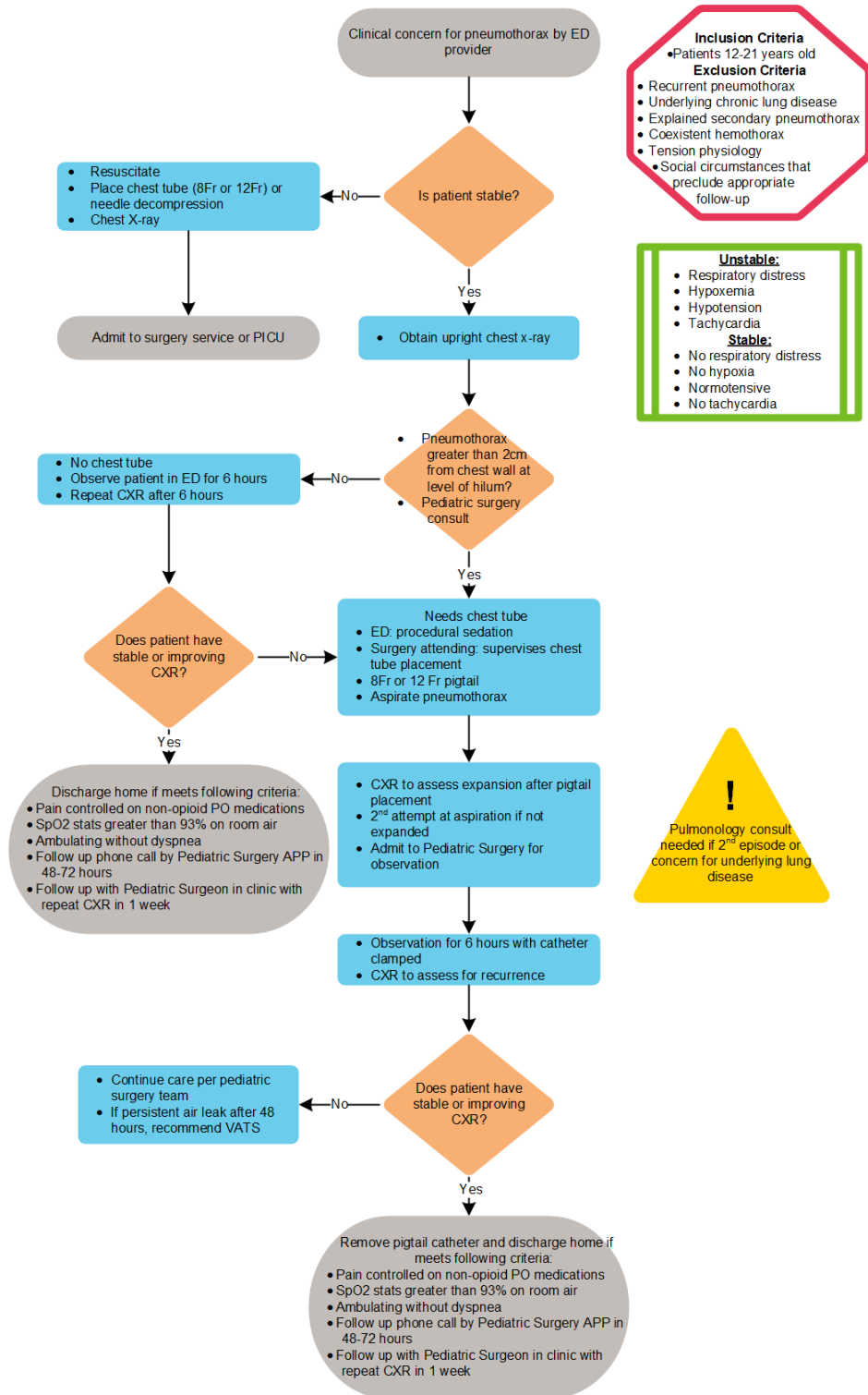


# PEDIATRIC PRIMARY SPONTANEOUS PNEUMOTHORAX

## SUSPECTED PNEUMOTHORAX DIAGNOSTIC ALGORITHM FOR EMERGENCY DEPARTMENT



**Inclusion Criteria**

- Patients 12-21 years old

**Exclusion Criteria**

- Recurrent pneumothorax
- Underlying chronic lung disease
- Explained secondary pneumothorax
- Coexistent hemothorax
- Tension physiology
- Social circumstances that preclude appropriate follow-up

