Guideline Recommendations
Choosing Wisely

Emergency Medicine
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BACKGROUND
On December 12, 2018, the Board of Directors of the West Virginia College of Emergency Physicians (WVACEP) voted unanimously to enter into an agreement with the West Virginia Partnership for Health Innovation (WVPHI) to review the 26 Choose Wisely Guidelines related to the practice of Emergency Medicine. WVACEP was asked to develop a list of approximately six guidelines that are the highest priority to benefit patients in West Virginia with a bias to low complexity, high impact care processes that are currently not consistently adopted in West Virginia.

ABOUT CHOOSING WISELY
The mission of Choosing Wisely is to promote conversations between clinicians and patients by helping patients choose care that is supported by evidence, not duplicative of other tests or procedures already received, free from harm and truly necessary.

WVACEP PROCESS
On Wednesday, March 13, 2019, WVACEP assembled a committee of a cross section of practicing emergency physicians from around the State of West Virginia at Stonewall Resort to complete the requested work. The physicians and their practice locations were:

Neal Aulick, MD, FACEP   Ohio Valley Medical Center, Wheeling, WV
Adam Crawford, DO    Charleston Area Medical Center, Charleston, WV
Ben Deuell, DO    Berkeley Medical Center, Martinsburg, WV
Chris Goode, MD, FACEP    WVU Healthcare, Morgantown, WV

This guideline review process included:

1. Review of the 26 Choosing Wisely Guidelines related to the practice of Emergency Medicine to ensure that each physician was familiar with the Guidelines.
2. Eliminated those that were high complexity and/or low impact.
3. Eliminated guidelines that were already consistently adopted in West Virginia.
4. Discourse was held to establish opinions of the remaining guidelines. This allowed the group to recognize commonalities of medical opinions, which narrowed the focus to 6 guidelines.
5. The medical rationale for each selection was developed.
6. Recommendations for implementation were developed.
7. The 6 guidelines, rationale and recommendations identified were presented to the WVACEP Board of Directors at their March 13, 2019 for review and final approval.
CHOOSING WISELY GUIDELINES RELATED TO EMERGENCY MEDICINE

The following Choosing Wisely Guidelines related to the practice of emergency medicine were reviewed.

1. Society of American Gastrointestinal and Endoscopic Surgeons

Don’t discharge patients presenting emergently with acute cholecystitis without first offering laparoscopic cholecystectomy.

2. American Epilepsy Society

Do not routinely perform brain imagining after acute seizure in patients with established epilepsy.

3. American Academy of Family Physicians

Don’t transfuse more than the minimum of red blood cell (RBC) units necessary to relieve symptoms of anemia or to return a patient to a safe hemoglobin range (7 to 8 g/dL in stable patients).

4. American Society for Clinical Pathology

Do not test for Protein C, Protein S, or Antithrombin (ATIII) levels during an active clotting event to diagnose a hereditary deficiency because these tests are not analytically accurate during an active clotting event.

5. American Academy of Nursing

Don’t administer “prn” (i.e., as needed) sedative, antipsychotic or hypnotic medications to prevent and/or treat delirium without first assessing for, removing and treating the underlying causes of delirium and using non-pharmacologic delirium prevention and treatment approaches.

6. American College of Medical Toxicology & American Academy of Clinical Toxicology

Don’t perform fasciotomy in patients with snake envenomation absent direct measurement of elevated intracompartmental pressures.

7. American College of Medical Toxicology & American Academy of Clinical Toxicology

Don’t use phenytoin or fosphenytoin to treat seizures caused by drug toxicity or drug withdrawal.
8. **American College of Emergency Physicians**

Avoid ordering CT of the abdomen and pelvis in young otherwise healthy emergency department (ED) patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.

9. **American College of Emergency Physicians**

Avoid prescribing antibiotics in the emergency department for uncomplicated sinusitis.

10. **American College of Emergency Physicians**

Avoid lumbar spine imaging in the emergency department for adults with non-traumatic back pain unless the patient has severe or progressive neurologic deficits or is suspected of having a serious underlying condition (such as vertebral infection, cauda equina syndrome, or cancer with bony metastasis).

11. **American College of Emergency Physicians**

Avoid CT pulmonary angiography in emergency department patients with a low-pretest probability of pulmonary embolism and either a negative Pulmonary Embolism Rule-Out Criteria (PERC) or a negative D-dimer.

12. **American College of Emergency Physicians**

Avoid CT of the head in asymptomatic adult patients in the emergency department with syncope, insignificant trauma and a normal neurological evaluation.

13. **American Society of Neurological Surgeons and Congress of Neurological Surgeons**

Don’t routinely obtain CT scanning of children with mild head injuries.

14. **American Association of Neurological Surgeons and Congress of Neurological Surgeons**

Don’t routinely obtain CT scanning of children with mild head injuries.

15. **Society for Cardiovascular Magnetic Resonance**

Don’t perform stress CMR in patients with acute chest pain and high probability of coronary artery disease.

16. **American College of Emergency Physicians**

Don’t delay engaging available palliative and hospice care services in the emergency department for patients likely to benefit.
17. **American College of Emergency Physicians**

Avoid instituting intravenous (IV) fluids before doing a trial of oral rehydration therapy in uncomplicated emergency department cases of mild to moderate dehydration in children.

18. **American College of Emergency Physicians**

Avoid computed tomography (CT) scans of the head in emergency department patients with minor head injury who are at low risk based on validated decision rules.

19. **American College of Emergency Physicians**

Avoid wound cultures in emergency department patients with uncomplicated skin and soft tissue abscesses after successful incision and drainage and with adequate medical follow-up.

