

# Complex care and Clinical Decision Support (CDS) - Make My AIMS Smarter!!

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I have no real or apparent conflicts of interest.



# PONV

- Significant perioperative issue
- 20-80% likelihood

# PONV Clinical Decision Support



**PUKING**

I think our satisfaction scores will be lower this month

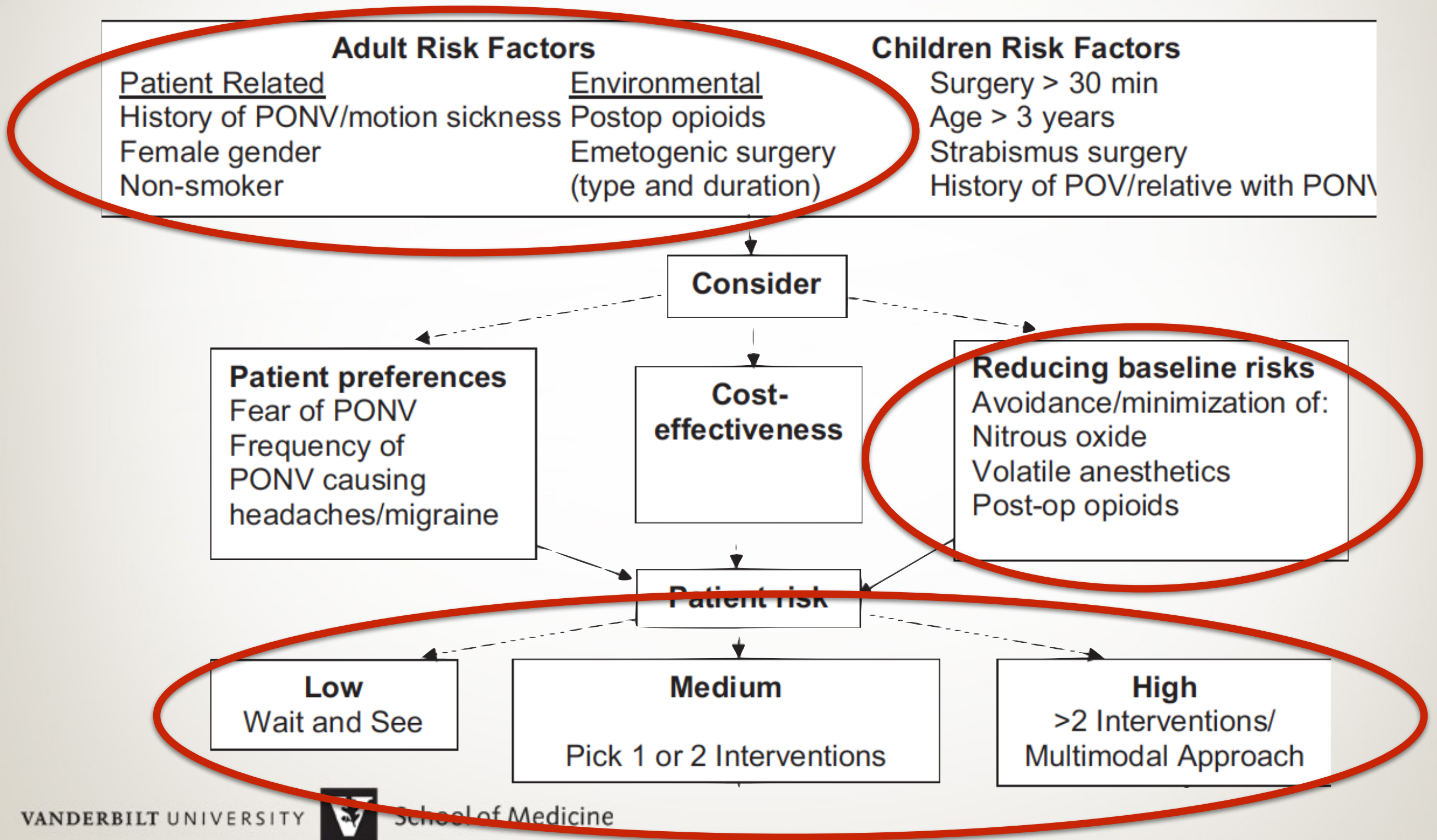


# Guidelines

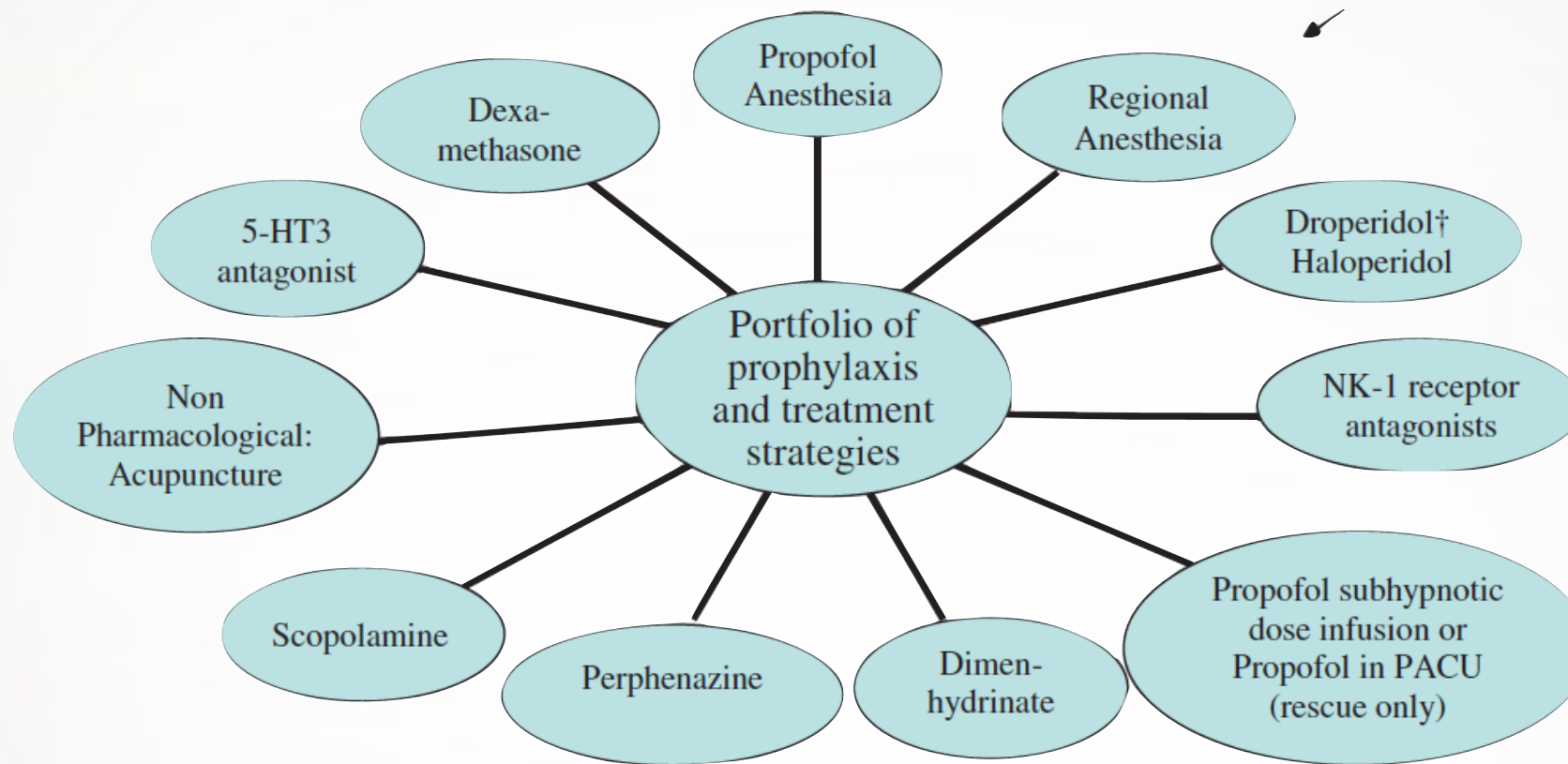




# SAMBA Guidelines



# SAMBA Guidelines



## Treatment Options

- If prophylaxis fails or was not received: use antiemetic from different class than prophylactic drug
- Readminister only if >6 hours after PACU;
- Do not readminister dexamethasone or scopolamine

† Use droperidol in children only if other therapy has failed and patient is being admitted to hospital; Haloperidol for adults only