**Unstable:**

- Respiratory distress
- Hypoxemia
- Hypotension
- Tachycardia

**Stable:**

- No respiratory distress
- No hypoxia
- Normotensive
- No tachycardia

**!**  
Pulmonology consult  
needed if 2<sup>nd</sup> episode or  
concern for underlying lung  
disease

## TABLE OF CONTENTS

[Algorithm](#)

[Target Population](#)

[Background | Definitions](#)

[Initial Evaluation and Clinical Management in the Emergency Department \(ED\)](#)

[Triage Assessment](#)

[Monitoring](#)

[Fluids, Electrolytes, and Nutrition](#)

[Initial Clinical Exam](#)

[Laboratory Studies](#)

[Medications](#)

[Patients at Urgent Care or Network of Care Sites with Suspected or Confirmed Primary Spontaneous Pneumothorax](#)

[Treatment in Unstable Patient with Primary Spontaneous Pneumothorax](#)

[Treatment in Stable Patient with Primary Spontaneous Pneumothorax Without Pigtail Chest Tube](#)

[Treatment in Stable Patient with Primary Spontaneous Pneumothorax With Pigtail Chest Tube](#)

[Consideration for Video-Assisted Thoracoscopic Surgery \(VATS\)](#)

[Consideration of Pulmonary Consultation](#)

[Utility of Computed Tomography \(CT\) Scans in Patients with Primary Spontaneous Pneumothorax](#)

[Discharge Instructions & Parent/Caregiver Education](#)

[References](#)

[Clinical Improvement Team](#)

---

## TARGET POPULATION

### Inclusion Criteria: Patients with suspected or proven spontaneous pneumothorax

- Patients 12-21 years old

### Exclusion Criteria: Patients with suspected or proven spontaneous pneumothorax

- Patients less than 12 years old
  - If patient is less than 12 years old, consult surgery on an individual basis
- Concern for recurrent pneumothorax, underlying chronic lung disease, explained secondary pneumothorax, coexistent hemothorax, tension physiology, social circumstances that preclude appropriate follow-up (as patients will require follow-up with PCP and Pediatric Surgery after diagnosis and treatment)

## BACKGROUND | DEFINITIONS

This guideline is intended for patients ages 12-21 years old with first episode of primary spontaneous pneumothorax. If underlying lung disease is suspected, or if there is concern for second or recurrent episode of spontaneous pneumothorax, the pulmonary service should be consulted, and other treatment regimens should be considered. No procedure or surgical intervention may be required for select, hemodynamically stable patients with mild symptoms.

However, only those children with appropriate follow up can be managed with observation alone. Patients may require intervention with pigtail chest tube placement and/or operative intervention (VATS) for large or symptomatic pneumothoraxes. Recurrence rates of primary spontaneous pneumothorax remain high in the pediatric population.

## INITIAL EVALUATION AND CLINICAL MANAGEMENT IN THE ANSCHUTZ ED

### Triage Assessment

- Vital signs (VS)
- History regarding presentation
  - Document history of onset of chest pain or dyspnea
  - History of underlying lung disease
  - History of trauma
  - History of huffing, smoking, or breath holding
  - History of prior pneumothorax
- Clinical interventions
  - Keep patient upright and NPO
  - Apply oxygen if hypoxemic (SpO<sub>2</sub> <93%)
  - Triage at least level 2
  - Place in room immediately for clinical evaluation

### Monitoring

- VS per nursing protocol
- Cardiopulmonary monitoring
- Oxygen if patient is hypoxic (SpO<sub>2</sub> <93%)

