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Adult Protocols

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Update 4/13/09

DIARRHEA

SYMPTOM DEFINITION

* Diarrhea is the sudden increase in the frequency and looseness of BMs (bowel movements, stools).

Diarrhea SEVERITY is defined as:

* MILD: Mild diarrhea is the passage of a few loose or mushy BMs.

* SEVERE: Severe diarrhea is the passage of many (e.g., more than 15) watery BMs.

- INITIAL ASSESSMENT QUESTIONS -

1. SEVERITY: "How many diarrhea stools have you had today?"
2. ONSET: "When did the diarrhea begin?"
3. BM CONSISTENCY: "How loose or watery is the diarrhea?"
4. FLUIDS: "What fluids have you taken today?"
5. VOMITING: "Are you also vomiting?" If so, ask: "How many times today?"
6. ABDOMINAL PAIN: "Are you having any abdominal pain?" If yes: "What does it feel like?" (e.g., crampy, dull, intermittent, constant)
7. ABDOMINAL PAIN SEVERITY: If present, ask: "How bad is the pain?" (e.g., Scale 1-10; mild, moderate, or severe)
 - MILD (1-3): doesn't interfere with normal activities, abdomen soft and not tender to touch
 - MODERATE (4-7): interferes with normal activities or awakens from sleep, tender to touch
 - SEVERE (8-10): excruciating pain, doubled over, unable to do any normal activities
8. HYDRATION STATUS: "Any sign of dehydration?" (e.g., thirst, dizziness) "When did you last urinate?"
9. EXPOSURE: "Have you traveled to a foreign country recently?" "Have you been exposed to anyone with diarrhea?" "Could you have eaten any food that was spoiled?"
10. OTHER SYMPTOMS: "Do you have any other symptoms?" (e.g., fever, blood in stool)
11. PREGNANCY: "Is there any chance you are pregnant?" "When was your last menstrual period?"

- BACKGROUND INFORMATION -

GENERAL

* The majority of adults with acute diarrhea (less than 14 days duration) have an infectious etiology for their diarrhea, and in most cases the infection is a virus. Other common causes of acute diarrhea are food poisoning and medications.

* Maintaining hydration is the cornerstone of treatment of adults with acute diarrhea.

* In general, an adult who is alert, feels well, and who is not thirsty or dizzy: is NOT dehydrated.

* Antibiotic therapy is only rarely required in the treatment of acute diarrhea. Two types of acute diarrhea that require antibiotic therapy are *C. difficile* diarrhea and (sometimes) Traveler's Diarrhea.

TRAVELER'S DIARRHEA

* Definition: Traveler's diarrhea typically begins within two weeks of traveling to a foreign country. There are bacteria in the water and food that the body is not used to and a diarrheal infection is the result. Traveler's Diarrhea is also called 'Mummy Tummy', 'Montezuma's revenge', and 'Turista'.

* Symptoms: Passage of at least three loose stools a day; accompanying symptoms may include nausea, vomiting, abdominal cramping, fecal urgency, and fever.

* Region and Risk: Traveler's to the following developing areas have a HIGH-RISK (40%) of getting Traveler's diarrhea: Latin America, Africa, Southern Asia. There is an INTERMEDIATE-RISK (15%) with travel to Northern Mediterranean countries, the Middle East, China, and Russia. Travelers to the United States, Western Europe, Canada, and Japan have a LOW-RISK (2-4%) of getting Traveler's Diarrhea.

* Prevention: Diet: Avoid uncooked foods (salad). Cooked foods (served steaming hot) are usually safe as are dry foods (e.g., bread). Avoid ice cubes and tap water. Drink steaming beverages (e.g., coffee, tea) or carbonated drinks (e.g., bottled soft drinks, beer). Fruits that can be peeled are usually safe (e.g., oranges, bananas, apples).

* Prevention: Bismuth Subsalicylate: Bismuth (PeptoBismol 8 tablets daily PO) is approximately 65% effective at preventing Traveler's Diarrhea.

* Prevention: Antibiotics: Antibiotic chemoprophylaxis (prevention) during travel may be indicated in certain circumstances. Rifamixin (200 mg PO BID with meals) is approximately 70-80% effective at preventing Traveler's Diarrhea.

* Treatment - Anti-Diarrheal Agents: Bismuth subsalicylate (PeptoBismol) and loperamide (Imodium AD) are both effective at reducing the diarrhea symptoms.

