

# Unlocking the Complete Blood Count: Derivation of a Single-Panel Laboratory Test that includes Monocyte Distribution Width to Create a Universal Sepsis Screening Tool

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## A Seemingly Simple Problem that Has Been Impossible to Fix



**3 million cases annually**  
**15-30% mortality rate**  
**10% of ICU admissions**  
**1/2 of hospital deaths**

**Few effective treatments**  
(>100 failed trials)

**Timely initiation of simple  
measures is life-saving**

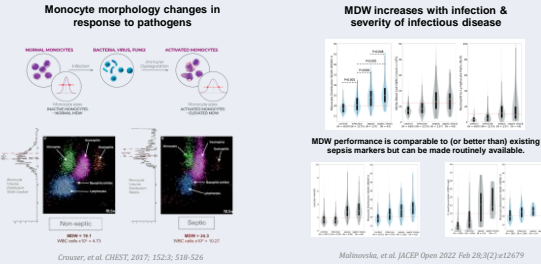
**No Change in Mortality  
over decades**

**AT LEAST 250,000 AMERICANS  
DIE FROM SEPSIS EACH YEAR.**

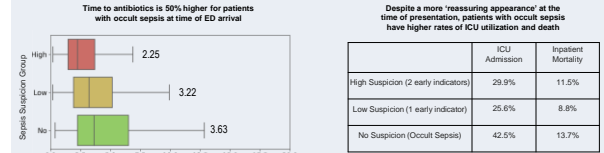
**GET AHEAD  
of SEPSIS**



## MDW: A Novel Marker of Sepsis with Universal Pragmatic Screening Potential



## Patients with Subtle Presentations Experience Delays to Antibiotics & Worse Outcomes



## Early Identification of Sepsis is Critically Important & Incredibly Challenging



Crit Care 2016; 20: 216  
Published online 2016 Jul 17. doi: 10.1186/s13054-016-1380-z

qSOFA does not replace SIRS in the definition of sepsis

JAMA 2016; 315: 406  
Published online 2016 Dec 28. doi: 10.1001/jama.2016.19822

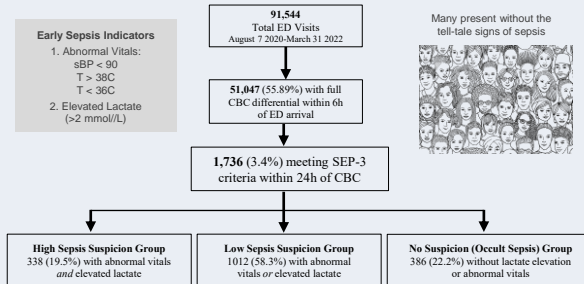
qSOFA should replace SIRS as the screening tool for sepsis

Stefano Franchini and Andrea Duce

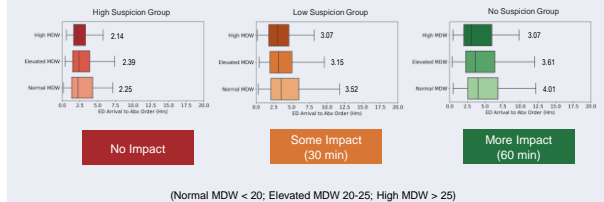
PMCID: PMC4867818  
PMID: 2742382

PMCID: PMC4162569  
PMID: 2802712

## Not all Septic Patients Look the Same



## For Patients with Subtle Sepsis, MDW Elevation is Associated with Reduced Time to Antibiotics

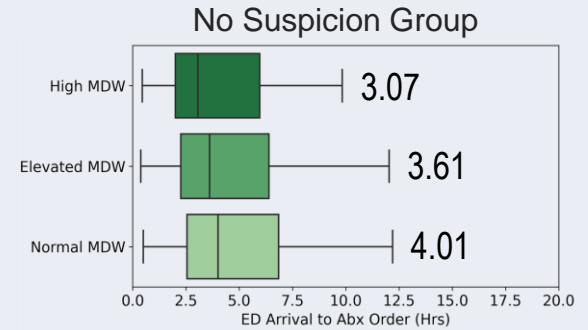
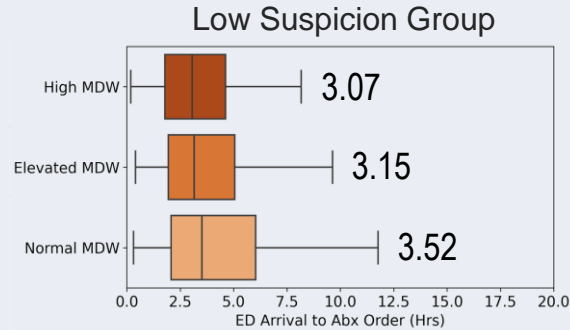
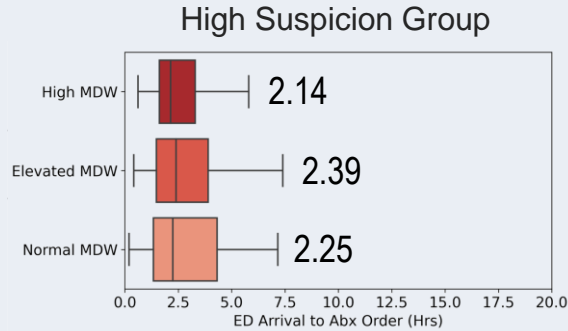


**Conclusion:** MDW is a unique marker of sepsis that is particularly valuable for early detection of sepsis in the group of patients that are most often missed.

**Acknowledgement:** A. Smith, M. Naiman, A. Saklecha and S. Levin are employees of Beckman Coulter, who developed and owns MDW technology.

**Disclaimer:** J. Hinson is a paid scientific consultant for Beckman Coulter.

# For Patients with Subtle Sepsis, MDW Elevation is Associated with Reduced Time to Antibiotics



No Impact

Some Impact  
(30 min)

More Impact  
(60 min)

(Normal MDW < 20; Elevated MDW 20-25; High MDW > 25)

**Conclusion:** MDW is a unique marker of sepsis that is particularly valuable for early detection of sepsis in the group of patients that are most often missed.