Nurse Update Letter

Major Clinical Changes in Electronic Version

Pediatric After-Hours 2019

Barton Schmitt, MD, to Telehealth Nurses

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To: **Telehealth Nurses Using Pediatric Telephone Triage Guidelines: After-Hours version**

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Re: **2019 Major Changes in the Pediatric Clinical Content: A Self-Study Guide for Nurses**

Yearly updates and new topics bring with them the responsibility to read and study the major changes in advance of implementation. Trying to learn new material while managing an actual call can be difficult. We hope this summary of changes will serve as a self-study guide, direct your reading and help you transition to the 2019 pediatric clinical content.

New Guidelines

The 2019 version contains 333 guidelines. This version contains 5 new guidelines and 328 updated guidelines.

Read, or at least scan, all ***New*** **Pediatric Guidelines** listed below:

- Behavior Problems (Age 1-5)
- Food Allergy - Diagnosed
- Pregnancy Questions
- Roseola
- Transgender Health Concerns and Questions

Title Changes to Existing Guidelines

There are 3 existing guidelines that we made minor changes to the title:

Current 2019 Title	**Prior 2018 Title**
Domestic Violence (Mother Abuse)	Partner Abuse (Mother Abuse)
Drowning or Submersion Event	Drowning or Near-Drowning
Food Reactions - General	Food Reactions

See More Appropriate Guideline (SMAG) Prompts

- Updated with title changes as above
- Added SMAGs for our new guidelines where appropriate

New References

- Every year, new references from the pediatric literature are reviewed and incorporated into the clinical content. A new reference list is contained in the Supplemental Information folder.

New Search Words

- Every year, new search words are added to existing guidelines based upon repeated search testing.
- If you are uncertain which guideline is best for your patient, please enter a search word. The keyword search system has become very selective and should meet your needs.
- Do not use the "No Guideline Available" guideline without first trying at least two search words.

Indexes for Pediatric Guidelines

There are 4 general indexes for these guidelines. In addition, there is also a Behavioral Health index that specifically lists behavioral/mental health guidelines. Indexes are contained in the Supplemental Information folder. Reviewing them may help you improve your guideline selection skills.

- Alphabetical Index
- Anatomical Index
- Behavioral Health Index
- System Index
- Type Index

Pediatric Care Advice (PCA) Handouts (formerly known as After Care Instructions or ACIs)

- PCAs are handouts that cover what callers want to know about specific symptoms and some common diseases.
- They are written at a 6th grade or lower health literacy level.
- Many triage guidelines have a matching PCA (s).
- They are completely compatible with the advice in the triage guidelines.
- You can send the PCA to the caller at the end of your call.
- This process should reduce your call times. Reason: You can address the most pertinent Care Advice live and provide non-essential information via the PCA.
- Even more important, they help the caller with normal memory limitation and prevent repeat calls about forgotten advice.
- Ask your software vendor for information on how to access these PCAs (aka ACIs).

Universal Changes

Rapid Respiratory Rates and Fever information changed in all respiratory guidelines:

RAPID RESPIRATORY RATES (RR) ARE NOT CAUSED BY FEVER

- Obviously, never attribute work of breathing (such as retractions or tight breathing) to fever.
- For safe triage, also do not attribute an abnormal RR (isolated tachypnea without dyspnea) to fever. Reason: risk of missing early respiratory distress and hypoxia, especially in bronchiolitis.
- Fever and RR: Fever may increase RR by 2 breaths per minute for each degree F (4 breaths per minute for each degree C).
- Reality: RR is difficult to assess over the phone. Caller reports of 'fast breathing' are also unreliable unless measured.
- Nurse judgment option: if the fever is above 103 F (39.5 C) and the RR is slightly increased above abnormal (and not associated with any increased work of breathing or trouble feeding), a nurse may elect to provide a follow-up call in 1 hour. During that time, the caller will be instructed on how to lower the fever and how to better count the RR. Again, if in doubt or if time-consuming, refer the patient in for an exam and pulse oxygen saturation check.

Care Advice Disposition Scripts changed for a number of dispositions. Reason: to include other advanced health care providers (such as a Nurse Practitioners and Physician Assistants).

Guideline Specific Changes

Arm Guidelines
Clarified in *definitions* that the hand is included.

