Should this patient be referred to the ED?

Elisha Targonsky
MD, CCFP (EM)
Emergency Physician NYGH
Assistant Professor UofT DFCM
@ETTube on X/Twitter

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- To all the amazing family doctors who are the pillars of medicine in Canada
- For all your hard work and dedication throughout the pandemic
- For diverting patients from the ER and expertly managing them in the office!

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Objectives

- Who needs to come to the ED?
  - When you cannot offer treatment of urgent condition
- Empower family physicians to feel comfortable managing co
- Review common scenarios that come to ED
- Optimize communication:
  - MD to MD is best
  - Fax is slow and unreliable!
  - Send a note, send an email with patient
  - Help set patient expectations

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Conflicts of interest…

- none

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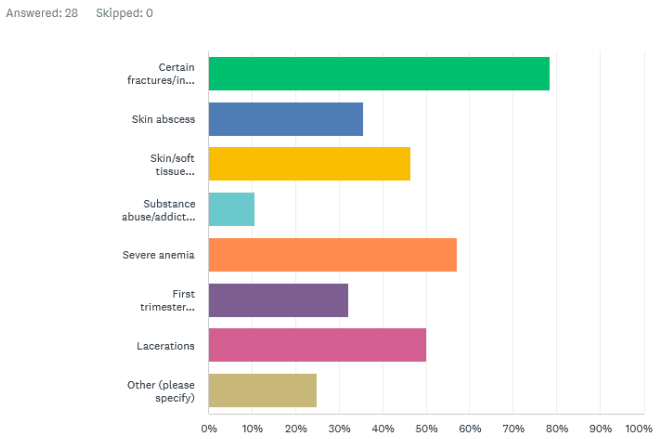

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Survey to EM Colleagues

- What do we see commonly in the ED that can be managed in the outpatient/clinic setting?
  - HTN
  - Cellulitis
  - Simple lacerations
  - Bell Palsy
  - r/o DVT
  - 1st trimester bleeds
  - Requests for IV antibiotics
  - Rate-controlled atrial fibrillation

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Case 1

- 71yF woke up a bit "dizzy"
- Checked BP 170/85
- Still dizzy and mild headache
- Repeat BP 185/90
- Went to FD, BP 190/90

- PHx: HTN
- Meds: candesartan, HCTZ

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Hypertension: when is it an emergency?

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Hypertensive Emergency

- Elevated BP (*generally* >180/120, often >220/140) with evidence of end-organ damage

Examples?

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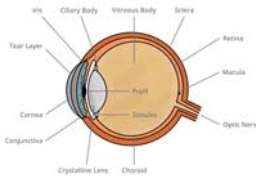
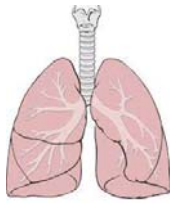
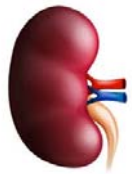


Severe sudden HA, Seizure
Focal neurologic S&S, Alt LOC

Chest Pain +1

Generally *not*:
- Gradual, mild or chronic HA
- Dizziness
- Palpitations
- Epistaxis
- "unwell"

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Terminology

- ~~Hypertensive "Urgency"~~
  - ~~Elevated BP (eg >180/120) but no symptoms of emergency~~
- Severe asymptomatic HTN
  - Elevated BP (eg >180/120) but no symptoms of emergency

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Exception!

>140/90 +
- HA
- Vison
- CP/SOB
- RUQP
- Edema
- 2+protein

Or > 160/110

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What happens to these patients in the ED?

Original Article

Review of Referrals Sent to the Emergency Department for Management of Hypertension

Retrospective, Montfort Hospital

(Ottawa) 254 patients (67 referred by GP)

Only 6 total HTN emergency

JAMA Internal Medicine | Original Investigation | LESS IS MORE

Clinical Outcomes of Intensive Inpatient Blood Pressure Management in Hospitalized Older Adults

Timothy S. Anderson, MD, MAS; Shoshana J. Herzig, MD, MPH; Bocheng Jing, MS; W. John Boscardin, PhD; Kathy Fung, MS; Edward R. Marcantonio, MD, SM; Michael A. Steinman, MD

Retrospective, US Veterans health admin data
> 66,000 patients > 65yo with asymptomatic HTN

Intensive BP management in hospital =
Worse outcomes: Higher ICU use, stroke, AKI, elevated troponin

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Clinical Policy: Critical Issues in the Evaluation and Management of Adult Patients in the Emergency Department With Asymptomatic Elevated Blood Pressure

From the American College of Emergency Physicians Clinical Policies Subcommittee (Writing Committee) on Asymptomatic Hypertension:

CRITICAL QUESTIONS

1. In ED patients with asymptomatic elevated blood pressure, does screening for target organ injury reduce rate of adverse outcomes?

