Rap #47
Post: YEARS - D-Dimer Under 1000 But Over Age-Adjusted? Be Careful...

Author: Clay Smith Reviewed by: Ellen Dore

I scored the above BEEM rating because:

D-dimer always feels like a nemesis until it works for us. This was an external validation of the YEARS criteria and study. The study validated the YEARS criteria, but it did note that any missed PEs happened when the D-dimer was above age adjusted levels. This is a useful study. The drawback is that we don't know how it applies to our current COVID-19 world.

The educational pearls include:

- The study validates the use of YEARS and age adjusted d-dimer.
- YEARS clinical criteria: clinical signs of DVT, hemoptysis, and PE are most likely diagnosis. If zero YEARS criteria are met, a D-dimer <1000 rules out PE. If ≥1 criteria are met, a D-dimer <500 rules out PE.
- Any missed PEs (17) happened when the D-dimer was above age adjusted levels.

I chose the above EBM rating because:

It is based on retrospective data that validates YEARS when utilized with age adjusted criteria. Will need prospective validation.

Edited by Jake Binder, Andrew Hasebrook, Ryan Johnsen, Megan Elsenheimer, Dan Hogan, Alex Taylor, Jacy O'Keefe and Joe Walter
Post: Follow-up and Outcomes Among Medicare Beneficiaries After ED Discharge

Author: Lin et. al  Reviewed by: Michael DeBoer

<table>
<thead>
<tr>
<th>BEEM Rater Scale</th>
<th>Score - choose only 1</th>
<th>Educational Utility</th>
<th>Score - choose only 1</th>
<th>EBM</th>
<th>Score - choose only 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assuming that the results of this article are valid, how much does this article impact on EM clinical practice?</td>
<td>Are there useful educational pearls in this article for residents?</td>
<td>Is this article reflect evidence based medicine (EBM) and thus lack bias?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Useless information</td>
<td>Low value: No valuable pearls</td>
<td>Not EBM based, only expert opinion (and thus more biased)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not really interesting, not really new, changes nothing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interesting and new, but doesn't change practice</td>
<td>Yes, but there are only a few (1-2) valuable or multiple (≥3) less-valuable educational pearls</td>
<td>Minimally EBM based</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interesting and new, has the potential to change practice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New and important: this would probably change practice for some EPs</td>
<td>Yes, there are several (≥3) valuable educational pearls, or a few (1-2) KEY educational pearls that every resident should know before graduating</td>
<td>Mostly EBM based</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New and Important: this would change practice for most EPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This is a &quot;must know&quot; for EPs</td>
<td>Yes, there are multiple KEY educational pearls that residents should know before graduating</td>
<td>Yes exclusively EBM based (unbiased)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I scored the above BEEM rating because:

Interesting and new, but not exactly surprising. It doesn’t change much of my practice other than making sure I’m continually trying to remove barriers to follow up.

The educational pearls include:

- 40% had follow up in 7 days, 70% in 30 days (30% didn’t have follow up in 30 days).
- Less likely to have PCP in 30 days: Medicaid eligible, Black race, treatment at rural ED → Go the extra mile and try to remove barriers for these populations.
- PCP follow up within 30 days: Lower risk of mortality, greater risk of re-hospitalization

I chose the above EBM rating because:

This is a very large cohort study, it includes medicare beneficiaries, a total of 9,470,626 patients, and is over a 5 year time period.

Edited by Jake Binder, Andrew Hasebrook, Ryan Johnsen, Megan Elsenheimer, Dan Hogan, Alex Taylor, Jacy O’Keefe and Joe Walter
I scored the above BEEM rating because:

Video laryngoscopy is becoming common practice for emergency intubators. Previous research suggested that standard blade geometry (C-MAC) was associated with a higher first pass success rate for intubation when compared to the hyperangulated blade (D-Blade, Glidescope). However, this data was unadjusted for potential confounders and included data from a time when video laryngoscopy was infrequently utilized.

The educational pearls include:

- There are two common blade shapes for video laryngoscopy: standard geometry blade (C-MAC) and the hyperangulated blade (D-Blade).
- Standard geometry blade permits both direct and indirect visualization and the use of a Bougie.
- The hyperangulated blade only allows for indirect visualization, uses a rigid stylet, and has the proposed benefit of decreased need for head and neck manipulation.