Breath-holding Spell
Added the following *See More Appropriate Guideline* prompt:

- Age < 6 months
  Go to Guideline: Spells (R/O: BRUE) (Brief Resolved Unexplained Event)

Circumcision Problems
Added the following *Background Information*:

- Expert opinion from Dr. Duncan Wilcox, pediatric urologist, CHCO: Has only heard of 1 or 2 babies with acute urine retention because of severe edema of the glans penis from a tight Plastibell. That was in 20 years of practice. He agrees that the usual cause is reduced urine production, not inability to void.

Added the following *See More Appropriate Guideline* prompt:

- [1] Breastfed AND [2] no urine > 8 hours or only passes a few drops
  Go to Guideline: Breastfeeding – Baby Questions

Added the following *triage question* to **See HCP within 4 Hours**:

- [1] Formula fed with normal intake AND [2] no urine > 8 hours or only passes a few drops (R/O: acute urine retention)

Concussion Follow-up Call
Guideline underwent major changes based on the *AAP Clinical Report: Recommendations for Sports Related Concussions in Children and Adolescents* (Halstead, Pediatrics 2018). Individual detailed review also done by Mark Halstead MD, FAAP; Washington University School of Medicine Departments of Pediatrics and Orthopedics. Please review this guideline.

Cough
OTC cough syrups containing honey are also available. They are not more effective than plain honey and cost much more.

Crying Baby
Added caution in *care advice* to stop swaddling in babies over 2 months (AAP recommendation).

Diabetes Guidelines
Guidelines underwent major changes based on the review of 2 pediatric endocrinologists, Dr. Guy Alonso and Dr. Paul Wadwa, from the Barbara Davis Center for Childhood Diabetes, Children's Hospital Colorado. Added *background information*, *triage questions* and *care advice* for blood ketones. Please review these guidelines.

Diarrhea and Diarrhea on Antibiotics
Added to *background information* regarding probiotics:

- Two recent studies showed no benefits (efficacy) of giving a 5-day course of probiotics to young children (average age 1.4 years) with acute viral gastroenteritis (Freedman 2018 and Schnadower 2018). Probiotics did not reduce the duration of diarrhea, the progression rate to moderate or severe diarrhea, or the days of missed child care, compared to a placebo group.
- Application to Care Advice: The studies will not change the longstanding recommendation to give active culture yogurt to children over age 1 year. Reason: harmless, inexpensive and gives parents an easy dietary strategy.

Ear – Piercing Questions
A large portion of the *care advice* was rewritten and simplified.

Ear Tubes Follow-up Call
Guideline reviewed by Dr. Peggy Kelley, Pediatric Otolaryngology, Children's Hospital Colorado. She has confirmed that most ear drainage from PETs can be managed by antibiotic ear drops.

Earwax Buildup
Added *background information* again cautioning against using cotton tipped applicators in peds:

EAR INJURIES FROM COTTON SWABS
- Cotton swabs cause over 10,000 ear injuries each year in the US. Over 2,000 are punctured eardrums. Many occur in young children who are allowed to play with cotton swabs.
- Source: Ameen ZS, et al. Pediatric cotton-tip applicator-related ear injury treated in US emergency departments, 1990-2010. J Pediatr. 2017 Jul;186:124-130.

CERUMEN IMPACTION: CLINICAL PRACTICE GUIDELINE (UPDATE) FROM AMERICAN ACADEMY OF OTOLARYNGOLOGY 2017
The following facts from this report support our existing guideline recommendations:
- Cerumen is a natural substance that lubricates the ear canal.
- It is removed by a self-cleaning mechanism.
- Common myth: the presence of earwax is a sign of uncleanliness. Hence, many people use cotton-tip applicators to 'clean' the ear canals. This practice usually causes wax buildup.
- Symptomatic cerumen needs to be removed (e.g., causing FB sensation).
- Cerumen buildup that interferes with the ability to examine most of the eardrum needs to be removed (e.g., cerumen impaction).
- Asymptomatic cerumen does not need to be removed.
- Excessive cerumen is present in 10% of children. It is more common in those with developmental disability.