2. In patients with asymptomatic markedly elevated blood pressure, does ED medical intervention reduce rates of adverse outcomes?

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What happens to these patients in the ED? It's variable…

- Take a good history & Do a focused physical exam
- Evidence of HTN Emergency in ED? → Treat emergency!
- No evidence of HTN Emergency in ED?
  - Sometimes labs (usually by nurse directive)
  - Treat/identify underlying cause (headache, stress, meds)
  - Occasionally a dose in ED or Rx (eg amlodipine)
  - Good follow up instructions and addressing patient expectations

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Case 2

- 39yF with fatigue, exertional SOB
- Heavy menses past 5 months
- Seen at FD: pale, normal vitals

- Sent for labs:
  - Hb 65, WBC 6, Plt 410
  - MCV 72, RDW 16
  - ferritin 5

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Does this patient need the ER?

- More workup?
- Blood transfusion?
- Both?
- Other

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Anemia and Blood Transfusions

- What is “critical” anemia threshold?
- Unstable?
- Acute/ongoing losses (or unable to replenish)
  - Brisk GIB, PPH, MDS

- Isovolemic anemia (eg chronic and slow) → can tolerate Hb 50 or lower in healthy people
- WOMB trial: postpartum patients recover Hb quickly and can avoid transfusion
- “Hb 70” is not a thing!

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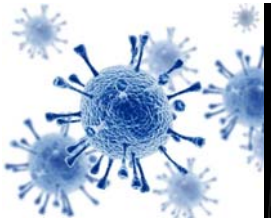
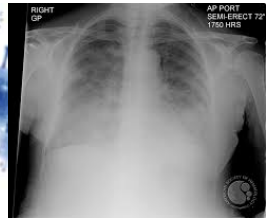
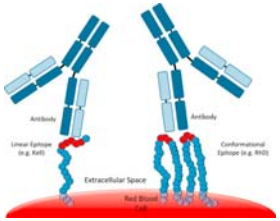
Downside of blood transfusions



<1/1,000,000
Infectious Dz



1/700 – 1/10,000
TRALI/TACO



1-8/100
Alloimmunization

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Options

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When should a patient get IV iron for IDA?

- Oral iron intolerant/failure
- Poor oral absorption
- Hb <90g/L esp if ? bleeding
- Brisk bleeding
- Time-sensitive pressures

More relevant to ED (not FM)

Results post IV iron:

- Hb up by day 3-7, up 20-30 in 2-4 weeks!

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How can this be arranged at NYGH?

- SCOPE clinic (can find referral on NYGH website)
- Referral to ED with loose expectations on whether patient needs:
  - Labs/workup
  - Packed RBC transfusion
  - IV Iron (often our 1st choice if stable and can tolerate)

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What happened to Case 2 in ED?

- 39yF with fatigue, exertional SOB
- Labs in ED: same
- Rx IV iron sucrose
- US in ED: Fibroids
- Started on oral iron
- Referred to Gyne Clinic
- Advised repeat CBC 2-3 weeks

Could also be facilitated in community vs ED

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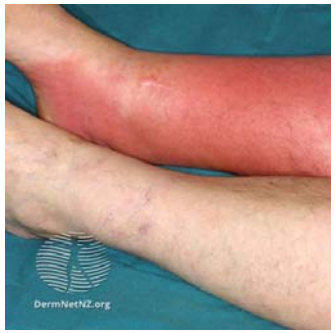
Case 3

- 51yF R leg pain + swelling x 3/7
- No fever
- No PHx
- No Meds

- Diagnosis? Plan?
  - Cellulitis
  - Cephalexin



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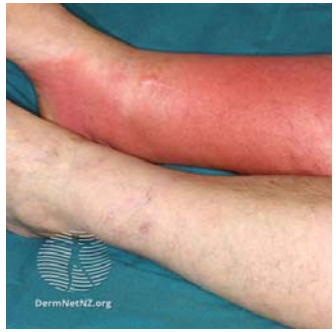
Case 4 continued…

- Returns 36 hours later

- Questions for this patient?
- Plan?



