___ Provider _____ Delivery : Time _____ SVD ____ Vacuum_____ C/S_____ Reason for C/S_____ Weight (grams) _____ Apgar (1 min) ____ (5 min) _____ Rupture membranes > 18 hours (Yes) __(No)___ # of hr ____ Maternal fever (Yes) ___ (No) ___ Last temp _____ History of drug abuse (Yes) ___ (No)___ Type ____ Last used___ Received antenatal steroids (Yes) ___ (No) ___ # of doses_____ Time last dose_____ Complications :_____ *Pertinent Lab Tests*: Blood Type _____RH_____ GBS Status: Pos ____Neg _____ Unknown _____ Antibiotics given (Yes) ___ (No) ___ # 0f doses ___ time last dose
A	**Assessment : *(Infant)*** Temp____ HR____ Resp____ Time_____ Needs drug screen (Yes)___ (No) ____Blood sugar _____ Time _____ Apnea_____ Void _____ Mec _____ Infant feeding plan: Breast ____ Bottle_____ Last feeding _____
R	**Recommendations:** Observation _____ Admission: Routine _____ Critical _____ Follow –up tests _____ Social service consult (yes)_____ (no) _____ Orders received that need to be completed _____

Figure 7 SBAR handoff for NICU admission. This figure is an example of the communication tool used for handoff report when a baby is transferred to the NICU for admission or observation.

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