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Emergent Referrals (and Other Time Sensitive Referrals)

This document offers a list of conditions or presentations that require referrals of a time-sensitive nature. Referral is based on having a high clinical suspicion at the time of the patient encounter.

NOTE: Other conditions that should be referred but that are not as time sensitive are not included in this protocol.

The following list should not be considered definitive. Other conditions or presentations that would require timely referral may not be represented here. This document is not intended to supplant the clinical judgment of the practitioner**.**

Reportable diseases are listed in an appendix at end of this protocol.

Procedures

- The supervising clinician should follow up on all time sensitive referrals within 24 hours.
- In regards to semi-urgent and immediate referral cases, a referral letter should be sent with the patient.
- The patient should be asked to sign appropriate release forms for medical records and to permit the clinical supervisors to contact the patient or family members for follow-up purposes.
- All follow up contacts and attempts at contact must be recorded in the patient chart in the correspondence section.
- Incidents involving emergent referral should be reported to the Dean of Clinics immediately. Emergent, urgent and semi-urgent referrals must be duly reported at weekly staff meetings.

The poison control center phone number is 1-800-222-1222.

Emergent Referral

Neuromusculoskeletal presentations

- **Cauda equina syndrome** *(also see under Urgent)*
- **Dislocation** (open dislocation/ dislocation with vascular or neurological signs/ knee dislocation)
- **Fracture, compound/open, unstable spinal**
- **Head trauma** with progressive loss of neuro function or cognition
- **Paralysis**, acute onset
- **Septic arthritis or osteomyelitis** if rapidly progressing symptoms or with systemic symptoms
- **Stroke** (in progress)
- **Subarrachnoid hemorrhage**
- **TIA**
- **Vertigo** *(certain, specific presentations)*

Visceral presentations

- **Abdominal aortic aneurysm** *(also see under Urgent and Semi-urgent)*
- **Abdominal pain, acute severe**
- **Arrhythmias** *(certain, specific presentations)*
- **Diabetic crises**
- **Dehydration**, severe
- **Detached retina**
- **Ectopic pregnancy**
- **Meningitis**
- **Myocardial infarction**
- **Poisoning or drug overdose**
- **Pregnancy** *(certain danger signs)*
- **Respiratory distress, acute**
- **Septicemia**
- **Strangulating hernia**
- **Unstable angina**

Urgent Referral

Neuromusculoskeletal presentations

- **AC joint dislocation** with clavicular penetration of trapezius, inferior displacement of the clavicle or super displacement of 100% or more
- **Compartment syndrome**, acute
- **Cauda equina syndrome,** certain presentations
- **Dislocation, closed unreduced**
- **Fracture**, unstable extremity fracture after proper bracing
- **Hemarthrosis**
- **Infection**, local with obvious signs of spreading
- **Suspected bacterial pneumonia**
- **Subdural hematoma**
- **Slipped capital femoral epiphysis**
- **Thoracic outlet syndrome** with true vascular compromise

Visceral presentations

- **Abdominal aortic aneurysm,** certain presentations
- **Arrhythmias** *(certain, specific presentations)*
- **Bladder infection** in a patient with risk factors for renal infection
- **Cellulitis, lymphangitis**
- **Deep vein thrombosis/thrombophlebitis**
- **Esophageal tear**, post-traumatic
- **Fever** *(certain, specific presentations)*
- **Renal infection**

Semi-urgent Referral

Neuromusculoskeletal presentations

- **Fracture,** scaphoid fracture with poor apposition, stable facture not treated in clinic
- **Septic arthritis** *(see also under Emergent)*
- **Tendon ruptures**

Visceral presentations

- **Abdominal aortic aneurysm** *(also see under Urgent and Emergent)*
- **Strep throat**

Legend

Emergent = Go directly from the clinic, action should be taken within minutes to a few hours
Urgent = Referral care should be sought the same day
Semi-urgent = Referral care should be sought within a window of 48 hours
General referral = Referral is warranted but is not acutely time sensitive (not listed in this document)

EMERGENT REFERRAL

These are potentially life - threatening conditions, highly unstable conditions, or rapidly progressive conditions with the risk of serious consequences. The patient must be conducted directly from the clinic to an emergency room or appropriate site, either by ambulance or other suitable method.

Emergent Referral: NEUROMUSCULOSKELETAL presentations

- **Cauda equina syndrome** (see also Urgent Referral section)
  Low back and/or leg pain with urinary retention/incontinence, saddle paresthesia, sexual dysfunction, or anal sphincter weakness *if* there is rapid onset of symptoms (especially after trauma), rapidly progressing deficits (over previous several days), or significant urinary retention (e.g., 24 hours of anuria).