I chose the above EBM rating because:

Prospective observational study using the National Emergency Airway Registry (NEAR) database, which is a multicenter international registry. Large sample size (N=11,927). Results were adjusted for possible confounders using multiple logistic regression (age, sex, obesity, medical vs. traumatic indication for intubation, initial airway assessment, patient positions, use of neuromuscular blocking agent). Clear discussion of strengths and limitations of study. Non-biased post, simply discussed results without personal commentary or expert opinion.
Does Antibiotic Under 1 Hour Impact Mortality?

Author: Clay Smith Reviewed by: Sean Condon

I scored the above BEEM rating because:

Surviving sepsis campaign is a quality measure that pushes for administration of antibiotics within 1 hour of sepsis recognition. Delayed antibiotic administration is known to increase mortality, but does it matter if administered within 1 vs. 3 hours? There was an immediate push back to this initiative because it could lead to poor antibiotic stewardship and expose patients to unnecessary risks of broad-spectrum antibiotics without a clear benefit. Waiting to give antibiotics could allow clinicians time to narrow antibiotic choice or even withhold them completely if non-infectious etiology is found. Many emergency physicians already questioned this quality measure, and this study further validates these concerns.

The educational pearls include:

- No mortality difference for immediate (within 1 hour) vs. early (within 3 hours) antibiotic administration across all patients.
- In cases of severe sepsis they found there to be higher mortality for immediate vs. early antibiotic administration.

I chose the above EBM rating because:

Fairly large number of subjects (33,863) across 13 different studies. Five prospective longitudinal studies and eight retrospective cohort studies, no randomized control studies. The overall quality of evidence was low based on Grading of Recommendations Assessment, Development, and Evaluation (GRADE). Three of the studies were found to have high risk of bias according to the Newcastle-Ottawa Scale.
Post: Interviewed while black

Author: Josh Ellis  Reviewed by: Joe Walter

<table>
<thead>
<tr>
<th>BEEM Rater Scale</th>
<th>Score - choose only 1</th>
<th>Educational Utility</th>
<th>Score - choose only 1</th>
<th>EBM</th>
<th>Score - choose only 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assuming that the results of this article are valid, how much does this article impact on EM clinical practice?</td>
<td>Are there useful educational pearls in this article for residents?</td>
<td>Is this article reflect evidence based medicine (EBM) and thus lack bias?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Useless information</td>
<td>Low value: No valuable pearls</td>
<td>Not EBM based, only expert opinion (and thus more biased)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not really interesting, not really new, changes nothing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interesting and new, but doesn't change practice</td>
<td>Yes, but there are only a few (1-2) valuable or multiple (&gt;=3) less-valuable educational pearls</td>
<td>Minimally EBM based</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interesting and new, has the potential to change practice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New and important: this would probably change practice for some EPs</td>
<td>Yes, there are several (&gt;=3) valuable educational pearls, or a few (1-2) KEY educational pearls that every resident should know before graduating</td>
<td>Mostly EBM based</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New and Important: this would change practice for most EPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This is a “must know” for EPs</td>
<td>Yes, there are multiple KEY educational pearls that residents should know before graduating</td>
<td>Yes exclusively EBM based (unbiased)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I scored the above BEEM rating because:

This article discusses multiple barriers that hinder black applicants in medicine. Acknowledging and striving for improvement in these areas of bias could lead to real representation and careers for our black colleagues.

The educational pearls include:

- Black people are underrepresented in medicine as in other facets of our society and face multiple barriers when applying for residencies and jobs in medicine (microaggressions, homophily, tokenism, imposter syndrome, stereotype threat).
- These negative barriers can negatively affect black individuals when seeking employment or within a program, whether they are intentional or not. This is compounded for other black minority groups (women, LGBTQ).
- Potential solutions include acknowledging these inequalities, staff education/ training, reporting databases.

I chose the above EBM rating because:

This does cover prior articles discussing this topic but there are some suggestions that may be more opinion based.

Edited by Jake Binder, Andrew Hasebrook, Ryan Johnsen, Megan Elsenheimer, Dan Hogan, Alex Taylor, Jacy O’Keefe and Joe Walter