Eye – Pus or Discharge

Age cutoff for being seen in *triage questions* was changed from 1 month to less than 3 months (R/O: blocked tear duct, Chlamydia)

Added new *triage question* to detect STI in male teens:
- [1] Male teen AND [2] abnormal discharge from penis
  R/O: GC or Chlamydia conjunctivitis

Foreskin Care Questions
Added *background information* on foreskin retraction and phimosis:

THE NO RETRACTION APPROACH TO THE FORESKIN
- Some doctors advise that a parent should never attempt to retract the foreskin. They also say never clean under the foreskin.
- They teach that only the boy himself should ever retract his foreskin. This teaching should occur after puberty or about age 12.
- They teach that the foreskin will naturally retract on its own during puberty. This is usually true.
- The advice against parent retraction is more common in Europe.
- It is a safe option. It prevents too much or forceful retraction.

- But, the gentle partial retraction for cleansing described in this guideline is also safe.
- Refer callers to their child's doctor for their thoughts on foreskin retraction.

PHIMOSIS - NORMAL IN YOUNG CHILDREN

- Phimosis means a tight foreskin. It means the foreskin can't be pulled back (retracted) over the head of the penis. It's a medical term.
- All males are born with a tight foreskin (normal phimosis). In fact, at birth the inner layer of the foreskin is fused to the glans (head of the penis).
- Separation occurs naturally over the years. Puberty accelerates the process.
- Partial separation starts by 2 years of age.
- By age 6, 90% of foreskins can be mostly or fully retracted.
- By age 16, 99% can be fully retracted.

Influenza-Exposure

Many pediatricians have requested to not get calls back about Tamiflu for prophylaxis for healthy children under 2, even though they are in the CDC's high-risk group for complications. Reason: Since many of these children are in child care settings, exposure is ongoing and inescapable. Antiviral treatment can be started if and when they develop influenza disease. Added this information to *background information*.

Added the following *triage questions* to cover healthy children age less than 2 years:

Call PCP within 24 Hours

- [1] Influenza EXPOSURE (Close Contact) within last 48 hours AND [2] age less than 2 years AND [3] caller insists on antiviral medicine and unresponsive to triager reassurance
  Reason: The CDC recommends early treatment of disease rather than post-exposure prophylaxis. Child is healthy. PCP will decide.

Home Care

- [1] Influenza EXPOSURE (Close Contact) within last 48 hours AND [2] healthy child age less than 2 years AND [3] NO symptoms
  Reason: The CDC recommends early treatment of disease rather than post-exposure prophylaxis. Child is healthy.

Added the following to *care advice* encouraging flu shots:

- Flu Shots: Remind callers that after the flu shot, it takes 2 weeks to get full protection. But then, the protection lasts for the entire flu season. By contrast, an antiviral medicine only protects from flu while you are taking it.

Immunization Reactions

Added the following to *care advice* for rotavirus vaccine:

- Rare serious reaction: intussusception risk 1 in 100,000 (CDC)
- Presents with vomiting, bloody diarrhea or severe crying.

Added *triage question* to capture intussusception after the rotavirus vaccine:

- [1] Rotavirus vaccine AND [2] vomiting, bloody diarrhea or severe crying (R/O: intussusception)

Added *triage question* for immune-compromised patients:
Call PCP Now

- [1] Fever AND [2] weak immune system (sickle cell disease, HIV, splenectomy, chemotherapy, organ transplant, chronic oral steroids, etc)
  Reason: PCP will decide if vaccine-related fever or needs to be seen

Jaundice - Newborn
Clarified in *definition* that newborn guideline is to be used for jaundice up to 3 months of age.

Leg Guidelines
Clarified in *definitions* that the foot is included.

Lice
Added **Home Care** *triage question and care advice* for exposure:
[1] Head lice, exposure to BUT [2] no nits (eggs) or moving lice seen

Lice Exposure: Low Risk for Getting It

- Most children who are exposed to someone with head lice do not get them.
- Lice cannot jump or fly. They can only crawl.
- Lice are only transmitted by close head-to-head contact. Even then the risk is low.
- Lice are rarely if ever transmitted by sharing caps or combs.
- Sleeping together has a small risk of transmitting risk.
- This is the only situation that the AAP recommends treating after exposure.

Measles Guidelines

- Exposure period changed from 18 days to 21 days as recommended by the AAP Red Book
- Measles Outbreak: As of May 31, 2019, there were 981 reported cases of measles in the US. This is more than all measles cases in 2018. It's also the largest total cases since 1994 (CDC).
- Over 90% of measles patients had not received the MMR.

