Englewood Health partners with Avo to Enhance Compliance with Massive Hemorrhage Protocol and Improve Patient Outcomes

Englewood Health, one of New Jersey's leading healthcare systems, partnered with Avo, a clinical decision support platform, to enhance compliance with massive hemorrhage protocol by transforming guidance on thromboelastography interpretation into a digitally available EHR tool in Epic.

Challenges with Thromboelastography Ordering and Interpretation

Englewood was looking to improve outcomes for patients experiencing severe bleeding by implementing a Massive Hemorrhage Protocol (MHP). This protocol was based on interpretation of thromboelastography (TEG) results which measures how quickly blood clots and the stability of clots.

What is Massive Hemorrhage Protocol (MHP)?
The protocol is activated when a healthcare provider anticipates that a patient will require a large transfusion of blood components. The primary goal of an MHP is to improve patient outcomes by bringing together the right patient, team, and interventions at precisely the right time.

Englewood sought to reduce unnecessary blood product, and faced challenges due to **lack of clinician familiarity with viscoelastic tests and TEG interpretation,** particularly outside of the Operating Room setting. Additionally, Englewood hoped to implement this new protocol **without disrupting or slowing down clinician workflows,** especially given the high-risk nature of patients with blood loss where time is of the essence.

Building a Point-of-Care Solution that Helps Clinicians Adopt Life-Saving Protocol

Englewood engaged their clinical decision support partner, Avo, to drive adoption of the Massive Hemorrhage Protocol (MHP). Avo's clinician support platform **effortlessly incorporates guidelines and protocols into the clinical workflow,** empowering healthcare organizations to standardize care and reduce burnout.

The Englewood team worked with Avo to **transform their MHP into a point-of-care tool, integrated with Epic.** With EHR integration, clinicians were able to easily navigate the protocol, receive real-time complex TEG interpretation, and glean patient-specific, evidence-based next steps. Thanks to the tool's success, Englewood decided to expand this Avo tool across the institution.

TEG Interpretation

CK-MA

ⓘ What is CK-MA?

● >65   ○ ≤65

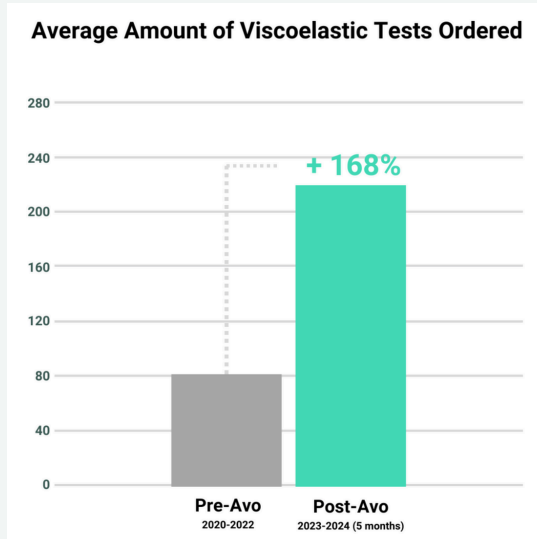**Interpretation of TEG Global Hemostasis with Lysis**

Prolonged clotting start time (CK splits > 10min)
Clotting start time is prolonged, evidenced by a CK-R >9.1. Likely due to factor deficiency and/or presence of anticoagulant.
- Administer FFP 15 mL/kg for CK-R 9.1-14
- Administer FFP 20 mL/kg for CK-R >14
OR
- Administer KCentra administration (25 units/kg)

- Consider anticoaulation treatment (reversal) if appropriate)
- Consider Vitamin K (10mg IV)

Normal Platelet Function (CRT > 40)
Platelet function is likely normal, given CRT curve is > 40mm by 10 min.

Normal Fibrin Function (CFF > 15)
Fibrin contribution to clot strength is normal.

Secondary Hyperfibrinolysis (LY30 > 3% and CK-MA > 65)
Likely secondary hyperfibrinolysis in setting of hypercoagulability. Hold antifibrinolytics.

Number of Viscoelastic Tests Ordered Increases by 168% after Implementing Avo

Average Amount of Viscoelastic Tests Ordered

+ 168%

Pre-Avo
2020-2022

Post-Avo
2023-2024 (5 months)

After implementing Avo, Englewood saw a 168% increase in the number of viscoelastic tests ordered within a year. Avo resolved clinicians' challenges with TEG interpretation, **leading to an improvement in patient outcomes and decrease in costs related to blood transfusions.** The TEG interpretation tool not only increased the number of viscoelastic tests ordered, but also empowered clinicians to better treat their patients by providing personalized, evidence-based recommendations at the point-of-care.

About Avo

Avo's clinician support platform empowers healthcare organizations to standardize care and reduce burnout by effortlessly incorporating guidelines and protocols into the clinical workflow. By centralizing the latest information and transforming it into actionable tools in the EHR (or outside of it), Avo simplifies everyday tasks like pre-charting, care planning, documentation, ordering, and more. At Avo, we improve quality of care with love, not alerts.

About Englewood Health

Englewood Health, a top healthcare system in New Jersey, provides acclaimed inpatient and outpatient care through its hospital, physician practices, urgent care, and imaging centers. Since 1890, Englewood Hospital has been known for clinical excellence and patient safety. Its Physician Network, with over 600 providers, offers primary, specialty, and urgent care at 140+ locations in five northern New Jersey counties.

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