- **Dislocation**
  - open dislocation
  - dislocation with vascular or neurological signs and symptoms
  - closed knee dislocation because of significant risk of femoral arterial or venous hemorrhage

- **Fracture**
  - compound/open fracture
  - unstable spinal fracture

- **Head trauma** with progressive loss of neurological function or cognition

- **Paralysis**
  - Acute onset of paralysis, with or without trauma. If possible, the patient should be transported by ambulance.

- **Septic arthritis or osteomyelitis**
  - If rapidly progressing symptoms or with systemic symptoms, otherwise see Semi-urgent Referral.

- **Stroke**
  - If possible, the patient should be transported by ambulance.

- **Subarrachnoid hemorrhage**
  - If possible, the patient should be transported by ambulance.

- **TIA.**
  - Recent history of symptoms suggesting a TIA in a patient with high risks.

- **Vertigo**
  - Severe vertigo where the patient has not responded to appropriate treatment or watchful waiting in the treatment room (e.g., cannot get up from adjusting table).

Emergent Referral: VISCERAL presentations

- **Abdominal aortic aneurysm (AAA)** (see also Urgent and Immediate Referral section)
    - Patients with back or abdominal pain suspected to have an AAA who additionally have any of the following findings: tenderness with abdominal palpation, palpable pulsating mass, hypotension/signs of shock, rapidly increasing severity of acute back or abdominal pain, sudden change or increase in symptoms, acute back pain that is not improved or reproduced by position or joint loading, the presence of nausea or vomiting, x-ray evidence of AAA 7 cm or greater.
    - Patients with an *established* AAA that display the above signs or symptoms not attributable to other likely causes (e.g., nausea and vomiting secondary to intestinal flu)

- **Abdominal pain, acute severe.** Severe abdominal pain with any of the following findings: antalgia, diaphoresis, very ill appearance, shortness of breath, abdominal rigidity or other peritoneal signs, Cullen's sign, significant pain increase associated with iliopsoas sign or obturator sign, Murphy's sign, seat belt sign, generalized pain which changes to sharp and localized.
    - Patients that do not quite rise to a level of strong suspicion (severe pain but none of the signs or symptoms listed above) should be treated and/or monitored. They should be advised to have someone around that can check on them, advised of what to do in case of symptom change, and should contact the clinic the next day for monitoring. A worsening of symptoms should trigger an emergent referral.

- **Arrhythmias or altered pulses** that include newly irregular, weak and thready pulse (especially if associated with recent cardiovascular symptoms); rates under 40 with or without symptoms; rates less than 60 with serious signs or symptoms (e.g., chest pain, shortness of breath, loss of consciousness, decreased blood pressure, signs of shock, congestive heart failure); rates over 120 with serious symptoms; rates over 140 without symptoms that do not respond to initial attempts to reduce tachycardia (e.g., carotid sinus massage).

- **Diabetic crises.** If unresponsive to either juice or to self-administered insulin as appropriate, consider diabetic ketoacidosis (DKA) and a hyperosmolar hyperglycemic state. Symptoms include fruity breath odor, loss of skin turgor, dry mucous membranes, tachycardia, hypotension, lethargy, focal neurological signs (hemiparesis or hemianopsia) or seizures.

- **Dehydration.** Severe fluid loss due to diarrhea, vomiting etc.

- **Detached retina.** Acute change in vision (distortion, loss of vision) usually unilateral presentation.

- **Ectopic pregnancy.** The patient may or may not know she is pregnant. Known risk factors include history of tubal surgery, pelvic inflammatory disease, advancing age, a prior ectopic pregnancy, DES exposure, previous termination of a pregnancy, ovulation induction/ IVF. *However most cases are not associated with any risk factors.* The most common presentation is with a missed period, positive pregnancy test, some abdominal pain (usually to one side), and some irregular vaginal bleeding. Some women report fainting or shoulder-tip pain.

Emergent Referral: VISCERAL presentations (*continued*)

- **Meningitis**
    - In adults, suspected meningitis where signs/symptoms include some combination of the following: sudden rapid progression of headache or neck pain (within a day or two), rash, severe headache, change in mental status, temperature above 101ºF, Brudzinski or Kernig's signs or appearing severely ill.
    - In infants, red flags to look for are bulging anterior fontanele, purplish blue skin, lesions on the trunk and extremities, meningeal irritation signs (less reliable in infants < 3 months old), a classic piercing, screaming cry.
    - Patients that do not quite rise to a level of strong suspicion (milder symptoms suggestive of flu and joint dysfunction) should be treated and monitored. They should be advised to have someone around that can check on them, advised of what to do in case of symptom change, and should contact the clinic the next day for monitoring. A worsening of symptoms should trigger an emergent referral. Reports of a local outbreak of meningitis may influence the practitioner's decision to refer the same day.