### Fluids, Electrolytes, Nutrition

- NPO
- NS bolus if patient is unstable (decreased unilateral breath sounds, respiratory distress, hypotensive, tachycardic, hypoxic)

### Initial Clinical Exam

Evaluate airway, breathing, circulation

- If the patient is **unstable** with clinical concern for pneumothorax, resuscitate as needed and proceed to treatment of unstable patients below
- If the patient is **stable**, proceed to imaging (CXR) – Upright PA
  - If pneumothorax is identified, measure the size on the x-ray
    - Small pneumothorax: less than or equal to 2 cm of air between chest wall and lung at the level of the hilum. Chest tube not indicated—treat with conservative management initially
    - Large pneumothorax: greater than or equal to 2 cm of air between chest wall and lung at the level of the hilum. Pigtail chest tube indicated for aspiration of pneumothorax
  - If concern for underlying lung disease or if this is patient's second (or recurrent) episode of spontaneous pneumothorax, recommend a pulmonary consult

## Laboratory Studies

- No empiric labs required

## Medications

- No empiric antibiotics required
- Pain management
  - PO analgesia with acetaminophen and NSAIDs +/- opioids for severe pain at ED discretion
  -

## TREATMENT OF UNSTABLE PATIENT WITH PRIMARY SPONTANEOUS PNEUMOTHORAX

- Patients with respiratory distress, hypoxemia, hypotension, tachycardia
  - Administer 100% oxygen
  - 2 large bore IV catheters
  - NPO
  - IV fluid resuscitation
  - Obtain upright PA CXR
    - If pneumothorax confirmed and patient clinically unstable, needle decompression by ED team prior to proceeding down algorithm
    - If pneumothorax confirmed and patient stable, proceed with algorithm
  - Procedural sedation consent to be obtained by ED attending
  - Procedural consent to be completed by Pediatric Surgery team
  - Using local anesthesia, place 8fr or 12Fr pigtail chest tube for pneumothorax aspiration
  - Obtain upright PA CXR after pigtail placement or needle decompression
  - Admit to Pediatric Surgery service for further observation and monitoring. If patient is stable after pigtail chest tube or needle decompression, patient may be admitted to the inpatient unit for monitoring. If ongoing concerns for hemodynamic or clinical instability, patient may require admission to the PICU (Pediatric Surgery remains primary)
  - Note: tension pneumothorax is a clinical diagnosis and is not based on imaging findings alone

## TREATMENT OF STABLE PATIENT WITH SMALL (LESS THAN 2CM) PRIMARY SPONTANEOUS PNEUMOTHORAX WITHOUT PIGTAIL CHEST TUBE

- Patients without respiratory distress, hypoxemia, hypotension, tachycardia
- Small pneumothorax (less than or equal to 2 cm of air between chest wall and lung at the level of the hilum) on CXR
- Consult Pediatric Surgery Service
- Observe patient in the ED for 6 hours after initial diagnosis of primary spontaneous pneumothorax on CXR. After 6 hours, repeat upright PA CXR. If CXR is stable or improving, the patient is hemodynamically stable, pain is controlled on non-opioid PO analgesia, patient is ambulating without dyspnea and able to keep SpO2 >93% on RA, can discharge home from the ED

- If failure of observation in the ED after 6 hours, admit to Pediatric Surgery service for ongoing observation on the inpatient unit. If worsening pneumothorax on repeat CXR, hemodynamic instability or worsening symptoms, proceed with pigtail placement (under the direction of the attending pediatric surgeon)
- Vital signs every 2 hours with pain score for the first 6 hours while being observed in the ED. If admitted, vital signs every 4 hours while on inpatient unit
- Continuous pulse ox and CR monitoring while in the ED or while on the inpatient unit if admitted
- The list below may be signs of deterioration:
  - Tachycardia
  - Hypotension
  - Increasing pain
  - Increasing dyspnea
- Use of 100% oxygen (nitrogen washout) is controversial and not clearly shown to decrease the pneumothorax
- Discharge criteria (from the ED or the inpatient units):
  - Stable or improving CXR, patient is hemodynamically stable, pain controlled on non-opioid PO analgesia, ambulating without dyspnea and able to keep SpO<sub>2</sub> >93% on RA
  - Follow-up phone call with Pediatric Surgery APP 48-72 hours after discharge from ED or inpatient unit. Follow-up in Pediatric Surgery clinic with Pediatric Surgeon in 1 week with repeat CXR prior to follow-up appointment
  - Follow-up with PCP within 1 week of discharge from ED or inpatient unit

