

# MDPQC Neonatal Antibiotic Stewardship Bundle

The goal of the Maryland Perinatal Quality Collaborative's Neonatal Antibiotic Stewardship bundle is to:

- Implement evidence-based interventions to improve birthing outcomes.
- Collaborate with health care and community organizations as well as patients and families to improve patient care.
- Participate in Learning and Action Networks (LAN) that bring together health care professionals, patients, and other stakeholders around evidence-based action-oriented agendas to achieve rapid, wide-scale health improvements.
- Support quality improvement efforts by reporting data related to selected topic areas.

## MDPQC Core Elements of Antibiotic Stewardship

Core Element	Description	Actions
<b>Leadership Commitment</b>	Dedicate necessary human, financial and information technology resources	<ul style="list-style-type: none"> <li>• Participation Agreement; hospital leadership awareness/involvement</li> </ul>
<b>Accountability</b>	Appoint a leader or co-leaders responsible for program management and outcomes	<ul style="list-style-type: none"> <li>• Establish a team; Provide team member names/roles</li> </ul>
<b>Pharmacy Expertise</b>	Appoint a pharmacist to be involved in implementation efforts to improve antibiotic use	<ul style="list-style-type: none"> <li>• Subject matter expertise access through Collaborative; Dosing recommendations through Bundle</li> </ul>
<b>Action</b>	Implement interventions to improve antibiotic use	<ul style="list-style-type: none"> <li>• Neonatal Sepsis Calculator; Antibiotic choice guidelines; Antibiotic time-out</li> </ul>
<b>Tracking</b>	Monitor Antibiotic prescribing, impact of interventions, and other important outcomes	<ul style="list-style-type: none"> <li>• <u>Outcome Measures</u>: # sepsis workups, # abx starts, # xfers to higher-level care, duration of abx</li> <li>• <u>Process Measures</u>: staff education, automatic stop orders, knowledge of facility rates, use of calculator</li> <li>• <u>Balancing Measures</u>: # deliveries, # blood cultures</li> </ul>
<b>Reporting</b>	Regularly report information on antibiotic use and resistance to staff	<ul style="list-style-type: none"> <li>• MDPQC will provide benchmarking reports to share data with team</li> </ul>
<b>Education</b>	Educate prescribers, pharmacists, and nurses about use of the calculator, optimal prescribing, and interpretation of laboratory results	<ul style="list-style-type: none"> <li>• Monthly team meetings</li> </ul>

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Below are the measures we are tracking based on MDPQC hospital input. The information collected will allow us to see how your hospital compares to other hospitals across the MDPQC network and will in turn make Maryland a safer place to have a baby.

	Process Measures	Balancing Measures	Outcome Measures
<b>Reported by:</b>	Hospitals to HQI SharePoint	Hospitals to HQI SharePoint	Hospitals to HQI SharePoint
<b>Reporting Frequency:</b>	As needed	Monthly	Monthly
<b>Measures:</b>	<ol style="list-style-type: none"> <li>1. Estimated number of physicians, nurses, and other providers who have received education on antibiotic stewardship and use of the neonatal sepsis calculator, by unit (L&amp;D, well-baby, NICU) and provider type</li> <li>2. Does your hospital have automatic stop orders for antibiotics after 48-72 hours, requiring review by a physician to continue?</li> <li>3. Has your team calculated your baseline institutional sepsis rate?</li> <li>4. Is your hospital using the neonatal sepsis calculator?</li> <li>5. Has your hospital incorporated the neonatal sepsis calculator into workflow?</li> <li>6. Has your hospital incorporated the neonatal sepsis calculator into the EHR?</li> </ol>	<ol style="list-style-type: none"> <li>1. Number of deliveries</li> <li>2. Number of direct NICU admissions</li> <li>3. Number of babies &lt; 35 weeks</li> <li>4. Number of unique babies ≥ 35 weeks w/ positive blood cultures containing a recognized pathogen*</li> </ol> <p>*excluding skin contaminants</p>	<ol style="list-style-type: none"> <li>1. Number of unique babies ≥ 35 weeks with blood cultures</li> <li>2. Number of transfers to a higher level of care</li> <li>3. Number of Starts AND Duration of antibiotics</li> </ol>

# About The Maryland Perinatal Quality Collaborative

The Maryland Perinatal-Neonatal Quality Collaborative (MDPQC) is a collaboration of hospitals, perinatal care providers, neonatal care providers, community organizations, and public health professionals working together with the same goal - to make Maryland a safer and more equitable place to give birth across all levels of care.

The MDPQC supports the sharing of best practices, ongoing training and education, sustained data-driven quality improvement, and alignment with other state initiatives to promote a safe birthing experience and improved outcomes for all, laying the groundwork for long-term family well-being.

## Join Us

Join hospitals across the state receiving no-cost support to improve birthing outcomes by implementing interventions associated with safer, more effective care.

The MDPQC offers tools, peer-to-peer learning, data analyses, and QI expertise to help you improve performance in severe maternal hypertension and neonatal antibiotic stewardship. We also help you incorporate the voice of patients into the quality improvement process.

## Get Stared Today

Complete an online [participation agreement](#) or contact:

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**MDPQC**