# Vomiting Without Diarrhea

Pediatric After-Hours Version2021

## DEFINITION

• Vomiting is the forceful emptying (throwing up) of a large portion of the stomach's contents through the mouth
• Retching (dry heaves) describes the rhythmic contractions of the abdominal and intercostal muscles without producing any vomit
• Nausea and abdominal discomfort usually precede each bout of vomiting
• Caution: Rule out appendicitis, the most common serious diagnosis that is missed in nurse telephone triage.
• **Also Included:** vomiting stopped but nausea and poor appetite persist

Vomiting **Severity** is defined:

• MILD: 1-2 times/day
• MODERATE: 3-7 times/day
• SEVERE: 8 or more times/day (vomits everything or nearly everything)
• Caution: Multiple stomach contractions (heaves) do not count as separate episodes of vomiting. At least 10 minutes need to pass, before we consider it another episode of vomiting.

## INITIAL ASSESSMENT QUESTIONS

1. SEVERITY: "How many times has he vomited today?" "Over how many hours?"
   - MILD:1-2 times/day
   - MODERATE: 3-7 times/day
   - SEVERE: 8 or more times/day, vomits everything or repeated "dry heaves" on an empty stomach
2. ONSET: "When did the vomiting begin?"
3. FLUIDS: "What fluids has he kept down today?" "What fluids or food has he vomited up today?"
4. HYDRATION STATUS: "Any signs of dehydration?" (e.g., dry mouth [not only dry lips], no tears, sunken soft spot) "When did he last urinate?"
5. CHILD'S APPEARANCE: "How sick is your child acting?" " What is he doing right now?" If asleep, ask: "How was he acting before he went to sleep?"
6. CONTACTS: "Is there anyone else in the family with the same symptoms?"
7. CAUSE: "What do you think is causing your child's vomiting?"

- Author's note: IAQ's are intended for training purposes and not meant to be required on every call.

## TRIAGE ASSESSMENT QUESTIONS

**Call EMS 911 Now**

Shock suspected (very weak, limp, not moving, too weak to stand, pale cool skin)

*FIRST AID: have child lie down with feet elevated*
*CA: 50, 12*

Sounds like a life-threatening emergency to the triager

*CA: 50, 12*

**See More Appropriate Guideline**

Food or other object stuck in the throat

*Go to Guideline: Swallowed Foreign Body (Pediatric)*

Vomiting and diarrhea both present (diarrhea means 3 or more watery or very loose stools)

*Go to Guideline: Vomiting With Diarrhea (Pediatric)*

Vomiting only occurs after taking a medicine

*Go to Guideline: Vomiting on Meds (Pediatric)*

Vomiting occurs only while coughing

*Go to Guideline: Cough (Pediatric)*

Diarrhea is the main symptom (no vomiting or vomiting resolved)

*Go to Guideline: Diarrhea (Pediatric)*

[1] Age > 12 months AND [2] ate spoiled food within the last 12 hours

*Go to Guideline: Food Poisoning (Pediatric)*

[1] Previously diagnosed reflux AND [2] volume increased today AND [3] infant appears well

*Go to Guideline: Spitting Up (Reflux) (Pediatric)*

[1] Age of onset < 1 month old AND [2] sounds like reflux or spitting up

*Go to Guideline: Spitting Up (Reflux) (Pediatric)*

Motion sickness suspected

*Go to Guideline: Motion Sickness (Pediatric)*

[1] Severe headache AND [2] history of migraines

*Go to Guideline: Headache (Pediatric)*

[1] Food allergy suspected AND [2] vomiting occurs within 2 hours after eating new high-risk food (e.g., nuts, fish, shellfish, eggs)

*Go to Guideline: Food Reactions - General (Pediatric)*

Vomiting with hives also present at same time

*Go to Guideline: Hives (Pediatric)*

**Go to ED Now**

Severe dehydration suspected (very dizzy when tries to stand or has fainted)

*CA: 51, 21, 12*

[1] Blood (red or coffee grounds color) in the vomit AND [2] not from a nosebleed (Exception: Few streaks AND only occurs once AND age > 1 year)

*R/O: peptic ulcer, esophagitis, Mallory-Weiss tear*
*CA: 51, 16, 12*

Difficult to awaken

*R/O: encephalitis, Reye's syndrome, intussusception, overdose*
*CA: 51, 20, 12*

Confused (delirious) when awake

*R/O: encephalitis, meningitis*
*CA: 51, 12*

Altered mental status suspected (not alert when awake, not focused, slow to respond, true lethargy)

*R/O: increased ICP, meningitis*
*CA: 51, 12*

Neurological symptoms (e.g., stiff neck, bulging soft spot)

*R/O: meningitis*
*CA: 51, 12*

Poisoning suspected (with a medicine, plant or chemical)

*CA: 51, 19, 12*

[1] Age < 12 weeks AND [2] fever 100.4 F (38.0 C) or higher rectally

*R/O: sepsis*
*CA: 51, 17, 28, 12*

**Go to ED Now (or PCP triage)**

[1] Newborn (< 1 month old) AND [2] starts to look or act abnormal in any way (e.g., decrease in activity or feeding)

*R/O: sepsis, NEC, adrenal insufficiency*
*CA: 52, 12*

[1] Bile (green color) in the vomit AND [2] 2 or more times (Exception: Stomach juice which is yellow)

*R/O: GI obstruction*
*CA: 52, 20, 12*

[1] Age < 12 months AND [2] bile (green color) in the vomit (Exception: Stomach juice which is yellow)

*R/O: GI obstruction, necrotizing enterocolitis*
*CA: 52, 20, 12*

[1] SEVERE abdominal pain (when not vomiting) AND [2] present > 1 hour

*R/O: bowel obstruction*
*CA: 52, 20, 12*

Appendicitis suspected (e.g., constant pain > 2 hours, RLQ location, walks bent over holding abdomen, jumping makes pain worse, etc)

*CA: 52, 20, 12*

Intussusception suspected (brief attacks of severe abdominal pain/crying suddenly switching to 2-10 minute periods of quiet) (age usually < 3 years)

*CA: 52, 20, 12*

[1] Dehydration suspected AND [2] age < 1 year (Signs: no urine > 8 hours AND very dry mouth, no tears, ill appearing, etc.)