* Treatment - Antibiotics: Antibiotic therapy is sometimes recommended to treat this type of diarrhea, especially if the symptoms are more than mild. There are a number of antibiotics that are effective including ciprofloxacin (Cipro), azithromycin (Zithromax), and Rifamixin (Rifaximin 200 mg PO TID for 3 days).

NORWALK VIRUS

* Definition: The Norwalk virus is one of a number of viruses that cause stomach flu (viral gastroenteritis). It is usually acquired through contaminated food or water. In 2002 and 2003 this received significant media attention when several cruise ships had outbreaks in which hundreds of passengers were affected.

* Symptoms: acute onset of diarrhea, vomiting, abdominal cramps. In adults there is usually more diarrhea than vomiting. The symptoms typically last 1 to 2 days.

* Epidemiology: The Norwalk virus is the number one cause of epidemic gastroenteritis. Outbreaks have been reported in restaurants, nursing homes, hospitals, and vacation settings like cruise ships.

* Incubation period: 1-3 days

* Prevention: How can one avoid exposure while on a vacation? Avoid uncooked food. Drink bottled water (avoid ice cubes). Wash your hands frequently. Do not share glassware or eating utensils.

* Treatment: Antibiotics are not helpful since this is a viral infection. Maintaining adequate hydration through intake of oral liquids is the most important thing. PeptoBismol can be used.

DEHYDRATION - ESTIMATION BY TELEPHONE...

*MILD DEHYDRATION

1. Urine Production: slightly decreased
2. Mucous Membranes: normal
3. Heart rate < 100 beats / minute
4. Slightly thirsty.
5. Capillary Refill: < 2 seconds
6. Treatment: can usually treat at home

*MODERATE DEHYDRATION

1. Urine Production: minimal or absent
2. Mucous Membranes: dry inside of mouth
3. Heart rate 100-130 beats / minute
4. Thirsty, lightheaded when standing
5. Capillary Refill: > 2 seconds
6. Treatment: must be seen; Go to ED NOW (or PCP Triage)

*SEVERE DEHYDRATION

1. Urine Production: none > 12 hours
2. Mucous Membranes: very dry inside of mouth
3. Heart rate > 130 beats / minute
4. Very thirsty, very weak and lightheaded; fainting may occur
5. Capillary Refill: > 2-4 seconds
6. Treatment: must be seen immediately; Go to ED Now or CALL EMS 911 NOW

*SIGNS OF SHOCK

1. Confused, difficult to awaken, or unresponsive
2. Heart rate (pulse) is rapid and weak
3. Extremities (especially hands and feet) are bluish or gray, and cold
4. Too weak to stand or very dizzy when tries to stand
5. Capillary Refill: > 4 seconds
6. Treatment: Lie down with the feet elevated; CALL EMS 911 NOW
- 7.

FIRST AID

FIRST AID ADVICE FOR SHOCK: Lie down with the feet elevated.

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SEARCH WORDS

ABDOMEN	DYSENTERY
ABDOMINAL CRAMPING	EXPLOSIVE STOOLS
ABDOMINAL CRAMPS	FOOD POISONING
ACUTE GASTROENTERITIS	FOREIGN TRAVEL
BACTERIAL DIARRHEA	FREQUENT STOOLS
BMS	GASTROENTERITIS
BOWEL CONTROL	LOOSE STOOLS
BOWEL MOVEMENTS	MUCUS IN STOOLS
COLITIS	NORWALK
CRAMPS	NORWALK VIRUS
CRUISE SHIP	PERSISTENT DIARRHEA
DEHYDRATED	PUS IN STOOLS
DEHYDRATION	RECENT TRAVEL
DIARRHEA	RECTUM

SEVERE DIARRHEA
STOOLS
TRAVEL
TRAVELERS DIARRHEA

TRAVELER'S DIARRHEA
VIRAL DIARRHEA
WATERY STOOLS

- TRIAGE -

Call EMS 911 Now

Shock suspected (e.g., cold/pale/clammy skin, too weak to stand)

R/O: shock. FIRST AID: Lie down with the feet elevated.

CA: 40, 22, 1

Difficult to awaken or acting confused (e.g., disoriented, slurred speech)

R/O: shock. FIRST AID: Lie down with the feet elevated.

