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insight™

CLINICAL EDITION FOR COMMUNITY HOSPITALS

# Is Your Patient On A Direct Oral Anticoagulant?

The use of direct oral anticoagulants (DOACs) is increasing in popularity for use in patients. These drugs work differently than vitamin K antagonists (VKA), such as warfarin, and have unique monitoring, evaluation and treatment considerations that are continuously evolving as research and new drugs emerge. Patients who take DOACs tend to be more medically complex patients who will present to the ED for a variety of reasons.

## *From the Editor*

Welcome to this installment of **HospitalMD insight™–Clinical Edition**! This publication is aimed to inspire and equip you to advance clinical excellence in your community hospital. I would love to hear your feedback, comments, suggestions and accolades. Please email me with any thoughts at: BNewberry@HospitalMD.com.

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# What is a DOAC?

DOACs are a class of drug that inhibit clot formation through a different mechanism than vitamin K antagonism. This class of drug includes dabigatran (Pradaxa®), rivaroxaban (Xarelto®), apixaban (Eliquis®), edoxaban (Savaysa®) and betrixaban (Bevyxxa®). The mechanism of action on the clotting cascade is either direct thrombin or FXa inhibition. These drugs are used to treat hypercoagulable states such as atrial fibrillation, VTE and PE.

## WHAT ARE THE DISADVANTAGES ASSOCIATED WITH DOACS?

DOACs do not allow for easy therapeutic monitoring. There are no levels that can be checked in order to determine if a patient is hyper or hypocoagulable. This can make treatment decisions in the acute care environment challenging. In addition, traditionally there have not been accessible reversal agents for these drugs; therefore, a patient who is actively bleeding could not be treated by reversing the effects of these medications. However, reversal agents are starting to appear on the market.

## WHAT ARE THE ADVANTAGES OF DOACS OVER VKAS?

VKAs require the patient to commit to frequent monitoring in order to ensure that PT/INR remains within a therapeutic range. DOACs do not require this close monitoring and frequent dosage adjustment hassle for patients. DOACs have short half-lives compared to VKAs. If a patient has a condition that requires that the drug be stopped (such as non-compressible bleeding after trauma), cessation of these drugs will result in return to normal coagulation more quickly than with a VKA. DOACs carry a reduced risk for bleeding complications over VKAs. DOACs also have a wider therapeutic window and fewer drug and food interactions than VKAs.

## ARE THERE ANY LABORATORY TESTS THAT CAN EVALUATE DOAC LEVELS OR EFFECTS?

The PT/INR are utilized to evaluate the effects of VKA therapy. However, these tests are not effective in evaluating the effectiveness of DOACs. Thrombin time does have good correlation with dabigatran concentrations and may be available at your facility. Some DOACs can be leveled but this testing is expensive and

not readily available at most facilities. A standard workup should be initiated based on the patient's presenting complaint. However, give additional consideration to potential bleeding sources for patients on DOAC therapy and have a lower threshold for adding additional testing (such as CT scans, ultrasound, CBC, CMP, occult blood) that may indicate complications due to bleeding, especially in patients with traumatic injuries. Clinicians should have a low threshold for performing head CTs, abdomen/pelvis CTs and FAST exams on patients experiencing minor trauma if they are on DOAC (or VTA) therapy.

## ARE REVERSAL AGENTS AVAILABLE FOR DOACS?

**Specific reversal agents** Dabigatran now has an available reversal agent, idarucizumab, that was FDA approved in 2018. This may be an option at your facility for patients experiencing life-threatening bleeding or that require urgent surgical intervention. There was also a reversal agent FDA approved in 2018 which eliminates the anticoagulant effect of FXa inhibitors. However, this therapy is costly and not available at many facilities. Keep in mind that the risk of thrombotic events is always increased with the reversal of any anti-coagulant therapy and must be considered when making treatment decisions in a shared decision-making process with the patient.

**Prothrombin complex concentrate** This has been used for years for VKA reversal and there is some off-label use being researched for DOACs that is still emerging. 4F-PCC seems to have improved anti-coagulation effects over 3F-PCC in the DOAC population based on current available evidence and is recommended for the rapid reversal of anticoagulation effects for patients taking FXa inhibitors that have major bleeding. These products do contain some heparin and therefore cannot be used in patients with a history of HIT.

**Fresh frozen plasma** FFP is not recommended for the reversal of DOACs. However, if a patient has major bleeding and requires transfusion, FFP should be used as normal in the blood transfusion or massive transfusion protocol.