*CA: 52, 21, 12*

[1] Dehydration suspected AND [2] age > 1 year (Signs: no urine > 12 hours AND very dry mouth, no tears, ill appearing, etc.)

*CA: 52, 21, 12*

[1] Severe headache AND [2] persists > 2 hours AND [3] no previous migraine

*R/O: increased intracranial pressure, 1st migraine headache*
*CA: 52, 20, 12*

[1] Fever AND [2] > 105 F (40.6 C) by any route OR axillary > 104 F (40 C)

*R/O: serious bacterial infection*
*CA: 52, 18, 28, 12*

[1] Fever AND [2] weak immune system (sickle cell disease, HIV, splenectomy, chemotherapy, organ transplant, chronic oral steroids, etc)

*R/O: serious bacterial infection. Note: if available, refer to established specialist.*
*CA: 52, 28, 12*

High-risk child (e.g. diabetes mellitus, brain tumor, V-P shunt, recent abdominal surgery)

*CA: 52, 28, 12*

Diabetes suspected (excessive drinking, frequent urination, weight loss, deep or fast breathing, etc.)

*CA: 52, 28, 12*

[1] Recent head injury within 24 hours AND [2] vomited 2 or more times (Exception: minor injury AND fever)

*R/O: subdural hematoma*
*CA: 52, 20, 12*

Child sounds very sick or weak to the triager

*Reason: severe acute illness or serious complication suspected*
*CA: 52, 28, 12*

**See HCP within 4 Hours (or PCP Triage)**

[1] SEVERE vomiting (vomiting everything) > 8 hours (> 12 hours for > 6 yo) AND [2] continues after giving frequent sips of ORS (or pumped breastmilk for breastfed infants) using correct technique per guideline

*CA: 53, 21, 22, 12*

[1] Continuous abdominal pain or crying AND [2] persists > 2 hours
(Caution: intermittent abdominal pain that comes on with vomiting and then goes away is common)

*R/O: early GI obstruction*
*CA: 53, 20, 22, 12*

Kidney infection suspected (flank pain, fever, painful urination, female)

*R/O: acute pyelonephritis*
*CA: 53, 28, 22, 12*

[1] Abdominal injury AND [2] in last 3 days

*R/O: traumatic pancreatitis, or duodenal hematoma*
*CA: 53, 20, 22, 12*

**Call PCP Now**

Pyloric stenosis suspected (age < 3 months and projectile vomiting 2 or more times)

*CA: 59, 28, 22, 12*

[1] Age < 12 weeks AND [2] vomited 3 or more times in last 24 hours (Exception: reflux or spitting up)

*R/O: pyloric stenosis, early GI obstruction*
*CA: 59, 28, 22, 12*

[1] Age < 6 months AND [2] fever AND [3] vomiting 2 or more times

*R/O: serious cause of isolated vomiting*
*CA: 59, 28, 22, 12*

Vomiting an essential medicine (e.g., digoxin, seizure medications)

*CA: 59, 22, 12*

[1] Taking Zofran AND [2] vomits 3 or more times

*R/O: wrong diagnosis*
*CA: 59, 22, 12*

[1] Recent hospitalization AND [2] child not improved or worse

*CA: 59, 22, 12*

**See PCP within 24 Hours**

[1] Age < 1 year old AND [2] MODERATE vomiting (3-7 times/day) AND [3] present > 24 hours

*CA: 54, 4, 7, 29, 6, 10, 30, 25, 12*

[1] Age > 1 year old AND [2] MODERATE vomiting (3-7 times/day) AND [3] present > 48 hours

*CA: 54, 8, 9, 10, 30, 25, 12*

[1] Age under 24 months AND [2] fever present over 24 hours AND [3] fever > 102 F (39 C) by any route OR axillary > 101 F (38.3 C)

*R/O: UTI, bacteremia*
*CA: 54, 10, 4, 7, 29, 6, 8, 22, 12*

Fever present > 3 days (72 hours)

*R/O: bacterial cause such as UTI, strep pharyngitis*
*CA: 54, 10, 4, 7, 29, 6, 8, 22, 12*

Fever returns after gone for over 24 hours

*R/O: UTI, strep pharyngitis, sinusitis*
*CA: 54, 10, 4, 7, 29, 6, 8, 22, 12*

Strep throat suspected (sore throat is main symptom with mild vomiting)

*CA: 54, 8, 9, 10, 25, 12*

**See PCP within 3 Days**

[1] MILD vomiting (1-2 times/day) AND [2] present > 3 days (72 hours)

*CA: 55, 4, 7, 29, 8, 10, 25, 12*

**See PCP within 2 Weeks**

Vomiting is a chronic problem (recurrent or ongoing AND present > 4 weeks)

*R/O: cyclic vomiting, peptic ulcer, eating disorder (self-induced)*
*CA: 56, 23, 4, 7, 29, 8, 10, 22, 12*

**Home Care**

[1] SEVERE vomiting ( 8 or more times per day OR vomits everything) BUT [2] hydrated

*Reason: will usually pass*
*CA: 58, 1, 3, 4, 7, 29, 6, 8, 10, 30, 2, 12*

[1] MODERATE vomiting (3-7 times/day) AND [2] age < 1 year old AND [3] present < 24 hours

*Reason: probably viral gastritis*
*CA: 58, 13, 4, 7, 29, 6, 10, 14, 30, 5, 12*

[1] MODERATE vomiting (3-7 times/day) AND [2] age > 1 year old AND [3] present < 48 hours

*Reason: probably viral gastritis*
*CA: 58, 13, 8, 9, 10, 14, 30, 11, 12*

[1] MILD vomiting (1-2 times/day) AND [2] age < 1 year old AND [3] present < 3 days

*CA: 58, 13, 4, 7, 29, 6, 14, 24, 12*

[1] MILD vomiting (1-2 times/day) AND [2] age > 1 year old AND [3] present < 3 days

*CA: 58, 13, 8, 9, 14, 24, 12*

[1] Vomiting stopped BUT [2] nausea and poor appetite persist

*CA: 58, 15, 26, 27, 22, 12*

**CARE ADVICE (CA) -**

1. **Reassurance and Education:**
   - Sometimes children vomit almost everything for 3 or 4 hours, even if given small amounts. However, some fluid is being absorbed and this will help prevent dehydration.
   - From what you've told me, your child is well hydrated at this time.
   - So continue offering fluids (Avoid: NPO).

