Figure 1: PDA management approach pre quality improvement initiative
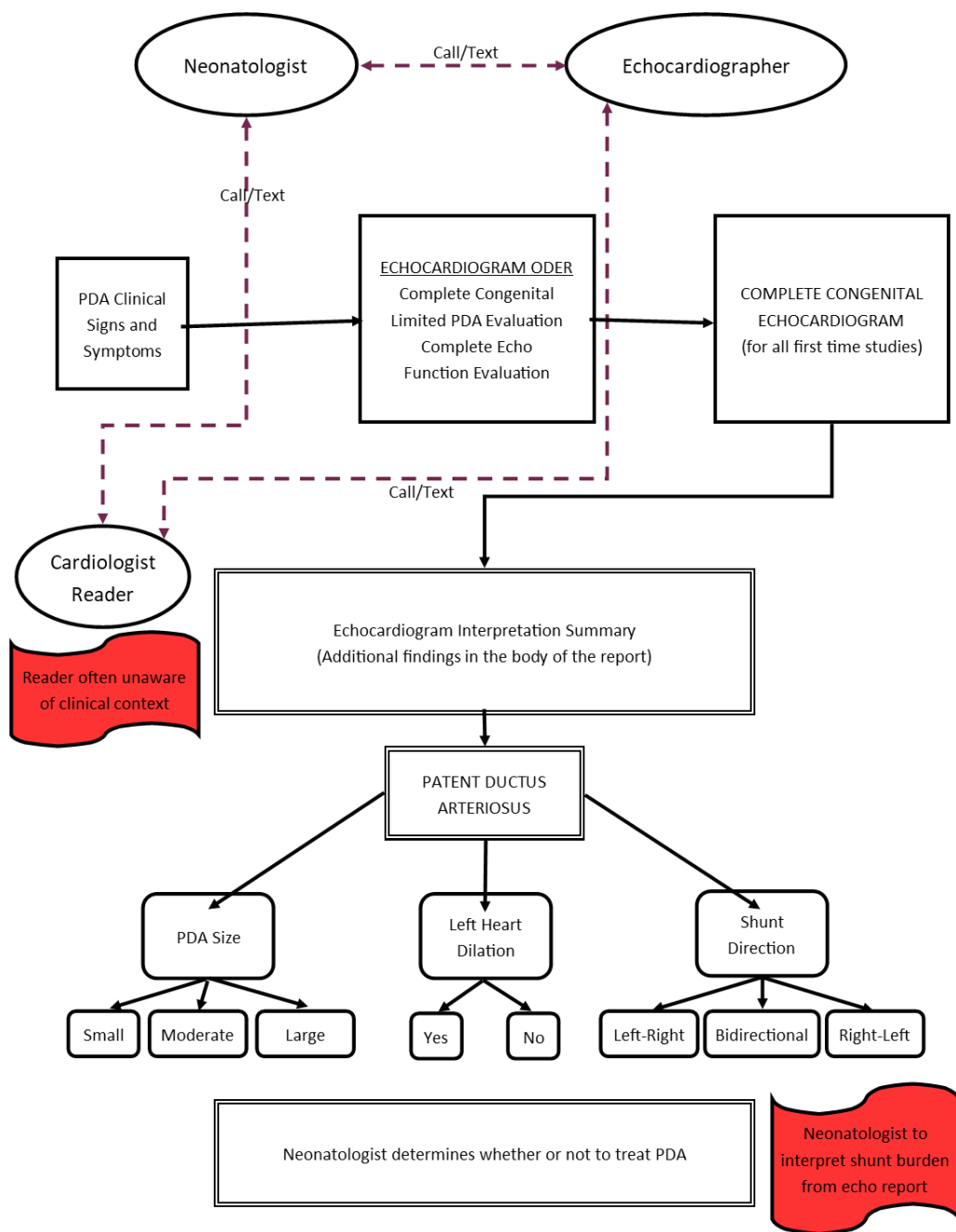

Neonatologist ⟵ Call/Text ⟶ Echocardiographer

Call/Text

PDA Clinical Signs and Symptoms

ECHOCARDIOGRAM ODER
Complete Congenital
Limited PDA Evaluation
Complete Echo
Function Evaluation

COMPLETE CONGENITAL ECHOCARDIOGRAM
(for all first time studies)

Call/Text

Cardiologist Reader

Reader often unaware of clinical context

Echocardiogram Interpretation Summary
(Additional findings in the body of the report)

PATENT DUCTUS ARTERIOSUS

PDA Size — Small, Moderate, Large

Left Heart Dilation — Yes, No

Shunt Direction — Left-Right, Bidirectional, Right-Left

Neonatologist determines whether or not to treat PDA

Neonatologist to interpret shunt burden from echo report

Fig 2: Driver Diagram

Primary Aim

Key Drivers

Interventions

To reduce variation in the timing of echocardiographic screening, reporting, and management of PDA in preterm infants.

Stakeholders
- Neonatologists
- Pediatric cardiologist
- Echosonographers

Establish buy in from stakeholders by highlighting challenges in early PDA screening & inconsistency in treatment approach

Form multidisciplinary QI team

Population

Infants born at 22-29 weeks gestation

Training and education

Training echosonographers to perform targeted scan and calculations required for scoring based on Iowa PDA scoring tool

Education to neonatology providers on Iowa PDA tool

Treatment Guideline

Develop PDA treatment guidelines based on clinical sign/symptoms and Iowa PDA score