**Tranexamic acid** While no studies to date have specifically evaluated the use of TXA in DOAC patients, TXA has shown to reduce mortality in trauma patients if given within three hours. TXA may help to reduce transfusion requirements but modification of standard trauma guidelines at your facility regarding TXA should not be altered based on DOAC therapy at this time.

**Vitamin K** There is no evidence to support the use of vitamin K for patients on DOAC therapy.

**Hemodialysis** Due to its lower protein binding compared to other DOACs, dabigatran can be successfully removed from circulation using hemodialysis. The other DOACs have much higher protein binding and therefore hemodialysis has not shown to be effective in removing these drugs. Now that dabigatran has a reversal agent, hemodialysis is less of a consideration as a treatment option to reverse drug effects.

### Hematology consult and/or transfer

Since major bleeding is time-sensitive, the decision to treat bleeding and/or reverse a DOAC needs to be within the scope for an ED clinician. For this reason, planning for these patients, having protocols and involving pharmacy to ensure that proper medications are available is a key part of treating these patients effectively. Hematology/trauma experts can be involved once the patient is stabilized; however, life-threatening bleeding should be treated immediately without regard to consultation unless seeking consultation does not delay care.

Any patient that has had reversal treatment to control major bleeding (or for other treatment reasons) should be admitted to the ICU or transferred to definitive care for monitoring and further treatment.

## ARE THERE ANY SCORING SYSTEMS AVAILABLE TO ASSESS BLEEDING RISK FOR PATIENTS ON DOACS?

Yes. The ORBIT and HAS-BLED scoring systems can be useful when trying to assess risk of bleeding for a patient on DOAC therapy. The ORBIT scale tends to be more widely used as it does not require INR levels. These scales can be used, in conjunction with history and physical, to determine the risk of bleeding for a patient with VTE, PE or afib that you are considering discharging from the ED on DOAC therapy. Patients with a lower risk of bleeding would be better candidates for outpatient DOAC therapy as long as they have good follow up. Patients with a higher bleeding risk should be treated inpatient for these conditions. In addition, the PESI or Hestia scores can help specifically risk stratify patients with PE for safe discharge home with outpatient treatment and close follow up.

## WHAT IF A PATIENT HAS AN ISCHEMIC STROKE, REQUIRES T-PA AND IS ON A DOAC?

Patients on DOACs can have an ischemic stroke and the rate is about 1.2% in DOAC patients based on current research. The use and safety of the administration of t-PA to patients on DOACs continues to be debated in the literature. Clearly, there is significant bleeding risk with such a procedure and expert consultation should be considered. Current guidelines do not recommend the administration of t-PA to patients who have had a dose of DOAC within the past 48 hours unless levels specific to the DOAC the patient is on are normal. In all cases, PT/INR should be reviewed prior to t-PA administration. Thrombin levels and anti-FXa levels can be considered for patients on DOAC therapy if these tests are available at your facility. Both IV thrombolysis and endovascular thrombectomy could be options for a stroke patient on DOAC. However, this decision should be made in conjunction with neurosurgery and shared decision making with the patient and family.

## CAN OUTPATIENT DOAC TREATMENT BE SAFELY STARTED IN THE ED?

Yes. Patients with low bleeding risk, reliable compliance and close follow up can be considered for outpatient treatment of VTE, PE and afib if otherwise stable. Policies and/or

protocols that address this are helpful so that clinicians can make good evidence-based decisions considering all the necessary elements. Treating as an outpatient for these conditions (when safe) reduces healthcare spending and improves patient satisfaction.

## WHAT ARE SOME WAYS TO IMPROVE THE CARE OF PATIENTS ON DOACS IN THE ED?

The best strategy for managing these patients is planning! Your facility WILL see these patients so work in conjunction with facility policy makers, hematology/trauma/surgery experts at tertiary care facilities and pharmacists to have protocols in place for these patients and ensure that proper products, medications and protocols are in place to manage potentially life-threatening bleeding in these patients.

## Additional resources for learning about patients on DOAC therapy:

The August 2018 issue of Emergency Medicine Practice focuses on patients on DOAC therapy and presents an in-depth, evidence-based approach to these patients. You can find the issue HERE and completion of the post-test is good for 4 CE credits, all of which can be applied for pharmacy CE credit.

ACEP has a policy statement available for outpatient treatment of patients diagnosed with VTE and PE in the ED.