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Is IV better?... NO! Excellent PO bioavailability

Bioavailability	Antimicrobial	
>90%	Levofloxacin Clindamycin Metronidazole Doxycycline	Rifampin Fluconazole Voriconazole Linezolid
80-90%	Amoxicillin Cefadroxil Cephalexin	Ciprofloxacin Moxifloxacin TMP/SMX
60-79%	Penicillin VK Ribavirin	Valganciclovir Valacyclovir
<60%	Dicloxacillin Cefuroxime Cefixime Cefpodoxime Cefdinir	Amox-clav Azithromycin Acyclovir Fosfomycin Clarithromycin

- Patience
- Elevate limb
- Address underlying condition
- Consider the DDx
- ***Which patients need IV?***

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When to pause and re-evaluate…

- Cellulitis mimic? (stasis dermatitis)
  - Very itchy
  - Bilateral
  - Not improving with ABx
- ? Rx failure if @ 72h:
  - No improvement in pain/heat
  - Progression of redness

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Harms of IV Abx…

- Cost
- ED visits/home care
- Thrombophlebitis
- Higher risk of C. Diff diarrhea

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Who needs IV Abx?

- Sick/sepsis
- Can't swallow
- Poor gut absorption
- Other* (chronic recurrent, lymphedema, post-op, large abscess)

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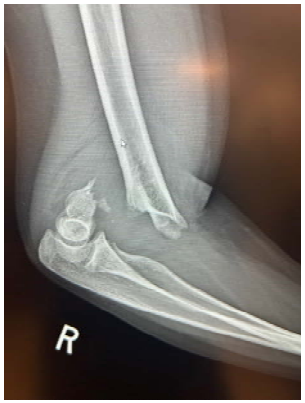
Injuries

- Fractures that need to go to ED:
  - Deformity
  - Pain control
  - Need for casting/splinting
  - *Rapid specialist follow up (days)



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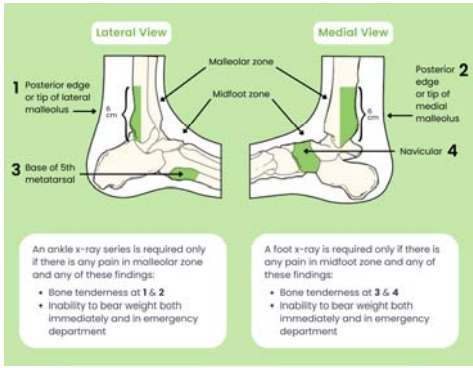
Case 4

- 11yF twisted ankle at V-ball
- Pain with WB
- Swollen, no visible deformity
- Plan?
  - Sent for outpatient X-ray…

Ottawa Ankle Rules: Who needs an X-ray



Libetta C et al. J Accid Emerg Med 1999 Sep 16
Plint AC et al. Acad Emerg Med 1999 Oct 6

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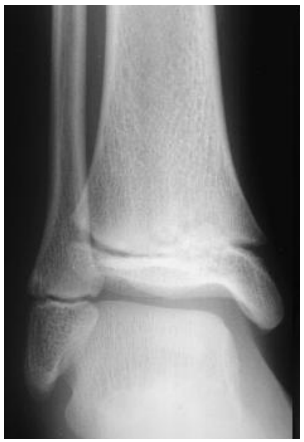
X-ray report says “possible Salter I fracture” distal fibula

Plan?



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January 4, 2016

Radiograph-Negative Lateral Ankle Injuries in Children

Occult Growth Plate Fracture or Sprain?

