

MICHIGAN PICC-RELATED CENTRAL LINE BLOOD STREAM INFECTION (MPC) RISK SCORE

Predicts risk of CLABSI in patients with peripherally inserted central catheter (PICC) prior to PICC insertion. Use in patients ≥ 18 years old admitted to a medical service (i.e. not surgical). Do not use in pregnant patients.

MPC Risk Score		
Hematological Cancer Past or Present History	No (0 Points)	Yes (+3 Points)
History of CLABSI within 3 months	No (0 Points)	Yes (+2 Points)
Active Cancer Receiving Chemotherapy	No (0 Points)	Yes (+2 Points)
Number of Lumens	Single (0 Points)	Multiple (+1 Point for each additional lumen)
Presence of Another CVC at the Time of PICC Placement	No (0 Points)	Yes (+1 Points)
TPN Through the PICC	No (0 Points)	Yes (+1 Points)

Strategies to Prevent PICC-CLABSI:

- Avoid the use of PICCs in patients at high risk for CLABSI when possible
 - Carefully consider the risks and benefits of using a PICC, especially if the risk of PICC-CLABSI is high.
 - Re-evaluate the necessity of using a PICC. Consider stepping down to less invasive/alternative vascular access if appropriate.
 - Consider Infectious Disease consult if PICC is indicated for Antibiotics to determine if the patient requires intravenous antibiotics or if oral antibiotics may be appropriate.
- When PICC use is necessary:
 - Limit number of lumens to single whenever possible
 - Consider a higher level of clinical vigilance in patients at higher risk of PICC-CLABSI (dedicated catheter rounds, requiring strict adherence to catheter care and maintenance protocols)
 - Consider advanced strategies (i.e. use of antimicrobial coated catheters, impregnated dressings, limiting access).

MICHIGAN PICC-CLABSI (MPC) RISK SCORE

MICHIGAN RISK SCORE INFORMATION	
WHY USE?	<p style="text-align: center;">Use prior to inserting a PICC to estimate the risk of PICC-CLABSI.</p> <p style="text-align: center;">Can help decide on whether testing for CLABSI (e.g. blood cultures) is appropriate in patients with fever but high risk for CLABSI.</p> <p>Understanding the patient's risk of CLABSI can help guide clinical decision making regarding PICC necessity, selection of appropriate vascular access device, number of lumens, and the level of clinical vigilance required.</p>
PEARLS/PITFALLS	<ul style="list-style-type: none"> • The Michigan PICC-CLABSI (MPC)Score for PICC-Related CLABSI helps estimate the risk of developing CLABSI in patients that receive peripherally inserted central catheters (PICCs). • Strongest predictors for risk include: <ul style="list-style-type: none"> ○ Past or Present History of Hematologic Cancer ○ History of CLABSI within 3 months ○ Active Cancer with receipt of chemotherapy • Has not been tested or validated in surgical patients or patients undergoing surgery with a PICC. • Has not been tested or validated in pediatric patients (<18 years of age).

For more detail about the MPC Risk Score, please see –

[A Model to Predict Central Line Associated Blood Stream Infection Among Patients with Peripherally Inserted Central Catheters: The MPC Score](#)

**Note – This is internally validated data. It is not yet externally validated and should therefore be used with caution.*



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