2. **Call Back If:**
   - Signs of dehydration occur
   - Vomits everything for over 8 hours while receiving ORS correctly (12 hours for 6 years and older)
   - Blood in vomit
   - Any abdominal pain becomes severe or constant
   - Your child becomes worse

3. **Encourage Sleep**:
   - Encourage your child to rest or go to sleep for a few hours.
   - Reason: Sleep often empties the stomach and relieves the need to vomit.
   - When your child awakens, again offer small amounts of clear fluids every 5 minutes.

4. **Formula Fed Infants - Give ORS:**
   - For vomiting once, continue regular formula.
   - For vomiting more than once within last 2 hours, offer ORS for 8 hours. If you don't have ORS, use formula until you can get some.
   - ORS is Oral Rehydration Solution.
   - ORS is a special electrolyte solution (such as Pedialyte or the store brand) that can prevent dehydration. It's readily available in supermarkets and drug stores.
   - Spoon or syringe feed small amounts: 1-2 teaspoons (5-10 ml) every 5 minutes.
   - After 4 hours without vomiting, double the amount.
   - **Formula:** After 8 hours without vomiting, return to regular formula.

5. **Call Back If:**
   - Vomiting everything for over 8 hours
   - **Moderate** vomiting persists over 24 hours
   - Vomiting becomes worse
   - Any abdominal pain becomes severe or constant
   - Signs of dehydration occur
   - Your child becomes worse

6. **Stop Solid Foods**:
   - Avoid all solid foods (or baby foods) in kids who are vomiting.
   - After 8 hours without throwing up, gradually add them back.
   - Start with starchy foods that are easy to digest. Examples are cereals, crackers and bread.
   - Return to normal diet in 24-48 hours.

7. **Breastfed Infants - Reduce the Amount per Feeding:**
   - If vomits once, nurse 1 side every 1 to 2 hours.
   - If vomits more than once within last 2 hours, nurse for 5 minutes, every 30 to 60 minutes. After 4 hours without vomiting, return to regular breastfeeding.
   - If continues to vomit, switch to pumped breastmilk. (ORS is rarely needed in breastfed babies but can be used if vomiting becomes worse).
   - Spoon or syringe feed small amounts of pumped breastmilk: 1-2 teaspoons (5-10 ml) every 5 minutes.
   - After 4 hours without vomiting, return to regular breastfeeding. Start with small feedings of 5 minutes every 30 minutes and increase as tolerated.

8. **Older Children Over 1 Year - Sips of Clear Fluids:**
   - Offer clear fluids in small amounts for 8 hours.
   - Water or ice chips are best for vomiting in older children (Reason: Water is directly absorbed across the stomach wall)
   - Other clear fluids: Use half-strength Gatorade. Make it by mixing equal amounts of Gatorade and water. Can mix apple juice the same way. ORS (such as Pedialyte) is usually not needed in older children, but can also be used. Popsicles work great for some kids.
   - The key to success is giving small amounts of fluid. Offer 2-3 teaspoons (10-15 ml) every 5 minutes. Older kids can just slowly sip a clear fluid.
   - After 4 hours without vomiting, double the amount.
   - After 8 hours without vomiting, return to regular fluids.
   - **Caution**: If vomiting continues over 12 hours, switch to ORS or half-strength Gatorade (Reason: needs some electrolytes).

9. **Stop Solid Foods:**
   - Avoid all solid foods in kids who are vomiting.
   - After 8 hours without throwing up, gradually add them back.
   - Start with starchy foods that are easy to digest. Examples are cereals, crackers and bread.
   - Return to normal diet in 24-48 hours.

10. **Avoid Meds:**
    - Discontinue all nonessential medicines for 8 hours. (Reason: usually makes vomiting worse.) (Avoid ibuprofen, which can cause gastritis.)
    - Consider acetaminophen suppositories (same as oral dose) if the fever needs treatment (over 102 F or 39 C and causing discomfort).
    - Call if child vomiting an essential medicine.

11. **Call Back If:**
    - Vomiting everything for 8 hours (12 hours for age over 6 years)
    - **Moderate** vomiting persists over 48 hours
    - Vomiting becomes worse
    - Any abdominal pain becomes severe or constant
    - Signs of dehydration
    - Your child becomes worse

12. **Care Advice** per Vomiting Without Diarrhea (Pediatric) guideline.

13. **Reassurance and Education:**
    - Most vomiting is caused by a viral infection of the stomach (viral gastritis) or mild food poisoning.
    - Vomiting is the body's way of protecting the lower GI tract.
    - Fortunately, vomiting illnesses are usually brief.
    - The main risk of vomiting is dehydration. Dehydration means the body has lost too much fluid.

14. **Expected Course**:
    - For the first 3 or 4 hours, your child may vomit everything. Then the stomach settles down.
    - Vomiting from viral gastritis usually stops in 12 to 24 hours.
    - Some children may develop diarrhea after the vomiting stops.
    - Mild vomiting with nausea may last 3 days.
    - **Contagiousness**: Your child can return to daycare or school after vomiting and fever are gone.

15. **Reassurance and Education**:
    - After a bout of vomiting from a stomach virus, it commonly takes 1 or 2 days for the normal appetite to return.

16. **Bring in a Sample of the Blood**:
    - Bring in a sample of the "bloody" material (Reason: for testing).

17. **Fever Under 3 Months Old - Don't Give Fever Medicine:**
    - Don't give any acetaminophen before being seen.
    - Need accurate documentation of temperature in medical setting to decide if fever is really present. (Reason: may require septic work-up.)

18. **Fever Medicine**:
    - Give acetaminophen to bring down the fever.
    - An acetaminophen suppository would be preferable.

19. **Bring in a Sample**:
    - For possible poisoning, bring in any material that's vomited (Reason: for testing).