20. **American College of Emergency Physicians**

Avoid placing indwelling urinary catheters in the emergency department for either urine output monitoring in stable patients who can void, or for patient or staff convenience.

21. **American College of Surgeons**

Don’t do computed tomography (CT) for the evaluation of suspected appendicitis in children until after ultrasound has been considered as an option.

22. **American College of Surgeons**

Avoid the routine use of “whole-body” diagnostic computed tomography (CT) scanning in patients with minor or single system trauma.

23. **Society of Cardiovascular Computed Tomography**

Don’t use coronary computed tomography angiography in high risk* emergency department patients presenting with acute chest pain.

24. **American Academy of Pediatrics**

Computed tomography (CT) scans are not always necessary in the routine evaluation of abdominal pain.

25. **American Academy of Pediatrics**

Computed tomography (CT) scans are not necessary in the immediate evaluation of minor head injuries; clinical observation/Pediatric Emergency Care Applied Research Network (PECARN) criteria should be used to determine whether imaging is indicated.
26. **American College of Radiology**

Don’t do computed tomography (CT) for the evaluation of suspected appendicitis in children until after ultrasound has been considered as an option.

**RECOMMENDATIONS**

The West Virginia College of Emergency Physicians Board of Directors unanimously endorses the following six Choosing Wisely Guidelines as the highest priority to benefit patients in West Virginia.

**Guideline Recommendation 1**

Avoid ordering CT of the abdomen and pelvis in young otherwise healthy emergency department (ED) patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.

**Rationale**

Secondary to the cost and healthcare impacts of radiation exposure to patients with uncomplicated renal colic and a history of kidney stones, we recommend avoidance of CT imaging as a standard modality of diagnosis.

**Recommendations for Implementation**

Recommend non-invasive studies such as ultrasound or empiric treatment of patients less than 50 year of age that have uncomplicated presentations and diagnostic workup during initial emergency department visit and have adequate follow-up.

**Guideline Recommendation 2**

Avoid lumbar spine imaging in the emergency department for adults with non-traumatic back pain unless the patient has severe or progressive neurologic deficits or is suspected of having a serious underlying condition (such as vertebral infection, cauda equina syndrome, or cancer with bony metastasis).

**Rationale**

In non-traumatic back pain with absence of neurologic deficit and in the absence of risk factors (ie. IV drug abuse, cancer, cauda equina syndrome), evidence does not support the routine use of lumbar spine imaging due to the low probability of a serious pathology. Diagnostic imaging does not accurately identify the cause of the etiology of low back pain and does not improve the time to recovery. The vast majority of cases of back pain in the ED are related to muscle strain or inflammation. As a result, routine imaging of the low back should be avoided in order to reduce ionizing radiation exposure and unnecessary cost.
**Recommendations for Implementation**

Recommend a through history and physical evaluation to identify high risk patients with risk factors or focal neurologic findings.

**Guideline Recommendation 3**

Avoid CT pulmonary angiography in emergency department patients with a low-pretest probability of pulmonary embolism and either a negative Pulmonary Embolism Rule-Out Criteria (PERC) or a negative D-dimer.

**Rationale**

In the setting of a low pre-test probability or negative D-dimer, evidence shows that the risk of an undiagnosed pulmonary embolism is the same as if the patient had a negative CTPA. Avoiding routine use of CTPA in low risk patients prevents risk of radiation, kidney injury and reduces healthcare costs.

**Recommendations for Implementation**

Adoption of clinical decision making tools such as Wells Criteria and PERC in conjunction with High Sensitivity D-dimer when indicated to guide diagnostic decision making and decrease CTPA utilization.

**Guideline Recommendation 4**

Avoid CT of the head in asymptomatic adult patients in the emergency department with syncope, insignificant trauma and a normal neurological evaluation.

**Rationale**

In patients presenting to the ED with syncope, a through history and physical examination should guide diagnostics. Syncope patients who present with the absence of trauma, signs of infection or abnormal neurologic examination do not require imagining of the brain. CT scans are expensive, expose the patient to radiation and produce a low diagnostic yield.

**Recommendations for Implementation**

Perform a through history and physical evaluation of the patient and in the absence of high risk features, avoid routine use of CT scan of the brain.

**Guideline Recommendation 5**

Don’t delay engaging available palliative and hospice care services in the emergency department for patients likely to benefit.
Rationale

With the aging population in West Virginia coupled with limited resources, early referral to hospice and palliative care services will result in an improved quality of life for our patients and better utilization of healthcare resources. In patients with a chronic or terminal illness, early referral provides comfort, relief of symptoms, and avoids prolonged futile care.

Recommendations for Implementation

Hospitals should utilize a multi-disciplinary team approach to provide early referral and implementation of palliative and hospice care services from the emergency department.

Guideline Recommendation 6

Avoid wound cultures in emergency department patients with uncomplicated skin and soft tissue abscesses after successful incision and drainage and with adequate medical follow-up.

Rationale

The use of wound cultures with uncomplicated skin and soft tissue infections, does not routinely change treatment and are not indicated.

Recommendations for Implementation

Abscesses and soft tissue infections should be treated as indicated including incision and drainage and wound cultures should not be performed.

SUMMARY

The West Virginia College of Emergency Physicians is the statewide medical society representing more than 200 emergency physicians, and is dedicated to improving the quality of emergency medical care through continuing education, research and public education.

Emergency Physicians are specialist trained to provide care to patients, including medical, surgical, trauma, cardiac, orthopedic, and obstetric services. As experts in the delivery of Emergency Medicine in West Virginia, the West Virginia College or Emergency Physicians pleased to have had the opportunity to participate in the West Virginia Partnership for Health Innovation’s discussion related to avoiding unnecessary medical tests, treatments and procedures.