MedCalc is a great resource for stratification tools to assess bleeding risk and you can find the Canadian CT Head Rule, NEXUS criteria, ORBIT, HAS-BLED, Well's criteria, PERC, PESI and SIRS scales along with many other helpful tools to help you to risk stratify patients.

And, of course, **UpToDate** has evidence-based clinical guidelines for the management of ED patients on anticoagulant therapy.

Management of bleeding in patients taking directs anticoagulants

Direct oral anticoagulants and parenteral direct thrombin inhibitors dosing and adverse effects

# 2019 MIPS *Update*

Each year, Medicare requires us to choose from a list of improvements for one that will be implemented in our sites. There is financial penalty involved with not attesting to at least one improvement. I try to select an improvement that is both relevant and useful for our clinicians (and ultimately patients) and isn't too cumbersome. The MIPS goal that we have chosen for 2019 is:

**IA_PSPA_6 - Consultation of the Prescription Drug Monitoring Program**

> ***Clinicians would attest to reviewing the patients' history of controlled substance prescription using state prescription drug monitoring program (PDMP) data prior to the issuance of a Controlled Substance Schedule II (CSII) opioid prescription lasting longer than 3 days. For the transition year, clinicians would attest to 60 percent review of applicable patient's history. For the Quality Payment Program Year 2 and future years, clinicians would attest to 75 percent review of applicable patient's history performance.***

*Whenever writing a narcotic or benzodiazepine prescription for longer than 3 days of medication, please be sure to check your local drug database and DOCUMENT that you reviewed the patient's account prior to prescribing these drugs. For the MOST part, we should be writing very short courses (1-3 days) of these drugs, if we write for them at all. Patients should have these drugs prescribed and managed by their primary care provider in an effort to improve patient safety around these medications.*

# HospitalMD
# *CASE STUDY*

These case studies are based on actual cases that **HospitalMD** providers have seen. However, details about the case, patient and outcomes have been modified in order to protect patient privacy.

**The Case: A previously healthy 28-year old female presents to the ED for the "worst headache of her life". She states that the pain had an abrupt onset approximately 2 hours ago. She describes the pain as sharp and non-radiated. No nausea, vomiting, vision changes (other than photophobia) or other symptoms. The patient is sent for a head CT without contrast following a focused physical exam**.

**History:** No PMH

**Meds:** No medications

**VS:** HR – 86, BP – 146/92, RR – 20,
T – 98.8 F, POx – 99% on RA

**EXAM:** On exam, all systems were WNL

**Labs:** No labs ordered at this time

**Imaging:** Non-contrast head CT is WNL

**Treatment:** The patient is medicated for pain and then reassessed 45 minutes later with symptom improvement.

**Disposition:** The provider wonders if the negative head CT rules out the subarachnoid hemorrhage that is on the differential. The provider does research on UpToDate and determines that the patient can be safely discharged home with significant symptom improvement and instructions to follow up with the p
PCP and to return for any new or worsening symptoms. According to UpToDate, a non-contrast head CT has nearly 100% sensitivity for SAH within the first 6 hours of symptoms onset. After the 6 hour mark, the non-contrast head CT sensitivity diminishes over time.

**The Outcome:** The patient was discharge home and had no further issues

**Take Aways:**

- Utilize available evidence-based research to assist you in making effective clinical decisions and guide treatment.
- Utilization of resources allows the provider to target evaluation and treatment options and not tie up hospital resources for testing and treatments with low yield for the patient.
- Utilize the Ottowa SAH rule to help gauge risk and guide evaluation and treatment decisions. You can download the MDCalc app for a multitude of risk stratification scales.

**Customer Service Tips:**

- Provide education to the family about appropriate evaluation and treatment options.
- Explain the warning signs that should prompt a return to the ED.
- Encourage follow up care with the patient's PCP.

# CMEs

## NEED STROKE AND/OR TRAUMA CME?

If you work at a facility that is a designated stroke or trauma center, you have a requirement for a certain number of CMEs EACH YEAR on these topics. Make sure you are keeping up with these requirements AND forwarding your CME certificates to myself and Pam Callahan so that we can track this CME and have it available for facility recertification requirements. Regardless of whether or not your facility is a designated stroke or trauma center, these CMEs are beneficial. The CME certificate will specifically designate stroke/trauma CME in most cases. If not, a stroke/trauma specific topic will suffice. Below are some ways that you can obtain these CMEs. There are lots of ways to obtain these CMEs, below are just a few examples. Need to say something here about a deadline of September 30 for MCHD providers to turn in their trauma CME to me.