20. **Don't Give Anything By Mouth:**
    - Do not allow any eating, drinking or oral medicines. (Reason: condition may need surgery and general anesthesia.)

21. **Fluids Until Seen:**
    - Offer fluids until your child is seen. (Reason: prevent dehydration)
    - If under 12 weeks old (or don't have ORS), do the following:
    - If formula fed, offer 5 ml (1 tsp) of formula every 5 minutes.
    - If breastfed, offer 5 ml (1 tsp) of pumped milk or formula every 5 minutes. Or nurse for 5 minutes every 30 minutes.
    - After 12 weeks old, offer small amounts (1-2 tsps or 5-10 mls) of ORS (e.g., Pedialyte) every 5 minutes.
    - If over 1 year of age, can also use water or ORS every 5 minutes.

22. **Call Back If**:
    - Your child becomes worse

23. **Keep a Vomiting Diary**:
    - Keep a diary of your child's vomiting.
    - Include the date, time, place, and what your child ate in the previous 2 hours.
    - Reason: Try to find some of the triggers.

24. **Call Back If**:
    - **Mild** vomiting persists over 3 days
    - Vomiting becomes worse
    - Any abdominal pain becomes severe or constant
    - Signs of dehydration occur
    - Your child becomes worse

25. **Call Back If:**
    - Vomiting becomes worse
    - Any abdominal pain becomes severe or constant
    - Signs of dehydration occur
    - Your child becomes worse

26. **Offer Bland Diet:**
    - Allow your child to gradually return to a normal diet.
    - Offer bland foods (crackers, cereals, soups).

27. **Avoid Meds**:
    - Avoid any medicines that might irritate the stomach (e.g., ibuprofen).

28. **Fluids Until Seen:**
    - Offer fluids until your child is seen. (Reason: prevent dehydration)
    - If under 12 weeks old, offer formula or breastmilk in small amounts.
    - After 12 weeks old, offer ORS (e.g., Pedialyte) in small amounts.
    - If under 1 year old and don't have ORS, offer formula or breastmilk.
    - If over 1 year old and don't have ORS, can offer water.

29. **Pumped Breastmilk Bottle-Fed Infants - Reduce the Amount per Feeding:**
    - If vomits once and bottle-feeding breastmilk, give half the regular amount every 1-2 hours.
    - If vomits more than once within last 2 hours, give 1 ounce (30 mL) every 30 to 60 minutes.
    - If continues to vomit, give 1-2 teaspoons (5-10 mL) every 5 minutes. If not tolerating breastmilk, switch to ORS (e.g., Pedialyte).
    - After 4 hours without vomiting, return to regular feedings. Start with 1 ounce (30 mL) every 30 minutes and slowly increase as tolerated.

30. **Dehydration: How to Tell**
    - The main risk of vomiting is dehydration. Dehydration means the body has lost too much water.
    - Vomiting frequently can lead to dehydration.
    - Dehydration is a reason to see a doctor right away.
    - Your child may have dehydration if not drinking much fluid and:
    - The urine is dark yellow and has not passed any in over 8 hours. (over 12 hours if age over 1 year)
    - Inside of the mouth is very dry and there are no tears if your child cries.
    - Your child is irritable, tired out or acting ill. If your child is alert, happy and playful, he or she is not dehydrated.

50. **Call EMS 911 Now**:
    - Your child needs immediate medical attention. 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.

51. **Go To ED Now**:
    - Your child needs to be seen in the Emergency Department immediately.
    - Go to the ED at _____ Hospital.
    - Leave now. Drive carefully.

52. **Go To ED Now (or PCP Triage):**
    - **If No PCP (Primary Care Provider) Second-Level Triage:** Your child needs to be seen within the next hour. Go to the ED/UCC at _____ Hospital. Leave as soon as you can.
    - **If PCP Second-Level Triage Required:** Your child may need to be seen. Your doctor (or NP/PA) will want to talk with you to decide what's best. I'll page the on-call provider now. If you haven't heard from the provider (or me) within 30 minutes, go directly to the ED/UCC at _____ Hospital.

53. **See HCP Within 4 Hours (or PCP triage)**:
    - **If Office Will Be Open:** Your child needs to be seen within the next 3 or 4 hours. Call your doctor's (or NP/PA) office as soon as it opens.
    - **If Office Will Be Closed and No PCP (Primary Care Provider) Second-Level Triage:** Your child needs to be seen within the next 3 or 4 hours. A nearby Urgent Care Center (UCC) is often a good source of care. Another choice is to go to the ED. Go sooner if your child becomes worse.
    - **If Office Will Be Closed and PCP Second-Level Triage Required:** Your child may need to be seen. Your doctor (or NP/PA) will want to talk with you to decide what's best. I'll page the on-call provider now. If you haven't heard from the provider (or me) within 30 minutes, call again. **Note:** If on-call provider can't be reached, send to UCC or ED.

    **Note to Triager:**
    - Use nurse judgment to select the most appropriate source of care.
    - Consider both the urgency of the patient's symptoms AND what resources may be needed to evaluate and manage the patient.

    **Sources of Care:**
    - **ED:** Patients who may need surgery or hospital admission need to be sent to an ED. So do most patients with serious symptoms or complex medical problems.
    - **UCC:** Some UCCs can manage patients who are stable and have less serious symptoms (e.g., minor illnesses and injuries). The triager must know the UCC capabilities before sending a patient there. If unsure, call ahead.
    - **OFFICE:** If patient sounds stable and not seriously ill, consult PCP (or follow your office policy) to see if patient can be seen NOW in office.

54. **See PCP Within 24 Hours:**
    - **If Office Will Be Open:** Your child needs to be examined within the next 24 hours. Call your child's doctor (or NP/PA) when the office opens and make an appointment.
    - **If Office Will Be Closed:** Your child needs to be examined within the next 24 hours. A clinic or an urgent care center is often a good source of care if your doctor's office is closed or you can't get an appointment.
    - **If Patient Has No PCP:** Refer patient to a clinic or urgent care center. Also try to help caller find a PCP (medical home) for future care.

    **Note to Triager:**
    - Use nurse judgment to select the most appropriate source of care.
    - Consider both the urgency of the patient's symptoms AND what resources may be needed to evaluate and manage the patient.