## TREATMENT OF STABLE PATIENT WITH LARGE (GREATER THAN 2CM) PRIMARY SPONTANEOUS PNEUMOTHORAX WITH PIGTAIL CHEST TUBE

- Large pneumothorax (greater than or equal to 2 cm of air between chest wall and lung at the level of the hilum) on CXR
- Place on oxygen if unable to keep SpO<sub>2</sub> >93% on RA and consult the pediatric surgery service
- Keep patient NPO
- ED attending:
  - Discuss the need for a pigtail chest tube with the pediatric surgery attending
  - Verbal consent for procedural sedation/anesthesia
  - Arrange and supervise the sedation following the 'Sedation Guidelines'
- Pediatric Surgery attending:
  - Consent for pigtail chest tube placement
- Supervise placement of 8Fr or 12Fr pigtail chest tube in ED for aspiration. The individual performing chest tube placement is per the discretion and supervision of the attending pediatric surgeon.
- After catheter placement, aspirate pneumothorax until air leak resolves
- CXR after pigtail placement to assess for lung re-expansion.
  - If incomplete lung re-expansion on repeat CXR, can perform second attempt at aspiration
  - If complete lung re-expansion on repeat CXR, clamp pigtail catheter
- After pigtail chest tube placement, admit to Pediatric Surgery (TACS) service. Observe on inpatient unit for 6 hours with catheter clamped. Follow-up CXR after 6 hours of catheter being clamped to assess for persistent or recurrent pneumothorax vs complete lung re-expansion

- If CXR stable or improved after pigtail catheter is clamped, patient remains stable on room air, hemodynamically stable, ambulating without dyspnea and pain is well controlled on non-opioid PO analgesia, remove pigtail catheter and discharge home
  - If CXR shows larger pneumothorax, place pigtail chest tube to suction; further management per pediatric surgical service
- If successful lung re-expansion within 48 hours, discharge home if meeting discharge criteria (mentioned below)
- If persistent air leak from pigtail chest tube, or only partial lung re-expansion on CXR at 48 hours, proceed with operative intervention (VATS)
- Discharge home from inpatient unit if: Stable or improving CXR, patient is hemodynamically stable, pain controlled on non-opioid PO analgesia, ambulating without dyspnea and able to keep SpO<sub>2</sub> >93% on RA. Pigtail catheter will be removed by Pediatric Surgery team prior to discharge home

## CONSIDERATION OF VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS)

- Failed pigtail aspiration trial at 6 hours (per Pediatric Surgeon discretion, could have discussions with family about early VATS vs admission to inpatient unit on Pediatric Surgery service for observation with VATS at 48-hour mark if no improvement)
- Recurrent episode of pneumothorax
- Presence of ongoing air leak from pigtail chest tube at 48 hours
- Partial lung re-expansion on CXR at 48 hours
- Presence of bullae/blebs on initial CXR
- Bilateral primary spontaneous pneumothorax
- Post-operative management after VATS
  - Chest tube management per pediatric surgeon
- Follow-up final surgical pathology report to determine need for post-operative imaging (ex. underlying lung disease identified on pathology report) and need for pulmonology consultation
  - Discharge home if meeting all medical criteria (listed below) with post-operative follow-up with operating surgeon in Pediatric Surgery clinic 2-3 weeks after hospital discharge
- Discharge criteria: Afebrile, stable or improving CXR (if obtained per Pediatric Surgeon discretion) after chest tube removal, patient is hemodynamically stable, tolerating regular diet, pain controlled on non-narcotic PO analgesia, ambulating without dyspnea and able to keep SpO<sub>2</sub> >93% on RA