CA: 40, 22, 1

Sounds like a life-threatening emergency to the triager

CA: 40, 1

See More Appropriate Guideline

Vomiting also present and worse than the diarrhea

Go to Guideline: Vomiting (Adult)

[1] Blood in stool AND [2] without diarrhea

Go to Guideline: Rectal Bleeding (Adult)

Go to ED Now

[1] SEVERE abdominal pain (e.g., excruciating) AND [2] present > 1 hour

R/O: appendicitis or other acute abdomen

CA: 41, 80, 81, 1

[1] SEVERE abdominal pain AND [2] age > 60

Reason: higher risk of serious cause of abdominal pain, e.g. mesenteric ischemia

CA: 41, 80, 81, 1

[1] Blood in the stool AND [2] moderate or large amount of blood

R/O: severe Shigella, Salmonella, Campylobacter or E. coli 0157

CA: 41, 80, 81, 1

Black bowel movements (EXCEPTION: chronic-unchanged black bowel movements AND is taking iron pills or PeptoBismol)

R/O: gastritis, peptic ulcer disease

CA: 41, 80, 81, 1

Go to ED Now (or PCP triage)

[1] Drinking very little AND [2] dehydration suspected (e.g., no urine > 12 hours, very dry mouth, very lightheaded)

Reason: may need IV hydration

CA: 42, 80, 1

Patient sounds very sick or weak to the triager

R/O: severe dehydration, sepsis

CA: 42, 80, 1

See Physician within 4 Hours (or PCP triage)

[1] Fever > 103 F (39.4 C) AND [2] not able to get the fever down using Fever Care Advice

CA: 43, 20, 72, 73, 89, 1

[1] Constant abdominal pain AND [2] present > 2 hours

R/O: diverticulitis, appendicitis or other acute abdomen

CA: 43, 89, 1

[1] Age > 60 years AND [2] > 6 diarrhea stools in past 24 hours

Reason: high risk for dehydration

CA: 43, 20, 89, 1

[1] Age < 61 years AND [2] > 15 diarrhea stools in past 24 hours

Reason: severe diarrhea, higher risk of dehydration

CA: 43, 20, 89, 1

See Physician within 24 Hours

Fever > 101 F (38.3 C)

R/O: bacterial diarrhea

CA: 44, 16, 20, 72, 73, 17, 1

Abdominal pain (EXCEPTION: Pain clears with each passage of diarrhea stool)

R/O: bacterial diarrhea

CA: 44, 20, 89, 1

[1] Blood in the stool AND [2] small amount of blood

(EXCEPTION: only on toilet paper. Reason: diarrhea can cause rectal irritation with blood on wiping)

R/O: bacterial diarrhea

CA: 44, 20, 89, 1

[1] Mucus or pus in stool AND [2] present > 2 days AND [3] diarrhea is more than mild

R/O: bacterial diarrhea

CA: 44, 16, 17, 1

[1] Recent antibiotic therapy (i.e., within last 2 months) AND [2] > 3 days since antibiotic was stopped

R/O: C. difficile diarrhea

CA: 44, 15, 3, 4, 17, 1

Immuno-compromised (e.g., HIV positive, cancer chemo, splenectomy, organ transplant, chronic steroids)

Reason: broader range of causes

CA: 44, 3, 4, 10, 17, 1

Tube feedings (e.g., nasogastric, g-tube, j-tube)

R/O: osmotic diarrhea

CA: 44, 23, 87, 89, 1

Age > 70 years

Reason: *higher morbidity*

CA: 44, 20, 17, 1

Call PCP within 24 Hours

Travel to a foreign country in past month

Reason: *antibiotic therapy may be indicated for the treatment of Traveler's Diarrhea*

CA: 50, 11, 12, 3, 4, 2, 5, 24, 25, 17, 1

See PCP When Office is Open (within 3 days)

Diarrhea present > 7 days

R/O: *bacterial cause or Giardia*

CA: 45, 3, 4, 7, 17, 1

See PCP within 2 Weeks

Diarrhea is a chronic symptom (recurrent or ongoing AND lasting > 4 weeks)

CA: 46, 3, 4, 7, 18, 8, 1

Home Care

Mild diarrhea (all triage questions negative)

