Aim: To provide a consistent approach to PSP emphasizing shared decision making and consistent communication.

NOTE 1
PSP features:
- 10 yrs of age or older
- Tall / thin habitus
- No prior hx of lung disease
- No active lung disease
- No recent chest trauma
- CXR normal apart from PNX
- Male predominance

Bilateral PNX

<20% Unilateral PNX*

Oxygen, pain relief

SHARED DECISION MAKING
Considerations:
1. Strongly consider at least unilateral surgical pleurodesis
2. Bilateral intervention per patient lifestyle and family preference

Recurrence after observation: chest tube placement and/or surgical pleurodesis, depending on patient lifestyle or family preference

>20% Unilateral PNX

Oxygen, pain relief

SHARED DECISION MAKING
Considerations:
1. Discharge, f/u in 24 hrs
2. Brief SSU or overnight observation
3. If this is a recurrence, surgical pleurodesis

Post-operative surgical care
- Analgesia: hydromorphone, PCA 0.005 mg/kg/dose Q 30 min prn to a maximum of 0.01 mg/kg/hr or 1 mg/hr; no infusion
- Acetaminophen: 10–15 mg/kg IV Q6hrs scheduled for the first 24 hrs then Q 6 hrs prn
- Incentive spirometry Q 1 hr while awake
- Chest tube to -20cm sxn until air leak resolves and pleural fluid out is <1ml/kg/day
- Standard surgical wound care

* A CXR with <2cm from the lung apex or lateral edge of the lung to the inside surface of the chest wall is likely <20%.
PRIMARY SPONTANEOUS PNEUMOTHORAX (PSP)

STANDARD PNEUMOTHORAX COMMUNICATION

How successful is chest tube placement for a PSP?
70% have resolution of the air leak in <3 days.

How often does a recurrent pneumothorax occur on the same side?
40% have recurrence on the same side. Should a second PNX occur the risk is higher than 60% for a third.

How often will a recurrence happen on the opposite side?
10% of patients will experience a pneumothorax on the opposite side.

Can a pneumothorax be life-threatening?
These events are relatively low risk. A mortality rate is quoted as <1%.

How successful is a surgical pleurodesis?
95% of patients are “cured” (no future recurrence)

How long after a chest tube placement for pneumothorax can the following activities be performed?
- High aerobic and/or contact sports: 4 weeks
- Commercial airline travel: 4 weeks
- Travel to altitude (>8,000 feet): 4 weeks
- SCUBA diving: Never

STANDARD COMMUNICATION FOLLOWING SURGICAL PLEURODESIS

How successful is surgical pleurodesis at preventing recurrent pneumothorax?
Surgical pleurodesis has a “cure” rate of 95%.

How uncomfortable to the patient is a surgical pleurodesis?
The object of surgery is to disrupt the inner lining of the chest wall and lung surface so that the two surfaces adhere to one another. This procedure is painful and requires post-operative intravenous pain support.

What are the complications of surgical pleurodesis?
The procedure is considered low risk but all procedures have unexpected risk. Low percentage complications include: unexpected bleeding, prolonged air leak (>7 days); post-operative secretion retention and the requirement for supplemental oxygen.

How long after surgery will my child be discharged?
Almost all children are discharged by 5 days depending on comfort.

How long after surgical pleurodesis for pneumothorax can the following activities be performed?
- High aerobic and/or contact sports: 4–6 weeks
- Commercial airline travel: 4–6 weeks
- Travel to altitude (>8,000 feet): 4–6 weeks
- SCUBA diving: Never

References: