Emergency Department Bouncebacks
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Motivation
• Work Experience
• M & M

Definition
• Bounceback - patients who make an unplanned return to the emergency department in the days following discharge
Caveat:
Also include:
* Those who die in the days following discharge from the emergency department

Outline
- Objectives
- 2 cases
- Literature review (4 articles)
- Method for approaching potential bouncebacks
- Summary

Objectives
1. View bounceback patients as a gift – they're giving you a chance to make a diagnosis.

2. Recognize patients with high risk for bounceback or death.
Objectives

3. Document a detailed neurologic exam on patients with neurologic complaints.

4. Don’t do a focused eye exam on patients with eye complaints.

5. Use the 2 Step Process in patients with high risk of bounceback or death.

The Cases

- Back pain
- Headache

Case 1 Visit 1
CC: back pain/spasms
HPI: 48 yo male w/ L sacroiliac spasms since last night, severe, assoc w/ intermittent fevers x 4 days. PCP W/U negative. No trauma, no change in bowel or bladder function. No radiation, never had this before, no abd pain

PMHx: mitral valve prolapse
Meds: Advil PRN
Allergies: NKDA
PSurgHx: Inguinal hernia repair
Social Hx: no Etoh, tobacco, or drugs. Pt is a massage therapist

PE: BP:114/60 P 80 R16 T37.3 96%RA
General: NAD, A & O x 3
HEENT: NL ears, nose & throat
Neck: supple, no LAD
Chest: CTA B/L
CV: RRR, holosystolic murmur
Abd: soft, NTND
Extr: no trauma or deformity, neurocirculatory status appears intact of the lower extremities
Back: limited exam due to pain
Case 1 ED Course

10:30 Toradol 30mg IV, Robaxin 1G IV
11:30 Demerol 50mg IV, Valium 50
12:30 Valium 2.5 mg IV, Decadron 10mg IV
13:58 DC home w/ percocet, valium, prednisone

MDM

- PCP visit, labwork reviewed (CBC, BMP, LFT’s, UA)
- Pt ambulated in ED - pain w/ flexion/extension
- No X-rays indicated - no trauma
- Pt comfortable w/ symptomatic Rx, requesting discharge
- Diagnosis: acute lumbosacral pain

Visit critique

- +:
  - Aggressive symptomatic Rx:
  - Reasonable MDM

- -:
  - Lack of neuro exam documentation
  - Did not explore or explain fever

Case 1 Visit 2 (5 days later)
CC: back pain
HPI: 48 yo male w/ fevers up to 103 x 3 weeks, vesicular lesions (now resolved), Severe Left SI joint and gluteal spasms. No CP, no cough, no radiation of pain, no change in bowel or bladder function. No relief w/ ED prescriptions, PCP did L spine X-rays 2 days ago - no acute process. Here today 2/2 severe pain.
PMHx: MVP
Meds: percocet, valium
Allergies: NKDA
PSurgHx: RIH
Social Hx: no Etoh, Tobacco, or drugs
### Case 1, Visit 2 ED Course

<table>
<thead>
<tr>
<th>Time</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30</td>
<td>Dilaudid 1mg, Phenergan 12.5 mg, 1L NS</td>
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<tr>
<td>2:30</td>
<td>CBC, UA NL</td>
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<tr>
<td>3:30</td>
<td>CT pelvis w/ PO &amp; IV contrast negative</td>
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<tr>
<td>4:48</td>
<td>DC home w/ percocet, valium, &amp; vioxx</td>
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### MDM

- Labs NL, CT pelvis - no abscess, pt referred to orthopedist on call, or PCP F/U. Pain improved, Prednisone not effective, so changed to Vioxx, off work x 5 days.
- Diagnosis: Left gluteal spasm, Fever, unknown origin

### Visit critique

- +:
  - Expanded w/u - CT

- -:
  - Limited neurologic exam documented
  - Fever remains unexplained, no comment on what IS causing it
Case 1 Visit 3 (6 days later)
CC: back pain
HPI: 48 yo male w/ 1 mo hx of intermittent fevers, fatigue, seen by PCP who thought he may have bacterial endocarditis. Several days ago had visual loss. Saw ophtho, who recommended echo. Echo today showed thick mitral valve leaflet w/ possible vegetation. Rash on trunk & face has resolved. Vomited x 1 in past month. Intermittent productive cough.
PMHx: MVP
Meds: percocet, valium
Allergies: NKDA
PSurgHx: RIH, cardiac cath in 1960’s to eval RHD - NL
Social Hx: no Etoh, Tobacco, or drugs

Case 1 ED Course
10:30 CBC NL, trop 1.06, CK 272, SR 77
11:30 IV vancomycin & gentamicin
11:45 Admitted

Diagnosis:
1. Febrile illness
2. Mitral regurgitation, rule out endocarditis
3. Left hip pain, rule out septic arthritis

Case 1 Hospital Course
TTE: EF 60%, Mitral valve w/ thickening and prolapse of anterior leaflet with probable vegetation,
Blood Cx 1 of 2 (+) for Salmonella

TEE: 0.5-0.75 cm vegetation on anterior leaflet of mitral valve, 3+ to +/- MR, Left atrium dilated. No atrial thrombus or PFO.

MRI left hip: Enhancement of inferior endplate of L5 and superior endplate of S1 w/ enhancement within L5-S1 disc. Consistent with osteomyelitis/discitis of L5-S1

Blood cultures x 4 negative

Diagnosis: culture negative endocarditis
Follow Up

- 4 months later pt had mitral valve repair, ligation of left atrial appendage. Pt had permanently diminished vision in left eye

Legal

- Pt sued the first 2 ED physicians and the PCP for failure to diagnose, alleging that blood cultures may have helped.
- Pt revealed to have dental procedure 3 wks prior to onset of symptoms. Pt was prescribed antibiotics but did not take them. Case dropped by plaintiff.

Pitfall

- Failure to document history & physical relevant to chief complaint

Key Point

- Neurologic exam documentation
Emergency Medicine Residents Do Not Document Detailed Neurologic Examinations

John Sarko, MD


Scored 0-8

- Level of consciousness
- Mental status
- Cranial nerves
- Motor
- Sensory
- Coordination
- Reflexes
- Gait

Results:

- Average score: 4.26
- Psych complaints: 3.97
- Neurologic complaints: 4.55
Conclusion

• Emergency medicine residents do not document detailed neurologic exam on patients with psychiatric or neurologic complaints

Case 2 Visit 1
CC: Headache/eye pain
HPI: 53 yo female with headache and eye pain x 4 days. Pt has hx of severe HA’s, but none in 10 years. HA gradual in onset, severe, similar in character to prior HA’s. Pt seen at urgent care and by PCP w/in last 24 hrs, no relief w/ injection or w/ vicodin. No weakness, fevers, paresthesia, rash, speech changes, cough, SOB, neck stiffness, diaphoresis, nausea, vomiting, or abd pain
PMHx: thyroid problem, headaches
Meds: synthroid, vicodin, maxalt, floricet
Allergies: NKDA
PSurgHx: ovarian cyst removal
Social Hx: pt is a smoker, but no Etoh or drugs

PE: BP:155/79 P 74  R16  T37.6
General: A & O x 3, NAD, well appearing
Head: NCAT
Eyes: perrl, EOMI, Fundi: no hemorrhage, exudates, or papilledema
Ears: TM’s normal
Nose: Normal, no rhinorrhea
Throat: NL tonsils
Neck: supple, nontender, no LAD
Chest: CTA B/L
CV: RRR, no murmurs
Abd: soft, NTND
Skin: no rash or lesions
Neuro: A & O x 3, CN 2-12 intact, normal gait, motor strength and sensation intact

Case 2 ED Course
10:30 Dilaudid 1 mg IV, Toradol 30 mg IV, Phenergan 12.5 mg IV, 1 L NS
11:30 CT brain w/o contrast: no acute process
12:30 DC home
Medical decision making

• “Patient is feeling better. Patient is ready to go home.”

Visit critique

• +:
  • Reasonable neuro exam documented

• -:
  • Minimal investigation/explanation of eye pain
  • Did not explain why CT done and whether LP may be indicated
  • MDM awful

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Case 2 Visit 2 (1 day later)
CC: Headache
HPI: 53 yo female w/ Hx of HA’s, but none in 10 years, here w/ 5 days of gradual onset R frontal HA behind her R eye. Seen last night, improved, sleep interrupted by pain. Today notes R eyelid swelling, no change in visual acuity, no neck pain or stiffness, +N/+V, no fever, no paresthesias, no facial droop, no neck pain.

PMHx: thyroid problem, headaches
Meds: synthroid, vicodin, maxalt, fioricet
Allergies: NKDA
PSurgHx: ovarian cyst removal
Social Hx: pt is a smoker, but no Etoh or drugs

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Case 2 Visit 1
PE: BP:128/75 P 64   R18  T37.5
General: A & O x 3, NAD, well appearing
Head: NCAT, swelling around upper and lower right eyelid.  
   No erythema, nontender R temple
Eyes: perrl, EOMI, no pain w/ EOM, VA: R 20/70, L 20/50,  
   tonopen: L: 29, R: 33
Ears: TM’s normal, no blood
Nose: Normal
Throat: NL pharynx w/ tonsillar hypertrophy
Neck: supple, nontender, no LAD
Chest: CTA B/L
CV: RRR, no murmurs
Abd: soft, NTND
Skin: no rash or lesions
Case 2 Visit 2, ED Course

10:30 Dilaudid 0.5 mg IV, Reglan 10mg IVP, benadryl 25 mg IV
11:30 decadron 10mg IV, Imitrex 6mg SQ
12:30 Demerol 25mg IVP
1:30 CBC NL, “I spoke to PCP, who requested LP, given 4 healthcare visits in 4 days.” LP results NL

MDM: “We were prepared to discharge this patient, but pain returned and appeared to be intractable. In addition, Tonopen pressures were somewhat elevated so we felt that admission was the best course.

20:50: Dilaudid and Nafcillin ordered.

Diagnosis:

- Headache, Orbital cellulitis

Visit critique

- Limited eye exam
- ? Orbital cellulitis
- ? Explain tonopen findings
Case 2 Hospital Course

Case d/w ophthalmologist, who agreed symptoms most c/w orbital cellulitis, pt placed on Nafcillin, levoquin eye drops, solu-medrol, ophthalmology consulted emergently

DDx: orbital cellulitis, herpes ophthalmicus, herpes zoster, ophthalmicus, acute angle closure

Day 2, vesicles appeared on right side of face & nose. Dx: herpes zoster ophthalmicus

Pt placed on IV acyclovir, stayed in hospital 5 days

Pitfall

- Failure to document history & physical relevant to chief complaint(s)

Pitfall

- Attempting to do a focused eye exam in a patient with an eye complaint.
- Visual acuity
- Conjunctiva
- Sclera
- Pupils
- Ocular movements
- Fundi
- Lids/FB
- Fluorescein/Woods Lamp - cornea
- Slit lamp – anterior chamber
- Tonopen, visual fields, ultrasound, dilation

The point
- As a non-ophthalmologist, you’re unlikely to be good enough at ophthalmology to do a focused eye exam – do a full exam every time.
- Ophtho will want to hear it

Literature review
- 4 articles
- Risk Factors for:
  1. Bounceback visits
  2. Bounceback visits
  3. Bouncebacks + Admission
  4. Death after discharge

Initial Emergency Department Diagnosis and Return Visits: Risk Versus Perception

Study objectives: To identify diagnostic predictors of return emergency department visits, and to compare actual and perceived associations between initial ED diagnosis and revisits to help identify target diagnoses for prevention strategies.
• Question: To identify predictors of 72 hour return visits

• Methods: 1 year review - Identified patients with 2+ visits in a 72 hour period

• Findings: 52,553 patients
  • Early returns: 1,422 (2.7%)
  • Early returns (admitted): 313 (0.5%)

• Most common Dx: Dehydration
  • Dx predicting admission: Dehydration

Other common diagnoses

• Abdominal pain
• Otitis media
• Strep throat
• Seizure
• UTI
• Closed head injury
Conclusions:

- Strategies to prevent re-visits:
  - Recognition of high risk DC diagnoses
  - Better discharge instructions
  - Follow-up phone calls
  - Home health visits

2.

“Bounces”: An Analysis of Short-Term Return Visits to a Public Hospital Emergency Department

From July through September 1987, our emergency department registered 17,214 patients, of whom 569 (3.3%) returned within two days of initial registration. Cases were reviewed to identify factors associated with return visits. Patient-related factors were responsible for a majority of repeat visits.

Findings

- 53%: patient-related factors
- 13%: progression of illness
- 12%: new problems
- 18%: physician problem - misDx, treatment error, admission indicated, called back
Findings

- 4%: healthcare system problems overall
- 19%: admitted on 2nd visit
- 4%: medical error

Key Points:

- Less than 1/5 of the time, return was due to the fault of the 1st physician

Key points:

- No one returning, even those admitted to ICU, died

Risk Factors for 72-Hour Admission to the ED

CHRISTIAN MARTIN-GILL, BS, NREMT-P AND ROBERT C. REISER, MD, MS, FACEP
• Question: To identify patients who are discharged from ED with high risk for return and admission within 72 hours.

• Methods: review of 2 years, 104,584 patients
• 493 (0.47%) returned, admitted

High Risk
• Over 65
• Medicare
• Arrive by ambulance

High Risk:
• Mental health
  Alcohol-related, Depressive = 71%

• Genitourinary
  Infection, Stone = 58%

• Symptom-based
  Nausea/Vomiting = 8%
  Chest + Abdominal pain = 37.3%
  Seizure = 8%
4.

Unanticipated Death After Discharge Home From the Emergency Department

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Results

• 117 deaths
• 30.2/100,000 discharges
• 58 deaths unexpected
• 35 had possible medical error

Methods: 10 year review of discharges from urban ED

• 387,334 encounters
• 186,859 individuals

Outcome: mortality within 7 days s/p ED

Themes

• Atypical presentation of low prevalence diseases
• Exacerbation of chronic disease
• Abnormal vital signs
• Mental Illness/Substance abuse
Lit Review: Summary

- Reviewed risk factors for bounceback, bounceback + admission, and death after discharge

What this means for you:

- 115 million emergency department visits annually
- 3% will bounceback within 72 hours
- 18-30% return due to a possible medical error
- (There’s a 70-80% chance the previous MD did nothing wrong)

The stats

- 30/100,000 patients will die within 7 days after ED discharge
- 9/100,000 patients will die within 7 days after ED discharge secondary to possible medical error

The Math

- You work 30 hours per week
- You see 3 patients per hour
- = 4,500 patients per year
• 135 of your patients will bounceback annually.
  • = about 1 per shift

• In a 30 year career, you will discharge 40 patients who will die within 7 days after discharge.

What can you do?

• Be smart

• Spend a little extra time on the high risk cases and charts.

Two step approach

• 1. Identify high risk patients

• 2. Review your evaluation prior to discharge
Step 1. High Risk

- High risk complaint without definitive diagnosis (ex. Chest pain, abdominal pain, fever with headache)
- Abnormal vital signs
- Factors making return unlikely (communication, poverty)
- Chronic disease with decompensation

Step 1. High risk

- Difficulty obtaining accurate data (communication)
- Advanced age
- Upset patients
- Unmet expectations
- A bounceback

Step 2. Review your Evaluation prior to DC

- Address all documented complaints
- Confirm history is accurate
- Consider serious diagnoses
- Explore/explain abnormal findings

Step 2. Review your Evaluation prior to DC

- Write a medical decision making note explaining your thought process
- Assure specific aftercare instructions with timely follow-up
- Confirm patient understanding and comfort with plan
In Summary:

1. Flag patients you will worry about after your shift, while the patient is still in the ED.

2. Complete a medically and legally defensible evaluation that is reflected in documentation.

Objectives

1. View bounceback patients as a gift - they’re giving you a chance to make a diagnosis

2. Recognize patients with high risk for death or bounceback

3. Document a detailed neurologic exam on patients with neurologic complaints

4. Don’t do a focused eye exam on patients with eye complaints

5. Use the 2 Step Process in patients with high risk of bounceback or death
References


Questions?