Medication Question
Added a *triage question* and *background information* regarding Complementary and Alternative Medications. This is a common question in our call center.

COMPLEMENTARY AND ALTERNATIVE MEDICINES (CAM)

- CAM Definition: Products and practices that are not part of conventional (standard) medical care
- Includes: Dietary supplements, herbs, vitamins, minerals, essential oils and homeopathic

remedies

- Wide Availability: 90,000 products currently on the market. (JAMA Open Network 2018;1(6):e183337)
- CAM products are not approved by the FDA. They have unproven efficacy and safety.
- Conventional Medicine Definition: prescription and OTC medicines. They have to document efficacy and safety before they can be approved by the FDA.
- Integrative Medicine Definition: using both conventional and complementary therapy for one's patients.
- Risks of CAM: The quality of CAM products isn't monitored, so the possibility of contamination exists (bacteria, metals, other drugs or herbs, etc). Safety reports rely only on complaints of adverse drug reactions. In addition, the FDA has to prove harm to take off market.
- Evidence for Use: If available, the majority of evidence exists only for adults. In pediatrics for most of these products, evidence to support efficacy and/or safety is limited or absent.
- Guideline Policy: We do not recommend the general use of CAM products within the guidelines.
- We strongly discourage their use in infants. Exception: if already prescribed by the child's primary care provider, always support the PCP advice. In addition, a few products are recommended by guideline, such as probiotics for diarrhea.
- Guideline response to call about CAM: All requests for CAM approval are referred back to the PCP during office hours. All requests for CAM information are referred to Medline Plus.
- Internet Resource for Complementary or Alternative Medicines: Medline Plus has a good free database for herbs and supplements that discusses any research done and what is currently known about the safety of the product. It is available at: https://medlineplus.gov. Look under herbs and supplements.
- Expert Reviewer on CAM: Allison Blackmer, PharmD, BCPS, BCPPS, FCCP

Seizure with Fever

Added *background information* and changed *care advice* to recommend treating all fevers above 100.4 F (38 C) in those children with a prior febrile seizure:

Treating the Fever to Prevent a Second Seizure within 24 Hours

- A 2018 study from Japan reduced second seizures by giving acetaminophen suppositories 10 mg/kg every 6 hours for the first 24 hours for all fevers over 38 C (100.4 F).
- Control group parents were told to not give any antipyretics for the next 24 hours.
- Second seizure rate: 9.1% in treatment group and 23.5% in the no antipyretic group
- Note: previous studies have not found that antipyretics reduced the second seizure rate.
- Guideline application: acetaminophen is recommended continuously for the first 24 hours, but it is given orally. In a child with febrile seizures, it is recommended for all fever levels (over 38 C), not just for fevers over 39 C.
- Reference: Murata S, et al. Acetaminophen and febrile seizure recurrences during the same fever episode. Pediatrics. 2018 Nov;142(5). pii: e20181009.

Skin Glue, Suture Questions

- Changed *triage questions* to see cuts that have opened up within the last 48 hours and are gaping open.

Spells

Added *triage question* to capture young babies with suspected BRUE (Brief Resolved Unexplained Event):

Go to ED Now (or PCP triage)

- [1] Age < 12 months AND [2] sudden attack of bluish color or going limp for over 20 seconds AND [3] normal now (R/O: BRUE)

Sore Throat, Strep Throat Follow-up Call, Throat Culture Follow-up Call

All *care advice* in these guidelines have incorporated the new AAP Redbook's recommendations that children with Strep can go back to school after 12 hours on the antibiotic if well-appearing and without fever. *Background Information* also added on this subject:

RETURN TO SCHOOL: 12 HOURS NOW APPROVED BY AAP FOR SELECTED PATIENTS

- A recent study showed that children with documented Strep pharyngitis were no longer contagious 12 hours after starting oral antibiotic treatment.
- The 2019 AAP Red Book has approved this change: 'Children with GAS pharyngitis or skin infections should not return to school or child care until well appearing and at least 12 hours after beginning appropriate antimicrobial therapy. Close contact with other children during this time should be avoided'.
- This guideline has also incorporated this update.
- Caution: The child must also be afebrile and 'well-appearing' to return to child care or school at 12 hours. Some children who have fever and acute symptoms at the time of starting an antibiotic, will be too sick to return at 12 or even 24 hours. Nurse judgment always required.
- Reference: Schwartz; Pediatr Infect Dis J.; 2015

Stools – Unusual Color

Added *triage question* to **Home Care** regarding normal color of stools:

- Normal stool color, but caller concerned

Substance Abuse

Added *background information* regarding opioid abuse and current epidemic.