55. **See PCP Within 3 Days**:
    - Your child needs to be examined within 2 or 3 days.
    - **PCP Visit:** Call your doctor (or NP/PA) during regular office hours and make an appointment. A clinic or urgent care center are good places to go for care if your doctor's office is closed or you can't get an appointment. **Note:** If office will be open tomorrow, tell caller to call then, not in 3 days.
    - **If Patient Has No PCP (Primary Care Provider):** Try to help caller find a PCP for future care (e.g., use a physician referral line). Having a PCP or "medical home" means better long-term care.

56. **See PCP Within 2 Weeks**:
    - Your child needs an evaluation for this ongoing problem within the next 2 weeks.
    - **PCP Visit:** Call your child's doctor (or NP/PA) during regular office hours and make an appointment.
    - **If Patient Has No PCP (Primary Care Provider):** A primary care clinic is where you need to be seen for chronic health problems. **Note:** Try to help caller find a PCP (e.g., use a physician referral line). Having a PCP or 'medical home' means better long-term care.

58. **Home Care**:
    - You should be able to treat this at home.

59. **Call PCP Now**:
    - You need to discuss this with your child's doctor (or NP/PA).
    - I'll page the on-call provider now. If you haven't heard from the provider (or me) within 30 minutes, call again.

60. **Call PCP Within 24 Hours:**
    - You need to discuss this with your child's doctor (or NP/PA) 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 the on-call provider now. Exception: From 9 pm to 9 am. Since this isn't urgent, we'll hold the page until morning.

61. **Call PCP When Office Is Open**:
    - You need to discuss this with your child's doctor (or NP/PA) within the next few days.
    - Call the office when it is open.

## FIRST AID

**First Aid Advice for Shock:** Lie down with the feet elevated.

## BACKGROUND INFORMATION

### Severity of Vomiting

- The following is an arbitrary attempt to classify vomiting by risk for dehydration:
- **Mild:** 1 - 2 times/day
- **Moderate:** 3 - 7 times/day
- **Severe:** 8 or more times/day
- Caution: Multiple stomach contractions (heaves) do not count as separate episodes of vomiting. At least 10 minutes need to pass, before we consider it another episode of vomiting.
- At the beginning of a vomiting illness (especially following food poisoning), it's common for a child to vomit everything or nearly everything for 3 or 4 hours and then become stable with mild or moderate vomiting.
- Parents who call within the first hours of a vomiting illness, need to be reassured that the severe vomiting usually passes.
- The younger the child, the greater the risk for dehydration.

### Causes of Vomiting

- **Viral Gastritis.** Stomach infection from a stomach virus is the most common cause. Also called stomach flu. A common cause is the Rotavirus. The illness starts with vomiting. Watery loose stools may follow within 12-24 hours.
- **Food Poisoning.** This causes rapid vomiting within hours after eating the bad food. Diarrhea may follow. Caused by toxins from germs growing in foods left out too long. An example is Staph toxin in egg salad.
- **Ibuprofen.** Ibuprofen products (such as Advil) can be a stomach irritant. If taken on an empty stomach, it can cause vomiting.
- **Food Allergy.** Vomiting can be the only symptom of a food reaction. The vomiting comes on quickly after eating the food. Common foods are peanuts, tree nuts, fish and shellfish (such as shrimp).
- **Food Protein-Induced Enterocolitis Syndrome (FPIES)**. In rare cases, the vomiting starts 2 to 3 hours after eating the food. Happens mainly in infants. The main trigger foods for a delayed vomiting reaction are cow's milk or soy milk.
- **Coughing.** Hard coughing can also cause your child to throw up. This is more common in children with reflux.
- **Motion Sickness.** Vomiting and dizziness are triggered by motion. Sea sickness or fun-park ride sickness are the most common types. Strongly genetic.
- **Migraine Headaches.** In children, most migraine headaches also have vomiting.
- **Cyclic Vomiting.** Cyclic vomiting is the most common cause of recurrent attacks of vomiting. Attacks have a sudden onset and offset. Often occur in children who later develop migraine headaches.
- **Serious Causes.** Vomiting alone (without diarrhea) should stop within about 24 hours. If it lasts over 24 hours, you must think about more serious causes. Examples are appendicitis, a kidney infection, diabetes and head injury. A serious cause in young babies is pyloric stenosis. (See below for more on this). In newborns, metabolic diseases often present with vomiting.

### Isolated Vomiting: Serious Causes

• Neurological diseases such as meningitis, encephalitis, Reye syndrome, blocked V-P shunt, head trauma and other causes of increased intracranial pressure
• Intussusception
• GI obstruction (e.g., malrotation and volvulus)
• Appendicitis
• Cholecystitis
• Pyelonephritis
• Hepatitis
• Abdominal trauma
• Poisoning
• Drug overdose
• Diabetes mellitus—new onset

**Meningitis: Difficulties in Diagnosis**

• Delayed diagnosis of meningitis was the most common cause of a malpractice lawsuit in pediatric practice and telephone care. The Hib and Prevnar vaccines have greatly reduced the frequency of bacterial meningitis.
• Age: 60% of claims involved children < 2 years old
• Errors in Initial Diagnosis: viral infection/influenza 36%, ear infection 12%, gastroenteritis (vomiting) 4%, migraine 3%, febrile seizure 3%
• Presenting symptoms: fever 74%, vomiting 49%, lethargy 32%, headache 27%, influenza symptoms 25%, altered mental status 12%, neck stiffness 10%
• Classic findings of headache, neck stiffness and altered mental status are not present in most infants and toddlers.
• Index of suspicion must be high for any young child with fever and isolated vomiting.
• Source: PIAA data from 1985-2006 (McAbee, Pediatrics 2009)

**Pyloric Stenosis: How to Recognize**

• Definition: stomach outlet obstruction (narrowing) caused by hypertrophy of the pylorus muscle
• Symptoms: The main symptom is projectile vomiting (the milk shoots out of the mouth). Other symptoms include vomit is not bilious, hungry after vomiting (“happy vomiter” unlike babies with gastritis), and weight loss.
• Peak age: 2 to 8 weeks. Rare after 3 months. More common in firstborn males.
• Diagnostic test: ultrasound
• Treatment: surgery