## CONSIDERATION OF PULMONARY CONSULTATION

- Concern for underlying lung disease on admission or pre-operatively
- Second or recurrent episode of spontaneous pneumothorax
- Abnormality on final surgical pathology report
- For patients treated in Colorado Springs, consider outpatient referral to pulmonology at Anschutz

## **UTILITY OF COMPUTED TOMOGRAPHY (CT) SCANS IN PATIENTS WITH PRIMARY SPONTANEOUS PNEUMOTHORAX**

- CT findings have not been shown to be predictive of recurrence rates and have significant false negative rates for air-containing lesions (blebs/bullae)
- No indication for routine use of CT with first episode of primary spontaneous pneumothorax
- No indication for routine use of CT to screen for contralateral blebs. CT findings have not been shown to be helpful in prophylactic management of contralateral findings.
- Consider CT if:
  - Bilateral disease
  - Suspected underlying pathology
  - Ipsilateral recurrence
  - New pneumothorax on contralateral side

## **DISCHARGE INSTRUCTIONS & PARENT/CAREGIVER EDUCATION**

- There is still a high rate of pneumothorax reoccurrence in pediatric patients after conservative management, pigtail aspiration drainage, or VATS procedure. Close follow-up with both PCP and Pediatric Surgeon is recommended
- Air Travel and scuba diving are discouraged for 48 hours post-chest tube removal. Travel over mountain passes with caution due to low barometric pressure at high altitude
- If applicable, steri strips over thoracoscopic incisions will fall off on their own 7-14 days after surgery
- If applicable, occlusive dressing from previous pigtail or chest tube site can be removed 3-5 days after pigtail or chest tube removal if one was placed

### **Follow-up Instructions**

- Pediatric Surgery APP to make follow-up phone call to patient/family 48-72 hours after ED/inpatient unit discharge
- Follow-up with Pediatric Surgeon in Pediatric Surgery clinic in 1 week after ED or inpatient unit discharge. Order CXR to be completed prior to clinic appointment with Pediatric Surgeon if treated with conservative management or pigtail aspiration
- Follow-up with operating surgeon in Pediatric Surgery clinic 2-3 weeks after hospital discharge if VATS performed during admission
- Follow-up with PCP within 1 week of ED or inpatient unit discharge
- Follow-up in pulmonary clinic if recurrent episode of pneumothorax, underlying lung disease is suspected, or if any abnormality is identified on surgical pathology report patients at urgent care or network of care sites with suspected or confirmed primary spontaneous pneumothorax

### **Triage Assessment**

- See above, as initial triage assessment will be the same at Urgent Care/Network of Care Sites

### **Treatment in Unstable Patient with Suspected or Confirmed Primary Spontaneous Pneumothorax**

- Follow algorithm above
- If patient can be stabilized after resuscitation for transfer to Anschutz Campus, call Anschutz Campus Surgeon on Call and ED team to transfer patient to Anschutz ED for management by Pediatric Surgery team

### Treatment in Stable Patient with Suspected or Confirmed Primary Spontaneous Pneumothorax

- If patient meets criteria for observation as described above (stable with <2cm pneumothorax) can be observed in ED at NOC or Urgent Care facility if PEM attending is comfortable with this management
- Follow observation protocol above
- If pneumothorax is >2cm, transfer to Anschutz Medical Campus ED
- Transfer to Anschutz Medical Campus ED with any concerns