Reason: *probably viral gastroenteritis*

CA: 48, 9, 3, 4, 24, 25, 2, 5, 7, 6, 8, 1

- CARE ADVICE (CA) -

1. CARE ADVICE given per Diarrhea (Adult) guideline.
2. OTC MEDS - Bismuth Subsalicylate (e.g., PeptoBismol):
 - Helps reduce diarrhea, vomiting, and abdominal cramping.
 - Adult dosage: two tablets or two tablespoons by mouth every hour (if diarrhea continues) to a maximum of 8 doses in a 24 hour period.
 - Do not use for more than 2 days.
3. FLUID THERAPY during MILD-MODERATE DIARRHEA:
 - Drink more fluids, at least 8-10 glasses (8 oz) daily.
 - For example: sports drinks, diluted fruit juices, soft drinks.
 - Supplement this with saltine crackers or soups, to make certain that you are getting sufficient fluid and salt to meet your body's needs.
 - Avoid caffeinated beverages (Reason: caffeine is mildly dehydrating).
4. NUTRITION during MILD-MODERATE DIARRHEA
 - Maintaining some food intake during episodes of diarrhea is important.

- Ideal initial foods include boiled starches / cereals (e.g., potatoes, rice, noodles, wheat, oats) with a small amount of salt to taste.
 - Other acceptable foods include: bananas, yogurt, crackers, soup.
 - As your stools return to normal consistency, resume a normal diet.
5. CAUTION - Bismuth Subsalicylate (e.g., PeptoBismol):
 - May cause a temporary darkening of stool and tongue.
 - Do not use if allergic to aspirin.
 - Do not use in pregnancy.
 - Read and follow the package instructions carefully.
 6. EXPECTED COURSE: Viral diarrhea lasts 4-7 days. Always worse on days 1 and 2.
 7. CONTAGIOUSNESS:
 - Be certain to wash your hands after using the restroom.
 - If your work is cooking, handling, serving or preparing food, then you should not work until the diarrhea has completely stopped.
 8. CALL BACK IF:
 - Signs of dehydration occur (e.g., no urine > 12 hours, very dry mouth, lightheaded, etc.)
 - Diarrhea persists > 7 days
 - You become worse.
 9. REASSURANCE:
 - In healthy adults, most new onset diarrhea is caused by a viral infection of the intestines.
 - Diarrhea is the body's way of getting rid of the germs.
 - Here are some tips on how to keep ahead of the fluid losses.
 10. DO NOT USE - Bismuth Subsalicylate (e.g., PeptoBismol):
 - Do not take Peptobismol for the diarrhea. (Reason: diarrhea in Immune-compromised patients is often chronic and there could be side effects from taking it chronically)
 11. TRAVELER'S DIARRHEA:
 - Traveler's diarrhea typically begins within two weeks of traveling to a foreign country. There are bacteria in the water and food that your body is not used to and a diarrheal infection is the result. Traveler's Diarrhea is also called "Mummy Tummy", "Montezuma's revenge", and Turista.
 - Symptoms: Passage of at least three loose stools a day; accompanying symptoms may include nausea, vomiting, abdominal cramping, fecal urgency, and fever.
 - Treatment: Antibiotic therapy is sometimes recommended to treat this type of diarrhea.

12. REGION and RISK:
 - High-risk: travel to Latin America, Africa, Southern Asia - diarrhea occurs in 40% of travelers
 - Intermediate-risk: travel to Northern Mediterranean countries, middle east, China, and Russia - diarrhea occurs in 10-15% of travelers
 - Low-risk: travel to United States, Western Europe, Canada, Japan – diarrhea occurs in 2-4% of travelers.

13. PREVENTION during travel to high risk regions:
 - Eat cooked foods (steaming hot) or dry foods (bread).
 - Eat fruit that can be peeled (apples, bananas, oranges).
 - Drink steaming hot beverages (coffee, tea) or carbonated drinks (bottled soft drinks, beer).
 - Avoid uncooked foods (salad).
 - Avoid ice cubes and tap water.

15. EDUCATION:
 - Most diarrhea that occurs in association with taking antibiotics will resolve on its own. However, sometimes a patient can develop a type of bacterial diarrhea after taking antibiotics.
 - You may need to provide a stool culture. Bring a sample of the diarrhea (e.g., in a container with a lid).

16. EDUCATION: Tell the caller: It could be bacterial diarrhea. You may need to provide a stool culture.

17. CALL BACK IF:
 - Signs of dehydration occur (e.g., no urine > 12 hours, very dry mouth, lightheaded, etc.)
 - Bloody stools
 - Constant or severe abdominal pain
 - You become worse.

18. DIARRHEA DIARY: Please keep a diary of the diarrhea each day. This can help make the correct diagnosis.

20. CLEAR LIQUIDS:
 - Drink more fluids.
 - Sip water or a sports - rehydration drink (Gatorade or Powerade)
 - Other options - oral rehydration solution (Pedialyte or Rehydralyte) .