**Urinary Tract Infections and Acute FWS (Fever Without a Source)**

• UTIs are the most common bacterial cause of acute FWS.
• Prevalence of UTIs is 5-7% in febrile infants who have no source for their fever evident on history or physical exam.
• Some of them have urosepsis.
• The highest risk groups are girls, uncircumcised boys who are less than 24 months old, or children with a history of a prior UTI. Children younger than 2 years are at particular risk because they usually can’t report urinary symptoms such as dysuria, urgency or suprapubic abdominal pain.
• The following triage question meets the recommendation of the AAP’s 2011 Clinical Practice Guideline on Urinary Tract Infections (Pediatrics 2011;128:595-610) on who needs to be seen for a urine culture:
• [1] Age < 24 months AND [2] fever present over 24 hours AND [3] vomiting without other symptoms

(no cold, cough, diarrhea, etc) AND [4] fever above 102 F (39 C) by any route OR axillary above 101 F (38.3 C) [R/O: UTI, bacteremia]
• A modified version of this triage question is included in this Vomiting Without Diarrhea guideline because acute pyelonephritis can present with fever and vomiting.

**Detecting Bile in Vomitus**

• Bile in the vomitus is a serious finding. In young infants it is commonly seen with volvulus and bowel obstruction. These are surgical emergencies.
• Bile is always green or dark green in color
• When mixed with stomach juices, it can be greenish-yellow, but never just yellow. If the caller is unsure if the color is greenish, ask "Does it look like spinach or mustard?" If the caller is still unsure, the child needs to be seen.
• Bile is in a liquid state. If the green color is in a glob of mucus, it's usually nasal mucus ("snot") or coughed-up phlegm that has been swallowed.
• Yellow-colored fluid in vomitus is usually normal stomach juices and acid. Vitamin drops can also cause this color. Recall how Vitamin C can turn the urine bright yellow.
• Many HCPs think that bile is bright yellow. The confusion probably comes from the fact that jaundiced babies are yellow.

**Appendicitis: How to Recognize**

• Symptoms: periumbilical pain for 4-12 hours
• Then constant localized RLQ pain
• Movement: increases pain (prefers to lie still)
• Position: lies on side, hips flexed, curled up
• Walking: Refuses or walks bent over and holding lower abdomen. Walking in a guarded way is also suggestive of appendicitis.
• Jumping or hopping: pain increases
• For any of the above (such as doesn't want to move, doesn't want to walk or pain in RLQ), refer in now even if vomiting is the main symptom
• If caller brings up "appendicitis", the patient has suspected appendicitis and needs to seen, unless the triager proves the patient has none of the above symptoms.
• Associated fever 50% and vomiting 60%
• Complications: perforation and peritonitis over 48 hours from onset (perforation occurs 20-70%)
• Death from shock less than 1%

**Ruptured (Perforated) Appendicitis**

• Delayed diagnosis of appendicitis is the 2nd most common cause of pediatric malpractice lawsuits (McAbee, 2009).
• Yet, ruptured appendix at the time of surgery is common: 90% in 0-2 year olds, 70% in 2-5 y o, 30% in 6-12 y o and 10% in teens.
• The perforation rate is inversely related to the age of the patient.
• Even an examination may not detect appendicitis. Some children are seen twice before the correct diagnosis is made.
• Atypical symptoms can be present: diarrhea (from pelvic appendix touching sigmoid colon), vomiting onset before pain (age 2 to 5), and minimal migration of pain to RLQ.
• In younger children, remember that crying can be from pain.
• Suspect appendicitis in children who have constant abdominal pain for more than 2 hours; even if they lack any of the classic symptoms.
• Symptoms may change after perforation: The RLQ pain can become more generalized and the pain

severity can temporarily diminish. However, the pain persists (it doesn't go away), the abdomen becomes rigid, fever begins or rises, and the child becomes less willing to move about.

**Distinguishing Appendicitis From Gastroenteritis**

- Gastroenteritis (GE) is the most common cause of acute onset abdominal PAIN
- Appendicitis accounts for 1% or 2%
- GE: Intermittent mild PAIN
- Appendicitis: Constant PAIN
- GE: PAIN doesn't interfere with activities
- Appendicitis: PAIN interferes with activities
- GE: Often starts with VOMITING
- Appendicitis: VOMITING (present 60%) is usually delayed, starting 12-24 hours after pain. (Exception: Vomiting can be the first symptom in young children).
- GE: Progresses to associated DIARRHEA
- Appendicitis: DIARRHEA is usually absent (Exception: from pelvic appendix)
- FEVER: not helpful for distinguishing appendicitis from gastroenteritis

**Intussusception**

- Definition: telescoping bowel
- Symptoms: brief attacks of severe abdominal pain, suddenly switching to calm (quiet periods last 2-10 minutes)
- Repeated vomiting (90%)
- Currant jelly stool (10%)
- Silent form: lethargy and pallor (10-20%)
- Age usually younger than 3 years; peak age 6 to 9 months
- Complication: necrotic bowel

**Bowel Obstruction**

- Symptoms: constant abdominal pain
- Persistent vomiting (99%), usually bile-stained
- Distended abdomen
- No stools
- Causes: volvulus, etc
- Complications: necrotic bowel shock

**Isolated Vomiting: Clues to Serious GI Causes From the Guideline**

- Abdominal pain that is continuous and present 2 hours or more
- Intussusception pain pattern (brief attacks of severe abdominal pain/crying suddenly switching to 2-10 minute periods of quiet)
- Appendicitis pain pattern (constant pain > 2 hours, RLQ location, won't jump, prefers to lie down, etc)
- Vomits bile which is green (Exception: Vomits stomach juice which is yellow)
- Age under 12 weeks and vomits 3 or more times in last 24 hours
- Age under 1 year old and isolated vomiting over 24 hours
- Age over 1 year old and isolated vomiting over 48 hours