## References




1. Brown SGA, Ball EL, Perrin K, et al. Conservative versus Interventional Treatment for Spontaneous Pneumothorax. *N Engl J Med*. 2020;382(5):405-415. doi:10.1056/NEJMoa1910775.
2. Chew R, Gerhardy B, Simpson G. Conservative versus invasive treatment of primary spontaneous pneumothorax: a retrospective cohort study. *Acute Med Surg*. 2014;1(4):195-199. Published 2014 May 19. doi:10.1002/ams2.33.
3. Cunningham JP, Knott EM, Gasior AC, et al. Is routine chest radiograph necessary after chest tube removal? *J Pediatr Surg*. 2014;49(10):1493-1495. doi:10.1016/j.jpedsurg.2014.01.004.
4. Johnson B, Rylander M, Beres AL. Do X-rays after chest tube removal change patient management? *J Pediatr Surg*. 2017;52(5):813-815. doi:10.1016/j.jpedsurg.2017.01.047.
5. Kaneda H, Nakano T, Taniguchi Y, Saito T, Konobu T, Saito Y. Three-step management of pneumothorax: time for a re-think on initial management. *Interact Cardiovasc Thorac Surg*. 2013;16(2):186-192. doi:10.1093/icvts/ivs445.
6. Laituri CA, Valusek PA, Rivard DC, et al. The utility of computed tomography in the management of patients with spontaneous pneumothorax. *J Pediatr Surg*. 2011;46(8):1523-1525. doi:10.1016/j.jpedsurg.2011.01.002.
7. Leys, C. M., Hirschl, R. B., Kohler, J. E., Cherney-Stafford, L., Marka, N., Fallat, M. E., ... Ostlie, D. J. (2020). Changing the Paradigm for Management of Pediatric Primary Spontaneous Pneumothorax: A Simple Aspiration Test Predicts Need for Operation. *Journal of Pediatric Surgery*, 55(1), 169–175. doi: 10.1016/j.jpedsurg.2019.09.043.
8. Li Z, Huang H, Li Q, et al. Pneumothorax: observation. *J Thorac Dis*. 2014;6(Suppl 4):S421-S426. doi:10.3978/j.issn.2072-1439.2014.08.32.
9. McGrath E, Ranstrom L, Lajoie D, McGlynn L, Mooney D. Is a Chest Radiograph Required After Removal of Chest Tubes in Children? *J Pediatr Health Care*. 2017;31(5):588-593. doi:10.1016/j.pedhc.2017.04.014.
10. Park S, Jang HJ, Song JH, et al. Do Blebs or Bullae on High-Resolution Computed Tomography Predict Ipsilateral Recurrence in Young Patients at the First Episode of Primary Spontaneous Pneumothorax? *Korean J Thorac Cardiovasc Surg*. 2019;52(2):91-99. doi:10.5090/kjtcs.2019.52.2.91.
11. Seguier-Lipszyc E, Elizur A, Klin B, Vaiman M, Lotan G. Management of primary spontaneous pneumothorax in children. *Clin Pediatr (Phila)*. 2011;50(9):797-802. doi:10.1177/0009922811404699.
12. Soler, L. M., Raymond, S. L., Larson, S. D., Taylor, J. A., & Islam, S. (2018). Initial primary spontaneous pneumothorax in children and adolescents: Operate or wait? *Journal of Pediatric Surgery*, 53(10), 1960-1963. doi:10.1016/j.jpedsurg.2017.12.014.
13. Tsou KC, Huang PM, Hsu HH, et al. Role of computed tomographic scanning prior to thoracoscopic surgery for primary spontaneous pneumothorax. *J Formos Med Assoc*. 2014;113(9):606-611. doi:10.1016/j.jfma.2014.02.011.
14. Williams, K., Lautz, T. B., Leon, A. H., & Oyetunji, T. A. (2018). Optimal timing of video-assisted thoracoscopic surgery for primary spontaneous pneumothorax in children. *Journal of Pediatric Surgery*, 53(9), 1858-1861. doi:10.1016/j.jpedsurg.2017.11.047.
15. Williams, K., Oyetunji, T. A., Hsuing, G., Hendrickson, R. J., & Lautz, T. B. (2018). Spontaneous Pneumothorax in Children: National Management Strategies and Outcomes. *Journal of Laparoendoscopic & Advanced Surgical Techniques*, 28(2), 218-222. doi:10.1089/lap.2017.0467.
16. Yoon J, Sivakumar P, O'Kane K, Ahmed L. A need to reconsider guidelines on management of primary spontaneous pneumothorax? *Int J Emerg Med*. 2017;10(1):9. doi:10.1186/s12245-017-0135-x.
17. Young Choi S, Beom Park C, Wha Song S, et al. What factors predict recurrence after an initial episode of primary spontaneous pneumothorax in children? *Ann Thorac Cardiovasc Surg*. 2014;20(6):961-967. doi:10.5761/atcs.0a.13-00142.
18. Lewit RA, Tutor A, Albrecht A, Weatherall YZ, Williams RF. Pediatric Spontaneous Pneumothorax: Does Initial Treatment Affect Outcomes? *J Surg Res*. Mar 2021;259:532-537. doi:10.1016/j.jss.2020.10.008
19. Tran Z, Haro G, Ebrahimian S, Verma A, Revels S, Benharash P. Association of initial management on readmissions for spontaneous pneumothorax in adolescents. *Surgery*. Jul 2022;172(1):385-390. doi:10.1016/j.surg.2022.03.011
20. Zarfati A, Pardi V, Frediani S, et al. Conservative and operative management of spontaneous pneumothorax in children and adolescents: Are we abusing of CT? *Pediatr Pulmonol*. Jan 2024;59(1):41-47. doi:10.1002/ppul.26703