- **Myocardial infarction** (this includes other serious causes of chest pain that might be mimicking an MI such as a pulmonary embolism or dissecting aortic aneurysm).
    - Include atypical presentations such as acute onset of dyspnea or confusion without chest pain, especially in geriatric patients, women, or non-smokers**.**
    - If possible, the patient should be transported by ambulance.

- **Poisoning or drug overdose.** The poison control center phone number is 1-800-222-1222.

- **Pregnancy, specific danger signs.** The mother has sensed no movement within the last 24 hours, increased blood pressure, cramping/contractions/ increasing episodes of "tightness" of the abdomen, vaginal leakage, UTI symptoms, fever above 101ºF.

- **Respiratory distress, acute.** (e.g., pneumothorax, staticus asthmaticus)

- **Septicemia.** Signs of septicemia may include red lines radiating from an area of inflammation, swollen lymph nodes, chills, fever, petechial bleeding, splinter hemorrhages seen under the nails.

- **Strangulating hernia.**

- **Unstable angina.** Recent change in severity, duration, pain distribution, response to nitroglycerine, or accompanying symptoms in a patient with established angina.

URGENT REFERRAL

The condition is serious enough to warrant the patient being seen on the same day. The appropriate referral may be to an urgent care center, emergency room, or office visit with the appropriate specialist depending on the circumstances.

Urgent Referral: NEUROMUSCULOSKELETAL presentations

- **AC joint dislocation** with evidence of any of the following: clavicular penetration of trapezius, inferior displacement of the clavicle or superior displacement of 100% or more.

- **Compartment syndrome.** Acute compartment syndrome (but not chronic).
    - It most commonly involves the three compartments of the leg or the forearm. It is usually subsequent to trauma (fracture, crushing injury, severe contusion, hemorrhage, and vascular occlusion); swelling, often tense, is seen in acute; bruising; severe pain that is inconsistent with the injury and is persistent and progressive; pain is often exacerbated by stretching involved muscles. After 12 hrs variable permanent muscle damage can occur; after 24 hrs there is a high probability of significant permanent disability.

- **Cauda equina syndrome** of recent onset.
    - Symptoms include low back and leg pain with urinary retention/incontinence, saddle paresthesia, sexual dysfunction, or anal sphincter weakness. Best surgical results are within 48 hours of onset (see also Emergent Referral section).

- **Dislocation, closed unreduced dislocation** (if unresponsive to attempt to reduce)

- **Fracture**, unstable extremity fracture after it is properly braced in the clinic

- **Hemarthrosis,** (e.g., traumatic TMJ with hemarthrosis can result in significant damage in as little as 2-3 hours).

- **Infection.** Any acute local infection with obvious signs of spreading.

- **Suspected bacterial pneumonia**

- **Subdural hematoma**

- **Slipped capital femoral epiphysis**

- **Thoracic outlet syndrome with evidence suggesting true vascular compromise.**
    - Symptoms include swelling in the hand or arm, nonpitting edema, cyanosis, decreased radial pulse, and subclavian bruit.

Urgent Referral: VISCERAL presentations

- **Abdominal aortic aneurysm (AAA).** Large (6 cm or greater) AAA found on an x-ray in a patient with acute back pain, but none of the additional symptoms or signs cited in the Emergent Referral section.

- **Arrhythmias or altered pulses** that include rates between 40-50 without symptoms if new onset, rates between 100 and 140 without symptoms that do not respond to initial attempts to reduce tachycardia (e.g., carotid sinus massage).

- **Bladder infection** in a patient with risk factors for renal infection

- **Cellulitis, lymphangitis.**

- **Deep vein thrombosis/thrombophlebitis.** The clinical presentation may include active cancer (treatment within previous 6 months); paralysis, paresis or recent plaster immobilization; recently bedridden for > 3 days or major surgery within 4 weeks; localized tenderness along the course of the deep venous system; entire leg swelling; calf swelling > 3 cm; pitting edema (greater in symptomatic leg); collateral superficial veins (nonvaricose).

- **Esophageal tear, post-traumatic.** Presentation includes dysphagia with evidence of increased retro-pharyngeal space on lateral radiograph.

- **Fever.**
    - Adult with a fever greater than 104ºF.
    - Infant under 2 months old with fever greater than 100.9ºF (especially if infant appears listless), consider possible pneumonia or meningitis. If the infant will not drink any water, eat any food, is not interested in anything they usually enjoy, fever may be a serious sign.
    - Infant over 2 months old with fever greater than 104ºF.

- **Renal infection.** Symptoms include flank pain with fever/chills. Murphy's punch may be positive.

SEMI-URGENT REFERRAL

Patient should be seen within 48 hours.

Semi-urgent Referral: NEUROMUSCULOSKELETAL presentations

- **Fractures**
  - Scaphoid fracture with poor apposition. Stabilize and refer within 48 hours. If apposition is good, cast and monitor.
  - Stable fracture that is not treated in the clinic.