**Reflux Versus Vomiting: Avoiding Over-Referral**

• **Parent Reports:** It's hard for parents to distinguish normal spitting up from vomiting. Most of what parents call vomiting is actually spitting up. This is an important decision. While reflux is benign, vomiting in babies has a serious etiology until proven otherwise. The following tips may help.
• **Reflux:** The following findings suggest reflux (spitting up): infant previously diagnosed with reflux, onset early in life (85% by 7 days of life, with a delayed onset more common in breastfed newborns), gradual onset, present for several days or weeks, no effort, no discomfort during reflux, no diarrhea, hungry, looks well and acts happy.
• **Vomiting:** The following findings suggest vomiting: uncomfortable during vomiting, new symptom starting today or yesterday, sudden onset, associated diarrhea or fever, projectile or forceful vomiting, vomit comes out the nose, looks or acts sick.
• **Volume:** Vomiting usually brings up a large volume of stomach contents. The vomiting is usually forceful and the child is usually uncomfortable. Spitting up (reflux) usually involves smaller amounts. However, with gastroesophageal reflux, the volume of reflux can fluctuate. The amount can become large if the child is wearing a tight diaper, is held in the horizontal position, or the size of the feeding was particularly large. Therefore, the amount is not that helpful to distinguishing between these 2 entities.

During the first month of life, newborns with true vomiting are seen immediately because the causes can be serious, including sepsis. Therefore, it's important to distinguish between reflux and true vomiting to prevent under- and over-referral.

**Vomiting: Most Frequent Pediatric After-Hours Call**

• Every year, vomiting comes in first in call frequency. It accounts for 7-8% of our total calls. This can be explained by the following:
• Before vomiting, children are apprehensive and unable to participate in normal activities.
• During vomiting, children are miserable.
• Parents remember how badly vomiting has made them feel in the past and they feel helpless.
• Parents often hope there is a medicine to stop the vomiting. Unfortunately, there is no OTC medicine for home treatment.
• All parents want to be sure they are treating the vomiting correctly. Hence, the importance of providing helpful, detailed care advice.

**Giving Fluids Versus NPO For Vomiting**

Sometimes children vomit everything that is offered to them, including ORS (Oral Rehydration Solution) and water. Other children are so nauseated they don't want to swallow anything. If vomiting is the only symptom (no associated diarrhea), it is safe to rest the stomach completely for 1 or 2 hours. It's unusual to become rapidly dehydrated from vomiting alone. Some children who begin vomiting at bedtime will vomit several times during the night without having any fluid intake, but still be hydrated with very concentrated urine in the morning.

The reason that this guideline instructs callers not to use NPO is that recommending it in selected circumstances can be confusing to some parents and contribute to dehydration in children who develop watery diarrhea with their vomiting. In addition, during the brief time that fluid is retained in the stomach, some of it is absorbed and this can help prevent dehydration. The literature demonstrates that we can feed most children through a vomiting and/or diarrhea illness.

**Vomiting: Treating with Sips of Water versus Oral Rehydration Solution (ORS)**

• This guideline recommends treating vomiting with small amounts of water (rather than ORS) after 1 year of age. The following are the reasons:

• Vomiting as an isolated symptom is usually short-lived (24 hours or less). During that time, it is difficult to become dehydrated from vomiting without diarrhea.
• If diarrhea also develops, the fluid is switched to ORS.
• Water is the most accessible fluid and in contrast to ORS, older children rarely refuse it, as they may do with ORS.
• The cutoff of 12 months for switching from ORS to water was arbitrary but matches the age of switching fluids in the Diarrhea guideline. I think there needs to be some age after which we no longer use ORS to treat isolated vomiting. Each call center can customize their cutoff to what their medical director or medical review panel agrees upon (e.g. age 2, 3, 6, 12). I don't know of any adults who use ORS to treat their vomiting.
• In diarrhea, the older children can also receive water as their main fluid as long as they are receiving their electrolytes from solid foods. Again, this is based upon the fact that we teach parents to feed through diarrhea. In children with diarrhea, if we only give them ORS for more than 6 hours, they become hungry and ketotic.
• All children with isolated vomiting are seen if it persists more than 24 hours.
• From personal experience, I have cared for several children who continued to vomit on ORS and improved when switched to sips of water.
• I have received no feedback about adverse outcomes from this advice despite using it in guidelines for over a decade.
• Finally, we need more studies to look at this common problem. Most research has addressed vomiting with diarrhea.
• Summary: Treating vomiting with sips of water is safe and will not cause hyponatremia under the following conditions: Age greater than 1 year, no associated diarrhea and limited to less than 24 hours.

**Homemade Oral Rehydration Solution (ORS) Formula**

• Caution: Recommend only under special circumstances and if approved by call center medical director.
• If parents can't obtain regular ORS and child is becoming dehydrated, consider a homemade ORS.
• Mix 1/2 cup of dry infant rice cereal with 2 cups (16 ounces) of water. Add 1/4 level teaspoon of salt (gives 50 mEq/L sodium solution).
• Have the caller write down the formula and repeat it back. (Caution the caller about the dangers of too much salt.)
• Given only in the event of adverse weather conditions (can't get to a store) OR
• Given only for rural areas long distance from a general store OR
• Given only for families with no timely transportation

**Peptobismol**

Peptobismol (bismuth subsalicylate) is sometimes used for diarrhea. It has no proven benefit for treating vomiting. The concern that the salicylate in Peptobismol might cause Reye's syndrome has never been documented. Therefore, we should not needlessly burden parents with this concern.

**Antiemetic Drugs for Vomiting: Zofran**

• Zofran (Ondansetron) is a proven effective treatment for the vomiting associated with chemotherapy or surgery. Later studies found it to be effective for vomiting caused by viral gastroenteritis.
• Positives: It is a safe agent, even in young children
• Negatives: Giving Zofran IM or IV is expensive. Most HCPs give it as an Oral Disintegrating Tablet (ODT) which costs far less.
• A study (Roslund, 2007) demonstrated the efficacy of Zofran for treating vomiting in children with

acute viral gastroenteritis who have failed ORS therapy in an ED setting.
• An evidence-based review article (DeCamp, 2008) supports prescribing Zofran for SEVERE vomiting in an ED setting, but NOT for MILD-MODERATE vomiting in an office or clinic setting.
• Vomiting can have many serious causes. Zofran is never used without first examining the child.
• Telephone management: the availability of Zofran does not change telephone triage or advice. For callers who ask about it, tell them it is used only for severe vomiting AND only after the child has been examined.