## STROKE

Requirement: 4 CMEs **annually**
EB Medicine "Emergency Stroke Care Series: Advances and Controversies"

- Cost: $179
- CME: 8 hours

American Heart Association "Acute Stroke Online Module"

- Cost: $27.50
- CME: 1.5 hours

National Stroke Association "Stroke Rapid Response Training"

- Cost: $20
- CME: 2 hours

## TRAUMA

Requirement: 9 CMEs **annually**

ATLS

- Cost: Varies but usually around $800-900
- CME: 17 (please note you can only count this to satisfy the requirement for one year even though your certification is for 4 – so this covers you in the calendar year that the course is taken)

Advanced Emergency Medicine Bootcamp

- Cost: $475
- CME: 2 Trauma CME (even though the entire course offers 23 CME in its entirety)

EM Crit – Trauma Compilation I

- Cost: $79.00 (includes 2 years' worth of access)
- CME: 16

EB Medicine

- Can mix and match topics that have trauma CME designated credits HERE and you can purchase each 4 hour course and CME test as a bundle for $49
- EB Medicine also has an 18 hour trauma course – Emergency Trauma Care: Current Topics and Controversies volume III – available for $249

## DO YOU KNOW HOW TO ACCESS YOUR UpToDate CME?

Did you know that **UpToDate** gives you CME credit for every subject that you review? It is easy to obtain a record of your completed CME.

- Sign into your personal **UpToDate** account (this won't work with a generic "site" login).
- In the upper right hand corner you will see a link for "CME".
- Click on this link.
- Click "Redeem" to redeem your CME (credits are available for 2 years).
- Click on "50 Credits".
- Place a checkbox next to the credits you would like to redeem and click "Continue" at the bottom.Answer the appropriate questions.
- Click "Next".
- Answer the additional questions.
- Click "Save".
- Click "Download" next to your certificate to view and/or save.

# Documentation Reminders

- ✔ **HPI** – Strive to always include **FOUR HPI** elements in your charts.
- ✔ **ROS** – Document the necessary elements in the ROS and then write or check "**ALL OTHER SYSTEMS REVIEWED AND ARE NEGATIVE**". This statement must be present, and the wording MUST BE PRECISE in order to be considered acceptable by the billing company.
- ✔ **Exam** – You must have **EIGHT** exam elements present for a higher level chart
- ✔ **ECG/Radiology interpretation** – If you have ordered either of these, the statement "interpreted by me" must be present in the chart. **An ECG must have 3 elements and an interpretation documented and a radiology result must have an interpretation documented**.
- ✔ **Critical Care Time** – If your patient qualifies for critical care, BE SURE to document this on the chart.
- ✔ **Procedures** – Be sure to include all pertinent details regarding procedures so that any more complex procedures (ie intermediate vs simple suture repair) can be billed at the rate that matches the true complexity of the procedure.

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If you have ANY questions about the documentation of any of these things, or any other types of documentation, please don't hesitate to contact your medical director or myself – **bnewberry@hospitalmd.com**.

*Tip*

**DON'T FORGET TO DOCUMENT CRITICAL CARE TIME!**

**Critical Care Documentation** is one of the largest areas that we can improve revenue for the essential services that we provide as Emergency Department clinicians.

## DO YOU KNOW WHEN YOU SHOULD DOCUMENT CRITICAL CARE?

**There are two clinical criteria that the patient must meet in order to qualify for Critical Care Time.**

- Acute impairment of a vital organ
- High probability of sudden, clinically significant or life threatening deterioration in condition

**The treatment criteria requires:**

- A provider's high complexity medical decision making in order to support vital organ function and prevent further deterioration
- A provider's full attention (service time does not need to be continuous but must be exclusive)
  - The provider must be immediately available to the patient
  - Time can include reviewing test results, discussing the patient's care with staff, documenting the critical care in the medical record
  - Time can also include discussion time with family members when the patient is unable to give history or make decisions (be sure to document the reason a surrogate is required (patient unresponsive, AMS, medicated, etc.)