**CLINICAL IMPROVEMENT TEAM MEMBERS**

**Stephanie Fingland**, CPNP-AC/PC | Pediatric Surgery  
**Shannon Acker**, MD | Pediatric Surgery  
**Oren Kupfer**, MD | Pulmonary Medicine  
**Andrew Krack**, MD | Emergency Medicine

**APPROVED BY**

Clinical Pathways and Measures Review Committee – 2/24/2025  
 Pharmacy & Therapeutics Committee – Not Applicable

<b>MANUAL/DEPARTMENT</b>	Clinical Pathways/Quality
<b>ORIGINATION DATE</b>	December 31, 2015
<b>LAST DATE OF REVIEW OR REVISION</b>	February 6, 2025
<b>COLORADO SPRINGS REVIEW BY</b>	 Michael DiStefano, MD Chief Medical Officer, Colorado Springs
<b>APPROVED BY</b>	 Lalit Bajaj, MD, MPH Chief Quality and Outcomes Officer
<b>APPROVED BY</b>	 Leigh Anne Bakel, MD, MsC Medical Director, Clinical Pathway Program

**REVIEW/REVISION SCHEDULE**

Scheduled for full review on February 6, 2028

Clinical pathways and algorithms are intended for informational purposes only. They are current at the date of publication and are reviewed on a regular basis to align with the best available evidence. Some information and links may not be available to external viewers. External viewers are encouraged to consult other available sources if needed to confirm and supplement the content presented in the clinical pathways. Clinical pathways and algorithms are not intended to take the place of a physician's or other health care provider's advice, and is not intended to diagnose, treat, cure or prevent any disease or other medical condition. The information should not be used in place of a visit, call, consultation or advice of a physician or other health care provider. The information presented should not be relied upon as being comprehensive or error-free. Furthermore, this document and the information it contains may not be distributed externally or reproduced for external distribution in any form without express written permission of Children's Hospital Colorado. The information presented is provided for use solely at your own risk on an "as-is" basis. Any person or entity reviewing this document and the information it contains should conduct their own review of the specified topic(s) and customize the information to meet their specific needs. Neither Children's Hospital Colorado, Pediatric Care Network, or any other Children's Hospital entities accepts any liability for the content, or for the consequences of any actions taken on the basis of the information provided. Children's Colorado and the Pediatric Care Network declare no affiliation, sponsorship, nor any partnerships with any listed organization, or its respective directors, officers, employees, agents, contractors, affiliates, and representatives.

Children's Hospital Colorado • Anschutz Medical Campus • 13123 East 16th Avenue • Aurora, CO 80045 • 720-777-1234 • childrenscolorado.org

**Discrimination is Against the Law.** Children's Hospital Colorado complies with applicable Federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability, or sex. Children's Hospital Colorado does not exclude people or treat them differently because of race, color, national origin, age, disability, or sex.

