Syncope: A High-Value Care Approach

Amber Deptola, MD
Assistant Professor of Medicine
Associate Program Director
Washington University In St. Louis
Outline

1. Why value matters
2. Opportunities for higher value
3. Syncope
Disclosures

• I have no potential financial conflicts to disclose.

• I’m presenting patient “fair prices” in St. Louis, publicly available on Healthcare Bluebook™ (HCB)

• I don’t pretend to be a health economist or health policy expert

The fair prices presented are based on the actual amount paid on a claim, not the billed amount, and reflect the discounts the health plan has negotiated with the facility.
VALUE = \frac{QUALITY}{COST}
MORE MONEY
=
BETTER OUTCOMES
.....right?
• **Spending**: Around 5% GDP more than other similar countries

• **Outcomes**: Life expectancy is shorter

![Figure 11. Difference in Life Expectancy by US County vs OECD Median Life Expectancy and US Median Life Expectancy, 2010](Moses et al. JAMA 2013.)
Why Worry About Cost Now?

Despite being 1st in spending among wealthy nations, US has highest:

- Infant mortality
- Child mortality
- Maternal mortality
- Rates of preventable death

1 in 3 healthcare dollars are WASTE²

Healthcare Spending as Percentage of GDP

[Graph showing the increasing trend of healthcare spending as a percentage of GDP from 1980 to 2040.]
Estimated Sources of Excess Costs in Health Care (2009)³

- Missed prevention: $55 Billion
- Fraud: $75 Billion
- Inflated prices: $105 Billion
- Inefficient delivery: $130 Billion
- Excessive admin costs: $190 Billion
- Unnecessary services: $210 Billion
Importance

Excess Healthcare Costs Sources

WASTE

53%

$395 billion

Physician-Driven Waste

Unnecessary Services

Inefficient service delivery

Missed prevention

Labs

Imaging
We asked our residents...

1. If my attending wants the test, I order it, regardless of cost.

2. Access to the outside/prior records.

3. Training in cost-effective care.
Syncope

- Sudden transient loss-of-consciousness
- Spontaneous immediate recovery
Not syncope

- Seizure
- Mechanical Fall
- Hypoglycemia
- Stroke
- Sleep
- Vertigo
- Intoxication
Healthcare Burden of Syncope

Figure 1. Incidence Rates of Syncope According to Age and Sex.
The incidence rates of syncope per 1000 person-years of follow-up increased with age among both men and women. The increase in the incidence rate was steeper starting at the age of 70 years. Syncope rates were similar among men and women.

Goal of Syncope Evaluation

Figure 2. Overall Survival of Participants with Syncope, According to Cause, and Participants without Syncope.

A 42 year old female with history of diabetes is brought in by her family after she was witnessed passing out. She was standing in a crowded line at a mall. She lost consciousness but quickly recovered. No head trauma. No cardiac symptoms. No prior similar incident.

What further information will you need in your in-office evaluation and why?
Every syncope evaluation needs 3 things:

1. History
   - What happened?
   - Are there concerning features of this story?
   - What past medical history is important?
   - What symptoms are present now?

Monetary cost: FREE with your visit.
Every syncope evaluation needs 3 things:

2. Physical Examination
   - Vital Signs
   - Orthostatics
   - Cardiac examination
   - Neurologic examination
   - ? Carotid Massage

Monetary cost: FREE with your visit.
Every syncope evaluation needs 3 things:

3. EKG
   - Diagnostic in 5%
   - If abnormal, helpful for risk stratification

HCB price: $33
45% of patients with syncope will have a diagnosis at this point.

Further testing will help in finding an etiology <2% of time.

• Exam: HR 75, BP 134/90, RR18, 98% on RA
• obese, otherwise unremarkable
• Orthostatics: supine 130/74, standing after 1 min 126/72, after 3 min 120/72

• EKG: NSR, borderline LVH
# To admit or not to admit?

<table>
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<tr>
<th>Generally YES</th>
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HCB price: $5,000-17,000
In the evaluation of simple syncope and a normal neurological examination, don’t obtain brain imaging studies (CT or MRI).

In patients with witnessed syncope but with no suggestion of seizure and no report of other neurologic symptoms or signs, the likelihood of a central nervous system (CNS) cause of the event is extremely low and patient outcomes are not improved with brain imaging studies.
Head CT?

- Generally not recommended if witnessed simple syncope
- Consider if:
  - Neurologic findings
  - Anticoagulated
  - Headache
  - Elderly
  - Visible trauma or dangerous mechanism

HCB price: $300


A 68 year old male with a history of myocardial infarction and stent placement in 2012 presents to your clinic after a “fall” this morning. It was un witnessed. He was walking across the room when he reports he felt lightheaded. He woke up laying on the ground. He denies neurologic signs or symptoms after he awoke. No seizure-like activity. He now has a headache over the back of his head.

On your review of his history, he has diabetes and is on aspirin, clopidogrel, metoprolol and glargine insulin. He also had mild aortic stenosis on his echocardiogram in 2012.
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For our patient

HR: 54
BP: 124/76. Orthostatics: 130/76 supine, 126/74 standing
RR: 20
O₂ Saturation: 94% on room air

Obese, barrel chested, small ecchymosis present over left occiput, prolonged expiratory phase, 2/6 blowing murmur at LSB, 1+ pitting ankle edema, 1+ pulses in lower extremities
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Our patient gets admitted to the hospital.

What additional testing do you feel is indicated and why?
Head CT?

- Generally not recommended
- Consider if:
  - Neurologic findings
  - Anticoagulated
  - Headache
  - Elderly
  - Visible trauma or dangerous mechanism

HCB price: $300

Telemetry

- Reveals a potential cause in only 5-15%
- Indicated for 24hrs for syncope of suspected cardiac cause

Hospital charges may be up to $1000/day
Echocardiogram

- Is useful if there is concern for:
  - Aortic stenosis
  - Hypertrophic cardiomyopathy
  - LV dysfunction

In those with suspected cardiac disease, may be suggestive of an etiology in nearly half of cases.

HCB price: $711
Things I wouldn’t order

- Carotid Dopplers – used in 58%, finds something in 0.5%

2. Don’t perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.

American Academy of Neurology

Choosing Wisely

Five Things Physicians and Patients Should Question

Don’t perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.

Occlusive carotid artery disease does not cause fainting but rather causes focal neurologic deficits such as unilateral weakness. Thus, carotid imaging will not identify the cause of the fainting and increases cost. Fainting is a frequent complaint, affecting 40% of people during their lifetime.

HCB price: carotid dopplers $378, EEG $679, tilt table $303
Discharge time!
Ambulatory Cardiac Monitors

- Diagnostic
  - 55%
  - 19%

Number of days recorded

HCB price: ICM $12,948, Holter/loop $167

2017 ACC/AHA/HRS Syncope Guideline
Take-Home Points

• All syncope patients should receive a history, exam and EKG.
  • 45% will have a diagnosis on these alone
  • Order beyond these only if specifically indicated.

• High-risk syncope: know it when you see it!
  • Cardiac history, exertional syncope, age

• Explore your available High-Value Care Resources:
  • ACP® High-Value Care Curriculum
  • Choosing Wisely® Campaign
  • Healthcare Bluebook™
References


Amber Deptola, MD
Assistant Professor of Medicine
Associate Program Director
Washington University In St. Louis
amberzdeptola@wustl.edu