



NORTHWESTERN  
UNIVERSITY

# Intervention Selection and Workflow Opportunities



Eric Abbott, Nancy Casazza &  
Kevin Scharnhorst

A thoughtful consideration of the workflow opportunities and interventions to be leveraged in order to realize improvements in measuring against Pneumonia Core Measures through use of a Clinical Decision Support System.

MMI 406 – Decision  
Support Systems and  
Health Care

Winter 2012

Northwestern University

**Table of Contents**

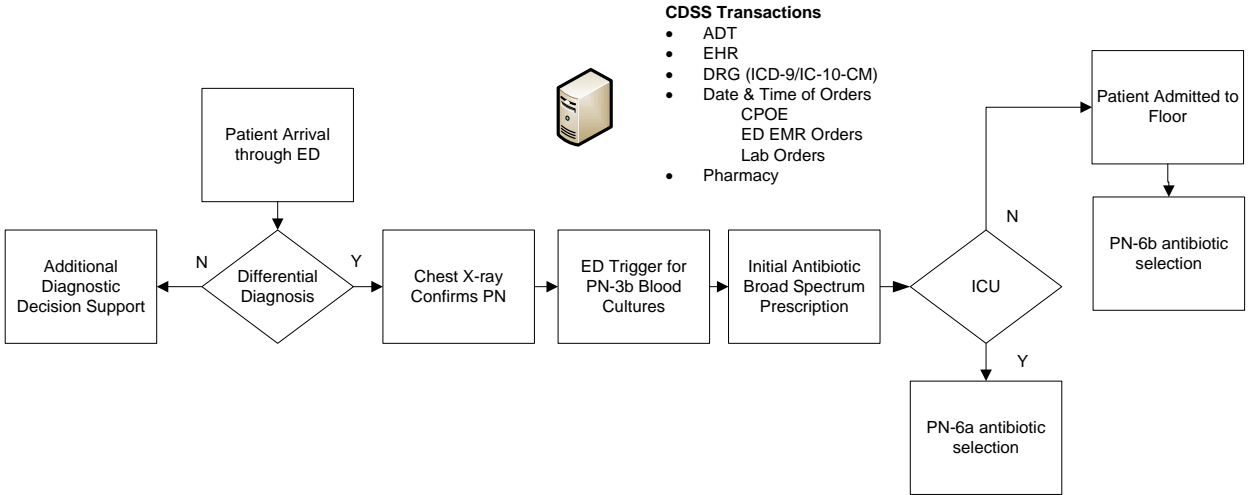
CDSS Intervention ..... 3

CDSS Intervention

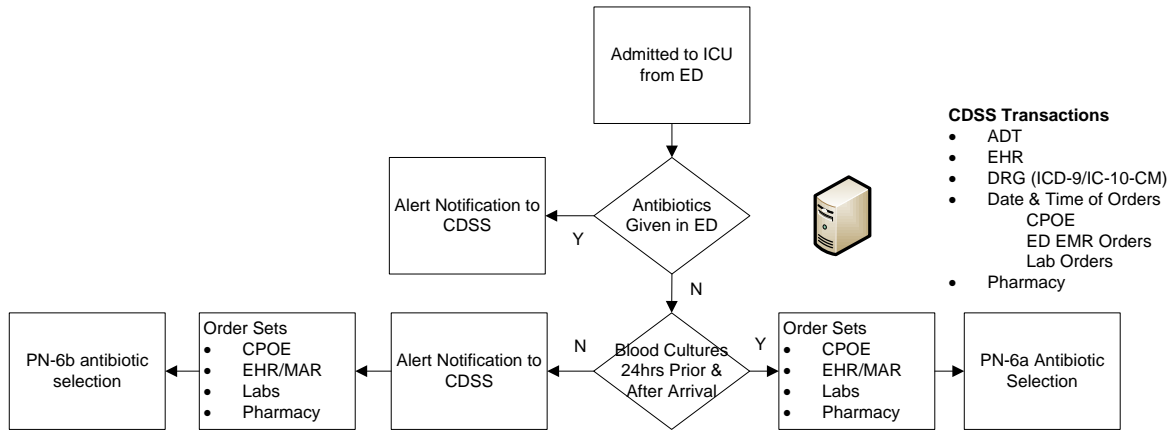
Timely delivery of care is essential as a means to improve patient outcomes and increase the quality of care. Our CDSS intervention focuses on improving accountability around core measure reporting and their utilization. Specifically, our proposed interventions is taken from the core measure itself, and we selected the Pneumonia Core Measure (PCM) as an example to illustrate timely collection of blood cultures and/or the selection of antibiotics for treatment. From a workflow standpoint, an opportunity to use the CDSS presents itself during patient intake and diagnostic assessment. Inflows include patient admitting entry points such as the emergency department (ED), the ICU, or the Inpatient floor (via ED or physician referral). Almost all pertinent data elements that the PCM measure considers happen in the admitting process, and thus intervention at this juncture maximizes opportunities for improved patient outcomes (not to mention increased quality of care for the hospital). Additional interactions occur with the placement and execution of lab orders and pharmacy orders that both follow initial intake. Another advantage of implementing the CDSS at intake is that real-time alerting of physicians and clinicians is possible, improving communications and clinical delivery of care. For example, if missing data is discovered, proactive procedures may be taken to minimize errors of omission and errors of commission. Furthermore, once the measurement is obtained and the CDSS rule criterion are met, the resulting decision can be forwarded to the measurement system where it will either be aggregated for later submission to hospital databases or sent in real-time to a clearinghouse or reporting recipient such as The Joint Commission (TJC). The net result is accurate and timely reporting of 100% of all addressed presenting core measure cases from the Healthcare Organization (HCO).