Children's Hospital Colorado provides free aids and services to people with disabilities to communicate effectively with us, such as: Qualified sign language interpreters, written information in other formats (large print, audio, accessible electronic formats, other formats). Children's Hospital Colorado provides free language services to people whose primary language is not English, such as: Qualified interpreters, information written in other languages.

If you need these services, contact the Medical Interpreters Department at 720.777.9800.

If you believe that Children's Hospital Colorado has failed to provide these services or discriminated in another way on the basis of race, color, national origin, age, disability, or sex, you can file a grievance with: Corporate Compliance Officer, 13123 E 16th Avenue, B450, Aurora, Colorado 80045, Phone: 720.777.1234, Fax: 720.777.7257, corporate.compliance@childrenscolorado.org. You can file a grievance in person or by mail, fax, or email. If you need help filing a grievance, the Corporate Compliance Officer is available to help you.

You can also file a civil rights complaint with the U.S. Department of Health and Human Services, Office for Civil Rights, electronically through the Office for Civil Rights Complaint Portal, available at [ocrportal.hhs.gov/ocr/portal/lobby.jsf](http://ocrportal.hhs.gov/ocr/portal/lobby.jsf), or by mail or phone at: U.S. Department of Health and Human Services 200 Independence Avenue, SW Room 509F, HHH Building Washington, D.C. 20201 1-800-368-1019, 800-537-7697 (TDD) Complaint forms are available at [www.hhs.gov/ocr/office/file/index.html](http://www.hhs.gov/ocr/office/file/index.html).

Children's Hospital Colorado complies with applicable Federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability, or sex.

ATENCIÓN: si habla español, tiene a su disposición servicios gratuitos de asistencia lingüística. Llame al 1-720-777-9800.

CHÚ Ý: Nếu bạn nói Tiếng Việt, có các dịch vụ hỗ trợ ngôn ngữ miễn phí dành cho bạn. Gọi số 1-720-777-9800.

주의: 한국어를 사용하시는 경우, 언어 지원 서비스를 무료로 이용하실 수 있습니다. 1-720-777-9800 번으로 전화해 주십시오.

注意: 如果您使用繁體中文, 您可以免費獲得語言援助服務。請致電1-720-777-9800。

ВНИМАНИЕ: Если вы говорите на русском языке, то вам доступны бесплатные услуги перевода. Звоните 1-720-777-9800.

ማስታወሻ: የሚናገሩት ቋንቋ አማርኛ ከሆነ የትርጉም አርዳታ ድርጅቶች: በነጻ ሊያገዝዎት ተዘጋጅተዋል። ወደ ሚከተለው ቁጥር ይደውሉ 1-720-777-9800 (መስማት ለተሳናቸው።

ملحوظة: إذا كنت تتحدث اذكر اللغة، فإن خدمات المساعدة اللغوية تتوافر لك بالمجان. اتصل برقم 1-720-777-9800-1 (رقم)

ACHTUNG: Wenn Sie Deutsch sprechen, stehen Ihnen kostenlos sprachliche Hilfsdienstleistungen zur Verfügung. Rufnummer: 1-720-777-9800.

ATTENTION : Si vous parlez français, des services d'aide linguistique vous sont proposés gratuitement. Appelez le 1-720-777-9800.

ध्यान बनु होस्तपाइले नेपाल बोलनहनछ भन तपाइको निम्त भाषा सहायता सवाहूर नःशुल्क रूपमा उपलब्ध छ । फोन गनु होसरू 1-720-777-9800 ।

PAUNAWA: Kung nagsasalita ka ng Tagalog, maaari kang gumamit ng mga serbisyo ng tulong sa wika nang walang bayad. Tumawag sa 1-720-777-9800.

注意事項: 日本語を話される場合、無料の言語支援をご利用いただけます。1-720-777-9800 まで、お電話にてご連絡ください。

Nti: Ọ buru na asụ lbo, asụsụ aka ọasụ n'efu, defu, aka. Call 1-720-777-9800.