Kathy Boutis, MD, MSc[1]; Amy Plint, MD, MSc[2]; Jennifer Stimec, MD[3]; et al

Author Affiliations | Article Information

JAMA Pediatr. 2016;170(1):e154114. doi:10.1001/jamapediatrics.2015.4114

Fractures rare in “Salter I” injuries = only 3% of “sprain” on MRI

Low risk Ankle fractures:
- Isolated “Salter I distal Fib”
- Isolated Salter II distal Fib
- Isolated Distal Fib avulsion #

→

Rest, ice, elevate, OTC meds

Removable brace

NWB → AAT

Ben Yaakov, Boutis. CMAJ Med 2018 Mar 6

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Case 5

- 7yM FOOSH off swing
- Mild swelling, tender distal radius
- No deformity
- Plan?
  - Sent for outpatient x-ray…

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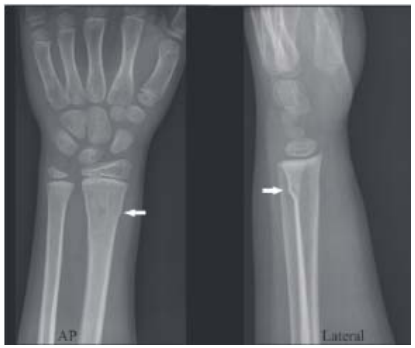
X-ray report…

- “There is a buckle-type fracture involving the dorsal aspect of the distal radius. No angulation”
- Plan?



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Management

- Simple buckle fractures (not greenstick, angulated or in growth plate)
- Velcro splint + family MD f/u

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Management

- FORCE Study: Perry et al Lancet, Jul 2, 2022, 400
  - Kids age 4-15, simple buckles
- Velcro splint = simple gauze wrap (placebo)
- Pain at 3 days and function at 6 weeks

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Referring patients to NYGH Fracture Clinic

- Form available on NYGH website

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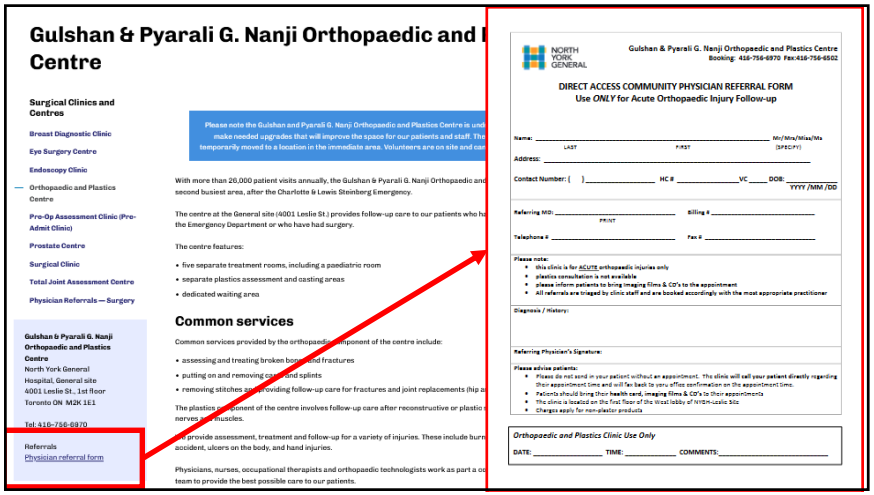

Gulshan & Pyarali G. Nanji Orthopaedic and Plastics Centre

Surgical Clinics and Centres

- Breast Diagnostic Clinic
- Eye Surgery Centre
- Endoscopy Clinic
- Orthopaedic and Plastics Centre
- Pre-Op Assessment Clinic (Pre-Admit Clinic)
- Prostate Centre
- Surgical Clinic
- Total Joint Assessment Centre
- Physician Referrals — Surgery

Gulshan & Pyarali G. Nanji Orthopaedic and Plastics Centre
North York General Hospital, General site
4001 Leslie St., 1st floor
Toronto ON M2K 1E1

Tel: 416-756-6970

Referrals
Physician referral form

Please note the Gulshan and Pyarali G. Nanji Orthopaedic and Plastics Centre is und... make needed upgrades that will improve the space for our patients and staff. The... temporarily moved to a location in the immediate area. Volunteers are on site and cas...

With more than 26,000 patient visits annually, the Gulshan & Pyarali G. Nanji Orthopaedic and... second busiest area, after the Charlotte & Lewis Steinberg Emergency.