**Birth To 3 Months Old: Indications For Seeing Patients Immediately With Fever**

• The triage question, "Age < 12 weeks AND fever 100.4 F (38.0 C) or higher rectally", is found in multiple symptom-based and newborn guidelines.
• Rectal temperatures are preferred before sending babies into the Emergency Room. (Reason: EDs/offices perform rectal readings to guide ED work-ups). If a caller is unable to take a rectal temp, the following definitions of fever can apply to this question as well:
• Rectal or Temporal Artery temperature: 100.4 F (38.0 C) or higher
• Pacifier temperature: 100 F (37.8 C) or higher
• Axillary (armpit) temperature: 99 F (37.2 C) or higher
• Tympanic temperatures are not reliable before 6 months of age.
• Temporal artery and skin infrared temperatures may be reliable in young infants. (De Curtis 2008)
• Note: Rectal temperatures always preferred over axillary readings (Reason: axillary often inaccurate). (EXCEPTION: Axillary temp above 100.4 F (38 C), just see them)

**Matching Pediatric Handouts for Callers**

Printed home care advice instructions for patients have been written for this guideline. If your software contains them, they can be sent to the caller at the end of your call. Here are the names of the pediatric handouts that relate to this topic:

• Vomiting (Baby on Breastmilk)
• Vomiting (Baby on Baby Formula)
• Vomiting (1-5)
• Vomiting (6-21)
• Fever - How to Take the Temperature
• Fever - Myths Versus Facts
• Acetaminophen (Tylenol) Dosage Table - Children

**Dehydration: How to Explain to Callers**

• The main risk of not drinking enough fluids is dehydration. Dehydration means the body has lost too much water.
• Dehydration is a reason to see a doctor right away.
• Your child may have dehydration if not drinking much fluid and:
• The urine is dark yellow and has not passed any in over 8 hours.
• Inside of the mouth and tongue are dry or very sticky.
• There are no tears if your child cries.
• Slow blood refill test: Longer than 2 seconds. First, press on the thumbnail and make it pale. Then let go. Count the seconds it takes for the nail to turn pink again. Ask your doctor to teach you how to do this test.
• A child with severe dehydration may become too weak to stand and can also be very dizzy when trying to stand. Severe dehydration can also lead to confusion, rapid breathing, or floppiness.

**Dehydration Estimation In Telephone Triage**

- A child who is alert, happy and playful is NOT dehydrated.
- Diminished urination occurs early in the process of dehydration (Gorelick 1997). Decreased urination (no urine in more than 12 hours) alone, however, should not be used to diagnose dehydration if other findings of dehydration are absent. (Exception: no urine > 12 hours and can't urinate now). As an isolated symptom, decreased urination only has a 17% predication for dehydration. In general, children with normal urine output are NOT dehydrated. (Exception: renal disease, diabetes mellitus or insipidus).
- A subset of 4 factors - capillary refill > 2 seconds, absent tears, dry mucous membranes, and ill general appearance-best predicted dehydration. The presence of any 2 factors correlated with a 5% deficit and the presence of any 3 factors with a 10% deficit (Gorelick 1997). In another study, decreased skin turgor (tenting) was a good predictor of dehydration and the duration of tenting correlated closely with the extent of dehydration (Armon 2000). However, this sign is usually difficult to assess by telephone.
- In general, mild diarrhea, mild vomiting or a mild decrease in fluid intake does not cause dehydration.

**Mild Dehydration:** 3-5% weight loss
1. Urine Production: slightly decreased
2. Urine Color: dark yellow
3. Mucous Membranes: normal
4. Tears: present
5. Anterior Fontanelle: normal
6. Mental Status: normal
7. Capillary Refill: less than 2 sec
8. Treatment: can usually treat with ORS at home

**Moderate Dehydration:** 5-10% weight loss
1. Urine Production: none for over 8 hrs. for infants, over 12 hrs. for older children
2. Urine Color: dark yellow-brown (amber)
3. Mucous Membranes: dry inside of mouth
4. Tears: decreased
5. Anterior Fontanelle: normal to sunken
6. Mental Status: irritable
7. Capillary Refill: more than 2 sec
8. Treatment: must be seen

**Severe Dehydration:** >10% weight loss
1. Urine Production: very decreased or absent
2. Mucous Membranes: very dry inside of mouth
3. Tears: absent, sunken eyes
4. Anterior Fontanelle: sunken
5. Mental Status: very irritable to lethargic
6. Capillary Refill: > 2-4 sec
7. Treatment: must be seen. If signs of shock, activate EMS (911)

**Signs of Shock**
1. Extremities (esp. hands and feet) are bluish or gray
2. Extremities are cold
3. Child too weak to stand or very dizzy when tries to stand
4. Child is difficult to awaken or unresponsive
5. Pulse is rapid and weak
6. Capillary refill > 4 seconds

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- The author is extremely grateful for these critical reviews.

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## SEARCH WORDS

ABDOMEN
APPENDICITIS
BARF
BILE
BILIOUS
BLOOD IN VOMITUS

DEEP BREATHING
DEHYDRATED
DEHYDRATION
DIABETES
DIARRHEA
DRY HEAVES
EMESIS
FOOD POISONING
GASTRITIS
HEAVY BREATHING
INTUSSUSCEPTION
IRRITATED STOMACH
NAUSEA
NAUSEATED
NAUSEOUS
PEDIATRIC
PYLORIC STENOSIS
RETCHING
SHOCK
SPITTING UP
STOMACH
STOMACH FLU
STOMACH VIRUS
THREW UP
THROWING UP
VIRAL GASTRITIS
VOMIT
VOMITED
VOMITING
VOMITING BILE
VOMITING BLOOD
VOMITS
VOMITUS

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**Content Set:** Telephone Triage Protocols - Pediatric After-Hours Version
Schmitt-Thompson Clinical Content

**Version Year:** 2021

**Last Revised:** 4/30/2021

**Last Reviewed:** 4/30/2021