Suicide Concerns

Added to *care advice* about the importance of locking up firearms:

- Firearms: Lock away any firearms. Be sure they are unloaded. Better yet, store them with a relative or friend. Reason: firearms cause most suicidal deaths in North America.

Swallowed FB
Added a *triage question* regarding asymptomatic ingestion of swallowed coins:
Call PCP within 24 Hours

- [1] Coin was swallowed AND [2] NO symptoms
  Reason: PCP will decide if X-ray is needed

Added *background information* to support this change in triage:
NASPGHAN Endoscopy Committee (Kramer 2015) Clinical Guidelines on Swallowed Coins: Chest Film or Not?

- Recent guidelines from NASPGHAN provide helpful recommendations for all types of swallowed foreign bodies.
- One recommendation, however, is controversial. They suggest chest films be obtained on all coin ingestions, even if the child is asymptomatic. Reason: rarely a coin can become lodged in the esophagus and cause erosions.
- This is in contrast to how most primary care pediatricians manage asymptomatic patients.
- During the last 30 years, our after-hours and office hours guidelines only recommended referring in the following asymptomatic patients: size of coin > 1 inch (2.5 cm) OR children less than 1 year old who swallowed any size coin. During those years, we have not received any complaints about the existing triage of asymptomatic coin ingestions.
- Frequency of coin ingestion calls: At our call center, we receive 260 swallowed FB calls per year and over half are coins.
- 2019 change: Any asymptomatic patients who have not already been referred in will be told to call their PCP within 24 hours for a decision. Reason for this change: to protect call centers from any concerns about not complying with this national clinical guideline
- In addition, if the coin has not passed in the stool within 72 hours, the caller has been told to call the child's doctor. The PCP again can decide if a chest film is warranted at that later time.

Teething
Added *care advice* and *background information* that FDA does not approve any "teething necklaces" in response to the popularity of amber ones. Reason: risk of choking, strangulation, and other complications.

Vomiting with Diarrhea; Vomiting without Diarrhea
Changed dispositions for triage questions for Vomiting in young babies to help reduce overreferral from See within 4 Hours to Call PCP Now:

Call PCP Now

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

Weakness

- *Care advice* rewritten.
- *Background Information* expanded on symptoms and causes.

Evidence-Based Guidelines and Updates

Yearly changes in these pediatric telephone triage and advice guidelines are based upon the following resources and evidence:

- American Academy of Pediatrics (AAP) new clinical practice guidelines and policy statements (including updates in the AAP Red Book)
- Centers for Disease Control and Prevention (CDC) new guidelines or recommendations
- Food and Drug Administration (FDA) new regulations and advisories
- New Clinical Guidelines from other national organizations (e.g. AHA, ADA)
- Research findings reported in this year's pediatric literature
- Expert-based reviews of and recommendations for all specialty guidelines by pediatric specialists in that field
- Consensus-based recommendations from 2 Expert Panels of community pediatricians (based in Colorado and in St. Louis, Missouri)
- Quality improvement projects that evaluate Emergency Department Under-referral and Over-referral (from our Pediatric Call Center at Children's Hospital Colorado)
- Reviews and recommendations from the following call centers: Alberta Health Link, Canada; Asante Health System, Centene, CitraHealth, Cleveland Clinic, Evergreen Health Care, FoneMed, Marshfield Clinic, St. Louis Children's Hospital/BJC, Sykes in Ontario, Canada; TeamHealth, and Triage Logic
- Reviews and recommendations from the following software vendors: ClearTriage and LVM
- Observations and questions from users, such as you. Your feedback is always welcome.

The guidelines have undergone changes based upon review of the above mentioned resources. Triage nurses are encouraged to review targeted guidelines using this self-study guide. We hope this summary of changes will help your transition and implementation of the 2019 pediatric guidelines.