21. CLEAR LIQUIDS:
 - Sip water or a sports - rehydration drink (Gatorade or Powerade)
 - Other options - oral rehydration solution (Pedialyte or Rehydralyte).

22. FIRST AID: Lie down with the feet elevated (Reason: counteract shock)
23. OPTION - CONTACT HOME HEALTH NURSE:
 - If patient is being followed by a home health nurse, a home visit may be an option instead of an office visit.
 - The home health nurse can assess the patient, check tube placement, and provide education.
24. OTC MEDS - Loperamide (Imodium AD):
 - Helps reduce diarrhea.
 - Adult dosage: two caplets or four teaspoonfuls initially PO. May take an additional caplet or 2 teaspoonfuls with each subsequent loose BM. Maximum of 4 caplets or 8 teaspoonfuls each day.
 - Do not use for more than 2 days.
25. CAUTION - Loperamide (Imodium AD):
 - Do NOT use if there is a fever >100 or if there is blood or mucus in the stools.
 - Read and follow the package instructions carefully.
40. CALL EMS 911 NOW: Immediate medical attention is needed. You need to hang up and call 911 (or an ambulance). (Triager Discretion: I'll call you back in a few minutes to be sure you were able to reach them.)
41. GO TO ED NOW: You need to be seen in the Emergency Department. Go to the ER at _____ Hospital. Leave now. Drive carefully.
42. GO TO ED NOW (or PCP triage):
 - IF NO PCP TRIAGE: You need to be seen. Go to the ER/UCC at _____ Hospital within the next hour. Leave as soon as you can.
 - IF PCP TRIAGE REQUIRED: You may need to be seen. Your doctor will want to talk with you to decide what's best. I'll page him now. If you haven't heard from the on-call doctor within 30 minutes, go directly to the ER/UCC at _____ Hospital.
43. SEE PHYSICIAN WITHIN 4 HOURS (or PCP triage):
 - IF NO PCP TRIAGE: You need to be seen. Go to _____ (ED/UCC or office if it will be open) within the next 3 or 4 hours. Go sooner if you become worse.
 - IF PCP TRIAGE REQUIRED: You may need to be seen. Your doctor will want to talk with you to decide what's best. I'll page the doctor now. If you haven't heard from the on-call doctor within 30 minutes, call again. (Note: If PCP can't be reached, send to ED/UCC or office.)
44. SEE PHYSICIAN WITHIN 24 HOURS:
 - IF OFFICE WILL BE OPEN: You need to be examined within the next 24 hours.

Call your doctor when the office opens, and make an appointment.

- IF OFFICE WILL BE CLOSED AND NO PCP TRIAGE: You need to be examined within the next 24 hours. Go to _____ at your convenience.

- IF OFFICE WILL BE CLOSED AND PCP TRIAGE REQUIRED: You may need to be seen within the next 24 hours. Your doctor will want to talk with you to decide what's best. I'll page the doctor now. (EXCEPTION: from 10 pm to 7 am. Since this isn't serious, we'll hold the page until morning.)

45. SEE PCP WITHIN 3 DAYS: You need to be examined within 2 or 3 days. Call your doctor during regular office hours and make an appointment.
46. SEE PCP WITHIN 2 WEEKS: You need an evaluation for this ongoing problem within the next 2 weeks. Call your doctor during regular office hours and make an appointment.
47. INFORMATION OR ADVICE ONLY CALL.
48. HOME CARE: You should be able to treat this at home.
49. CALL PCP NOW: You need to discuss this with your doctor. I'll page him now. If you haven't heard from the on-call doctor within 30 minutes, call again.
50. CALL PCP WITHIN 24 HOURS: You need to discuss this with your doctor within the next 24 hours.
 - IF OFFICE WILL BE OPEN: Call the office when it opens tomorrow morning.
 - IF OFFICE WILL BE CLOSED: I'll page him now. (EXCEPTION: from 9 pm to 9 am. Since this isn't urgent, we'll hold the page until morning.)
51. CALL PCP WHEN OFFICE IS OPEN: You need to discuss this with your doctor within the next few days. Call him/her during regular office hours.
52. GO TO L&D NOW: You need to be seen. Go to the Labor and Delivery Unit or the Emergency Room at _____ Hospital. Leave now. Drive carefully.
72. FEVER MEDICINES:
 - Treat fevers above 101° F (38.3° C).
 - The goal of fever therapy is to bring the fever down to a comfortable level. Remember that fever medicine usually lowers fever 2-3° F (1-1.5° C).
 - ACETAMINOPHEN DOSING (e.g., Tylenol): 650 mg by mouth every 4 hours or 1,000 mg by mouth every 6 hours. Maximum dose per day = 4,000 mg.
 - IBUPROFEN DOSING (e.g., Motrin, Advil): 400 mg by mouth every 6 hours or 600 mg by mouth every 8 hours.
 - AGE > 65 YEARS: Acetaminophen is generally considered safer than ibuprofen.