Workflows

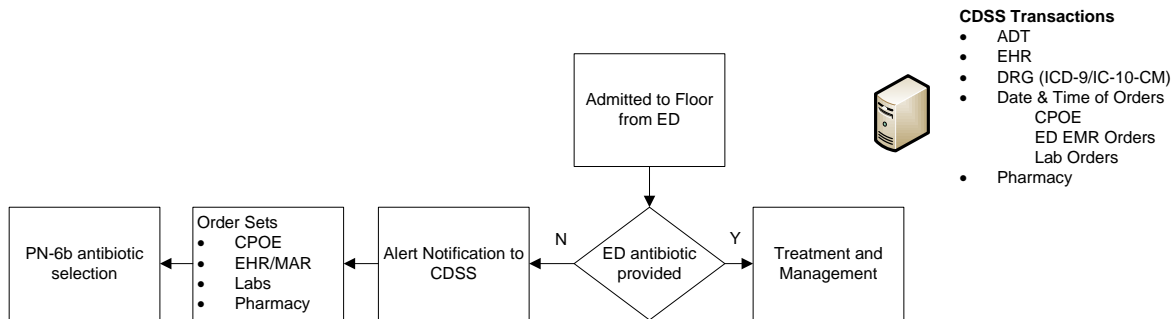
Scenario 1: Arriving through the ED



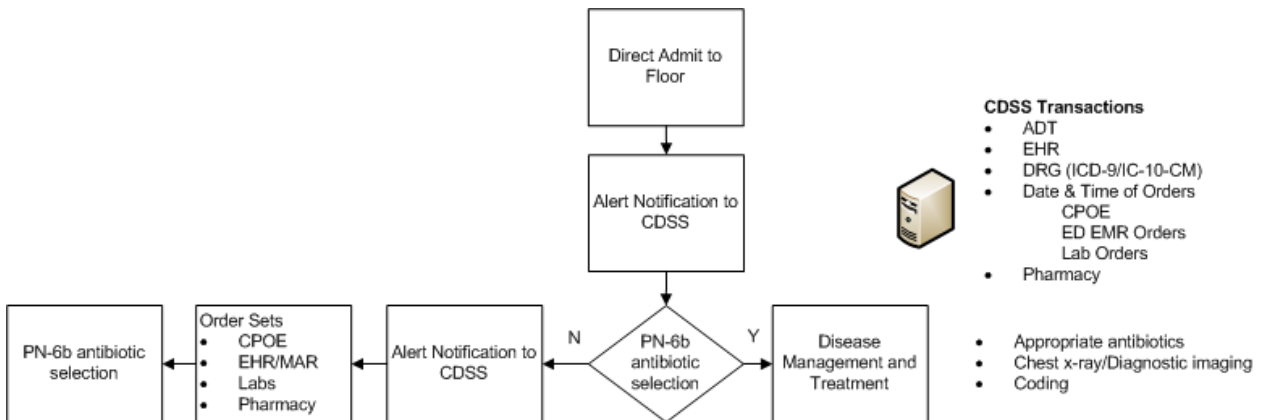
## Scenario 2: Admitted to ICU from ED



## Scenario 3: Admitted to the floor from the ED



## Scenario 4: Direct admit to the floor



Scenario 5: Direct admit to the ICU