- **Septic arthritis** in cases where the patient has a history of slowly evolving symptoms and no systemic symptoms. (See also Emergent and Urgent Referral sections).

- **Tendon ruptures**

Semi-urgent Referral: VISCERAL presentations

- **Abdominal aortic aneurism (AAA)** over 6 cm found *incidentally*.
  - If there are incomplete signs of calcification of the aorta and size cannot be well visualized, the case should be treated as if it is over 6 cm. (See also Emergent and Urgent referral sections).
  - Patients who have an abdominal aortic aneurism under 6 cm, presenting with acute low back pain which appears to be mechanical in nature and who have none of the red flags cited in the emergent referral section should also be investigated but this referral is not as time sensitive.

- **Streptococcal sore throat**.

Developed and reviewed by CSPE Committee, Chiropractic Science Division and Clinical Science Division (2004)
- Laura Baffes, DC
- Mike Carnes, DC
- Fred Colley, PhD
- Cathy Cummins, DC
- Daniel DeLapp, DC, DABCO, LAc, ND
- Elizabeth Dunlop, DC
- Jim Gerber, DC
- Lorraine Ginter, DC
- Dennis Hoyer, DC
- Ronald LeFebvre, DC
- Charles Novak, DC
- David Panzer, DC, DABCO
- David Peterson, DC
- Ravid Raphael, DC, DABCO
- Anita Roberts, DC
- Peter Shull, DC
- Steven Taliaferro, DC

Also reviewed by
- Dan Neuman, MD (emergency medicine)
- Martin Lipsky, MD (family practice)
- Susan Morton, MD (neurology)

References
Specific citations are not included. This document was generated based on the expert opinion of the participants.

APPENDIX: CDC Reportable Diseases

Immediately, day or night

- *Bacillus anthracis* (anthrax)
- *Clostridium botulinum* (botulism)
- *Corynebacterium diphtheriae* (diphtheria)
- *Yersinia pestis* (plague)
- Intoxication caused by marine microorganisms or their byproducts (for example, paralytic shellfish poisoning, domoic acid, ciguatera, scombroid intoxication)
- Any known or suspected common-source outbreaks
- Any uncommon illness of potential public health significance.

Within 24 hours (including weekends and holidays)

- *Haemophilus influenzae* (any invasive disease)
- Measles (rubeola)
- *Neisseria meningitidis* (any invasive disease)
- Pesticide poisoning
- Poliomyelitis
- Rabies (human or animal)
- Rubella
- Vibrio (all species)

Within one local public health authority working day

- *Bordetella pertussis* (pertussis)
- *Borrelia* (relapsing fever, Lyme disease)
- *Brucella* (brucellosis)
- Campylobacter (campylobacteriosis)
- *Chlamydia psittaci* (psittacosis)
- *Chlamydia trachomatis* (chlamydiosis; lymphogranuloma venereum); *Coxiella burnetii* (Q fever)
- *Cryptosporidium* (cryptosporidiosis)
- *Cyclospora cayetanensis* (cyclosporidiosis)
- *Escherichia coli* (Shiga-toxigenic, including E. coli O157 and other serogroups)
- *Francisella tularensis* (tularemia)
- Giardia (giardiasis)
- *Haemophilus ducreyi* (chancroid)
- Hepatitis: A, hepatitis B (acute or chronic infection), hepatitis C (acute infection only), hepatitis D (delta)
- HIV infection (does not apply to anonymous testing) and AIDS
- *Legionella* (legionellosis)
- *Listeria monocytogenes* (listeriosis)
- *Mycobacterium tuberculosis* and M. bovis (tuberculosis)
- *Neisseria gonorrhoeae* (gonococcal infections)
- Plasmodium (malaria)
- Rickettsia (all species: Rocky Mountain spotted fever, typhus, others); Salmonella (salmonellosis, including typhoid)
- Shigella (shigellosis)
- *Treponema pallidum* (syphilis)
- Trichinella (trichinosis)
- Yersinia species (other than pestis)
- Any infection that is typically arthropod vector-borne (for example: Western equine encephalitis, Eastern equine encephalitis, St. Louis encephalitis, dengue, West Nile fever, yellow fever, California encephalitis, ehrlichiosis, babesiosis, Colorado tick fever, etc.)
- Human bites by any other mammal
- CD4 cell count <200/ml (mm^3) or CD4 proportion of total lymphocytes <14%; hemolytic uremic syndrome

Within 7 days

- *Clostridium tetani* (tetanus)
- Hantavirus
- lead poisoning, suspected (this includes all blood lead tests performed on persons with suspected lead poisoning)
- Leptospira (leptospirosis)
- Pelvic inflammatory disease (acute, non-gonococcal)
- *Taenia solium* (including cysticercosis and undifferentiated Taenia infections)