Acetaminophen dosing interval should be increased to every 8 hours because of reduced liver metabolism. Maximum dose per day = 3,000 mg.

- Be certain to read the package instructions.

73. CAUTION - NSAIDS:

- Do not take ibuprofen if you have stomach problems, kidney disease, or other contraindications to using non-steroidal anti-inflammatory drugs.

- Do not use if pregnant.

- Do not use ibuprofen for >7 days without consulting your PCP.

80. DRIVING: Another adult should drive.

81. BRING MEDS: Be certain to bring your medications with you to the Emergency Department.

87. BRING MEDS: Be certain to bring your medications or a list of your meds with you, when you go to see the doctor.

89. CALL BACK IF:

- You become worse.

Author: David A. Thompson, M.D.

Content Set: Telephone Triage Algorithms - Adult After-Hours Version

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Copyright: 2000-2008 David A. Thompson, M.D.

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Dr. Thompson is Board Certified in both Internal Medicine and Emergency Medicine, having completed a dual residency at Northwestern Memorial Hospital (Northwestern University). He is also a Fellow in the American College of Emergency Medicine.

Clinical Work Experience

- Part-time faculty attending and clinical instructor in the Northwestern Memorial Hospital Emergency Department.
- Chief Information Officer for Emergency Consultants Inc.
- Chief Medical Officer for Apollo Information Services.
- Former Medical Director and Chair of the Department of Emergency Medicine of the MacNeal Health Network;
- Medical Director of MacNeal Health Network’s Medical Call Center for five years.
- Actively involved in the areas of quality assurance, training, and information technology. Served as both chair and member of both hospital-based and national quality assurance committees. Developed databases and educational tools to promote benchmarking and quality improvement for medical call centers and the emergency department.
- Works with a select group of medical call centers, aggregating data from approximately 2 million telephone triage calls, and publishes an annual benchmarking report.
- Lecturer in the area of telephone triage
- Author of Adult Telephone Triage Protocols, 2nd Edition, published by the American Academy of Pediatrics (AAP).
- Author of numerous medical articles, several in two fields of special interest: chief complaint coding and patient satisfaction.

Education

- Northwestern Memorial Hospital
Combined Residency, Internal Medicine/Emergency Medicine
Chief Resident in Emergency Medicine
- University of Illinois College of Medicine
Alpha Omega Alpha
- University of Illinois College of Engineering
Tau Beta Pi

Professional Organizations

- American College of Emergency Physicians
- American Society of Training and Development
- Healthcare Information and Management Systems Society
- Illinois College of Emergency Physicians

Adult Protocol Review Process

- Review Relevant Pediatric Protocol(s) from Dr. Barton Schmitt
Write First Draft-Version of Adult Protocol
- Research topic
- Review books, internet, journals, and/or consult physician sub-specialist(s)
Develop differential diagnosis
- Create table of differential diagnoses with ICD-9CM codes
- Assess frequency of each diagnosis
- Assess urgency, morbidity/mortality, required disposition level for each diagnosis
Write Second Draft-Version
- Incorporate information from research and differential diagnosis
Write Third Draft-Version
- Two weeks after second draft
- Identify, incorporate, and cite 3-5 relevant journal articles
Send Protocol to Reviewers
- Obtain written feedback from 5-8 reviewers for each protocol
- Reviewers: call center medical directors, emergency physicians, primary care adult physicians (IM, FP), physician sub-specialists, call center nurses, sub-specialty nurses
Write Fourth Draft-Version
- Incorporate reviewer suggestions
Clinical Testing of Protocol Performance by Designated Call Centers
Write Fifth-Final Version
- Modify protocol to incorporate clinical and non-clinical testing results
Release Final Version to Call Centers
Review of Protocol by Medical Director at Each Site Prior to Activation

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