**Potential clinical indicators include (but are not limited to):**

- Unstable vital signs
- Disposition status such as transport to cath lab or admission to ICU/CCU
- Procedures performed (ET tube, CPR, BiPAP, CPAP, tPA, cardioversion, defibrillation, pericardiocentesis, CVP, thoracentesis, tracheostomy, LP, ventilator use and IO access)
- Medications administered
  - IV infusions (nitro, epi, amiodarone, beta blockers, insulin, anti-arrhymics, antibiotics, anti-venom)
  - Vasopressors
  - Paralytic agents
  - Thrombolytics

**Tip** DON'T FORGET TO DOCUMENT CRITICAL CARE TIME!

**Potential Diagnoses that may qualify for Critical Care (though there may be others):**

- Acute MI/Unstable Angina
- PE
- AAA
- Surgical Abdomen
- Acute CVA/SAH
- Multi-system Trauma
- Extensive Head Injury
- Internal Organ Injuries
- GI Bleed
- Meningitis
- AMS
- Drug/Alcohol Overdose
- Status Epilepticus
- Hypoxia/Hypotension
- Hyperkalemia
- Sepsis
- Respiratory Failure/COPD/Asthma
- DKA
- Pneumothorax

**Documentation Criteria for Documentation Criteria**:

- Critical Care is a time-based code and requires your documentation to reflect your Critical Care Time for the patient's encounter. (i.e. Critical Care Time____minutes excluding separately billable procedures.)
- Critical Care Time durations are documented as: 30-74 minutes; 75-104 minutes; 105-134 minutes; 135-164 minutes; 165-194 minutes; 194 minutes or longer.

- The provider's notes must document that time involved in the performance of separately billable procedures was not counted toward Critical Care Time. If an intubation, CPR, Chest Tube insertion, central line placement, pericardiocentesis is performed and billed separately the time the physician spent performing these procedures must be subtracted from the total Critical Care Time and this must be evident in the documentation. Notes should describe relevant data (i.e. signs, symptoms and diagnostic data). See above highlighted statement for an example.
- Critical Care Time includes your time spent:
    - Performing procedures that are not separately billable: pulse oximetry, chest x-rays, monitoring blood gases, evaluating computer information; NG tube placement; transcutaneous pacing; ventilator management and vascular access procedures
    - Interval assessments of the patient's condition (e.g. response to treatment)
    - Rationale for treatment
    - Timing of interventions
- Teaching physicians must be present for the entire period of Critical Care Time for which the claim is submitted. Only time that the teaching physician spends alone with the patient (and that she/he and the resident spend together with the patient) can be counted.
- The teaching physician documentation must provide substantive information including:
    - Time the teaching physician spent providing Critical Care Time
    - That the patient was critically ill during the exam
    - What made the patient critically ill
    - The nature of the treatment and management
- **Acceptable note:** *"Patient developed hypotension and hypoxia; I spent 45 minutes, excluding separately billable procedures, while the patient was in this condition, providing fluids, pressors and oxygen. I reviewed the resident's assessment and plan of care."*
- **Unacceptable note:** *"I came and saw the patient and agree with the resident."*

**Important Note:**

The physician must be prepared to demonstrate that the service billed meets the definition of critical care. Medicare may request supporting documentation at any time for any claim. Medicare may also request documentation whenever there is an indication that the services may not have been critical care.

# Resources and Events

## ANNUAL HEALTHSTREAM EDUCATION DEADLINE HAS PASSED!

Have you completed your HealthStream annual education? If you have not completed this, please get this done ASAP. It is very important that we have documentation of annual training on compliance topics such as EMTALA, restraint use and corporate compliance.

## GET ACEP NOW

ACEP Now is a great publication that works to keep all of us working in Emergency Medicine up to date on clinical and political topics. Go to this link to look at the latest issue and subscribe!

## UPCOMING CONFERENCES

ACEP Calendar of Emergency Medicine Conferences

Calendar of Hospital Medicine Conferences

AAENP Conference Events

## ONLINE EDUCATION

Emergency Medicine Boot Camp

Hospital Medicine Boot Camp

## PROCEDURE TRAINING

Global Training Institute

Emergency Procedures Course

## CERTIFICATION REVIEWS

Fitzgerald ENP Certification Review

Rosh ENP Certification Review

## JOURNALS AND PROFESSIONAL ORGANIZATIONS

**FREE!** Emergency Medicine News

**FREE!** ACEP Now

Emergency Medicine Practice

Advanced Emergency Nursing Journal

Annals of Emergency Medicine

Journal of Hospital Medicine

Society of Hospital Medicine

American College of Emergency Physicians

American Academy of Nurse Practitioners

American Academy of Emergency Nurse Practitioners

American Academy of Physician Assistants

## PODCASTS

EM: Rap

EMCRIT

FOAMCast

REBELEM

EMplify

Hospital and Internal Medicine Podcast

The Hospitalist Podcast

If you have a great resource you would like added to this list, let us know!

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