The centre at the General site (4001 Leslie St.) provides follow-up care to our patients who h... the Emergency Department or who have had surgery.

The centre features:

- five separate treatment rooms, including a paediatric room
- separate plastics assessment and casting areas
- dedicated waiting area

Common services

Common services provided by the orthopaedic component of the centre include:

- assessing and treating broken bones and fractures
- putting on and removing casts and splints
- removing stitches and providing follow-up care for fractures and joint replacements (hip a...

The plastics component of the centre involves follow-up care after reconstructive or plastic ... nerves and muscles.

We provide assessment, treatment and follow-up for a variety of injuries. These include burn... accident, ulcers on the body, and hand injuries.

Physicians, nurses, occupational therapists and orthopaedic technologists work as part a co... team to provide the best possible care to our patients.

NORTH YORK GENERAL

Gulshan & Pyarali G. Nanji Orthopaedic and Plastics Centre
Booking: 416-756-6970 Fax:416-756-6502

DIRECT ACCESS COMMUNITY PHYSICIAN REFERRAL FORM
Use *ONLY* for Acute Orthopaedic Injury Follow-up

Name: _____ Mr/Mrs/Miss/Ms
LAST FIRST (SPECIFY)

Address: _____

Contact Number: ( ) _____ HC # _____ VC ____ DOB: _____
YYYY /MM /DD

Referring MD: _____ Billing # _____
PRINT

Telephone # _____ Fax # _____

Please note:
- this clinic is for ACUTE orthopaedic injuries only
- plastics consultation is not available
- please inform patients to bring imaging films & CD's to the appointment
- All referrals are triaged by clinic staff and are booked accordingly with the most appropriate practitioner

Diagnosis / History:

Referring Physician's Signature:

Please advise patients:
- Please do not send in your patient without an appointment. The clinic will call your patient directly regarding their appointment time and will fax back to you; office confirmation on the appointment time.
- Patients should bring their health card, imaging films & CD's to their appointments
- The clinic is located on the first floor of the West lobby of NYGH-Leslie Site
- Charges apply for non-plaster products

Orthopaedic and Plastics Clinic Use Only

DATE: _____ TIME: _____ COMMENTS: _____

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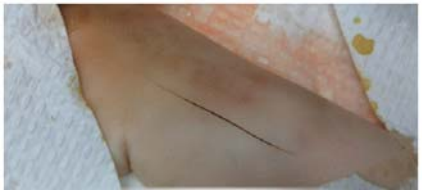
Case 7

- 23yM cut left forearm moving a dryer – how will you repair this?



Lacerationrepair.com

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Factors influencing modality for repair

- location, depth and length of wound
- need for tensile strength (eg laceration over large joint)
- patient's work/recreational activities
- pain (eg suture vs glue)
- convenience of aftercare
- Clinician's time/efficiency, flow of office
- physician experience

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Case 7 – forearm laceration

- Equipment needed:
  - Tap water
  - Clean blue pad
  - Non-sterile gloves
  - Cosmesis/outcomes for simple lacerations:
  - Sutures = Glue = Steristrips = Staples

Glue is easy and fast

Steristrip easy and fast

Can use steristrips + glue

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Optimizing communication between ED & FD

- MD to MD
  - Fax is slow + unreliable
  - Direct communication by calling in can sometimes help
  - Send patient with a note best & tell patient to give it to MD!
  - Clinical question/DDx better than symptom
  - We want to family MD clinical impression too!
    - R/O Appx > Abdo pain
    - R/O ACS > chest pain

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Optimizing communication between ED & FD

- Patient expectations…
  - Wait times (can be long *even if referred by FD*)
  - Imaging availability (time of day, what can be done from ED)
    - MSK ultrasound → almost never
    - MRI brain/spine → hard to get without hard findings
    - Imaging after midnight (yes X-ray, no US, only some CT)
  - Pt will be evaluated by MD and then advised if/which tests will be done (at MD discretion)
    - Imaging & labs
    - Treatment (eg IV iron vs RBC transfusion)

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Summary

- Family docs are amazing!
- You already know how to tell sick vs not sick, so majority of ED referrals are spot-on!
- Feel empowered to manage some conditions discussed in this talk without ED referral
- Optimal communication = better patient care!
  - FD to ED MD and vice versa

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