# Information and Actions

- Risk Factors
- Baseline risk reduction
- Intervention

# Timing

- Preoperative
- Intraoperative
- Postoperative

# Clinical Decision Support (CDS)



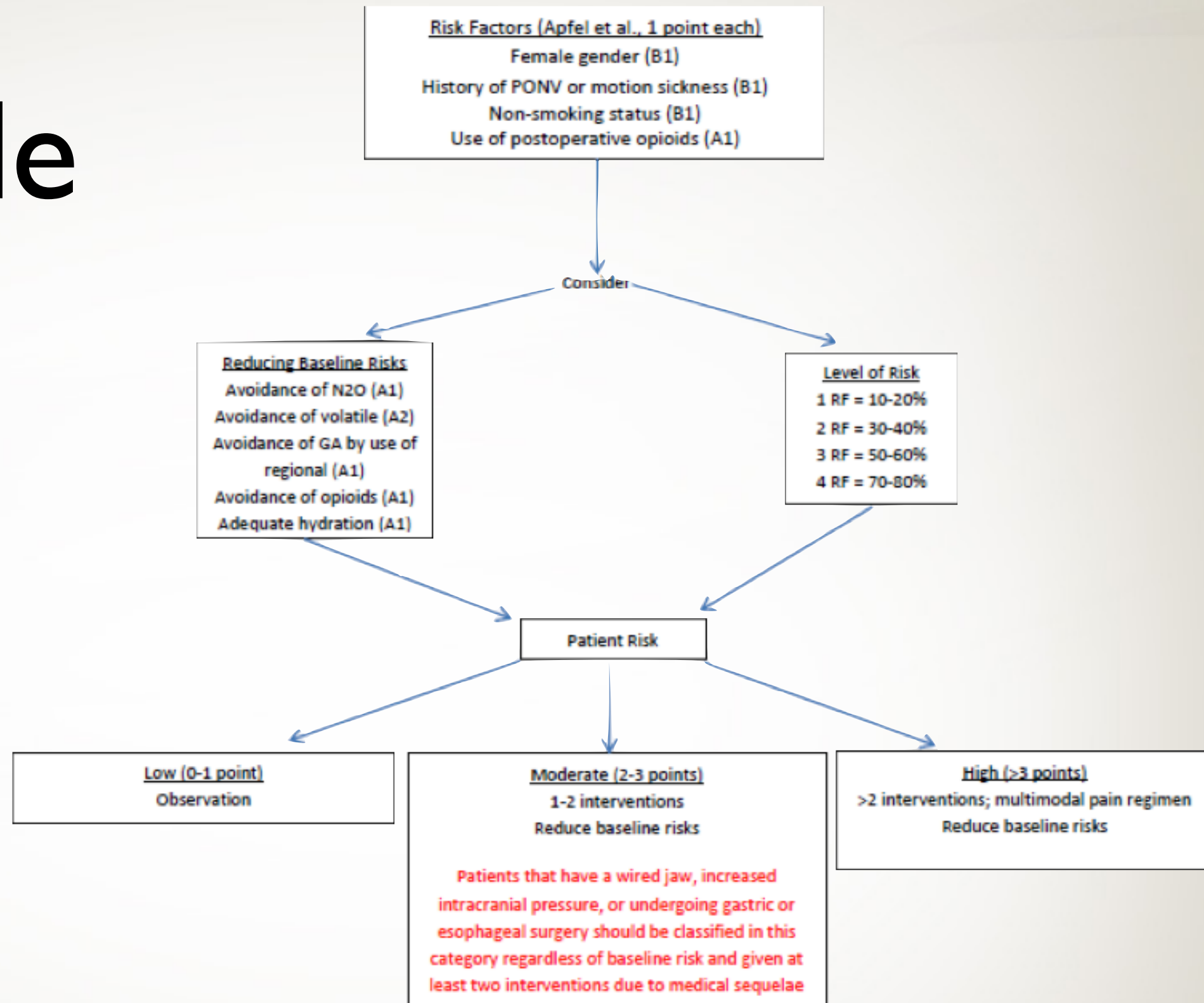
# CDS

System Actions	Provider Actions
Collect	Confirm
Decide	Define
Send	eSCalate

# Data Collection

Data	Source	When Known	Other Sources?
<b>Female</b>	ADT feed	Admission	X
<b>PONV/Motion Sickness Hx</b>	Anes preop assessment	Preoperatively	Previous PACU nursing documentation
<b>No TOB</b>	Anes preop assessment	Preoperatively	Preop nursing documentation
<b>Postop Opioids</b>	<ul style="list-style-type: none"> <li>• AIMS orders</li> <li>• Case type</li> </ul>	<ul style="list-style-type: none"> <li>• Intraoperatively</li> <li>• Admission</li> </ul>	Postoperative orders

# Decide



evidence grading defined in appendix A



## Rescue

If prophylaxis fails, use a drug in a different class than used for prophylaxis  
Readminister the same class of anti-emetic only if >6h  
Do not readminister dexamethasone or scopolamine



# Send

- Preoperative
  - Preoperative anesthesia assessment
  - Preoperative nursing documentation
  - Intraoperative anesthesia documentation
- Intraoperative
- Postoperative

# Design and Gap Analysis



# Data Collection

Always!!

Misses motion sickness

Data	Source	When Known	Other Sources?	Exceptions
<b>Female</b>	ADT feed	Admission	X	NA
<b>PONV/Motion Sickness Hx</b>	Anes preop assessment	Preoperatively	Previous PACU nursing documentation	Assessment documented after pt in room
<b>No TOB</b>	Anes preop assessment	Preoperatively	Preop nursing documentation	Assessment documented after pt in room
<b>Postop Opioids</b>	<ul style="list-style-type: none"> <li>• AIMS orders</li> <li>• Case type</li> </ul>	<ul style="list-style-type: none"> <li>• Intraoperatively</li> <li>• Admission</li> </ul>	Postoperative orders	Orders completed Intra/post operatively

Data available too late?

# Gap Analysis

- We collect all necessary data
- Gap is timing
  - Collected but not entered  
(contemporaneous charting)
  - Collected and entered after decision point
- Data may be collected after anesthetic initiated for preoperative interventions...

# Why Does It Matter

- Risk factor underestimation
- Missed opportunities to start preoperative
  - Multimodal pain regimen
  - Regional Anesthesia
  - Hydration and no Nitrous
- Outcomes potentially impacted

# Problems to Solve

- Can we collect and document data earlier?
- Can we use historical data if available?
- What do we do about missing data?
- How best to send CDS recommendations?



# Collect Data Earlier

- Study and improve workflow
- Educate - Contemporaneous documentation
- Soft stop/prompts
- Hard stop/forced functions

# Data Delivery

- Augmented Vigilance
  - Right information to the
  - Right person at the
  - Right time in the
  - Right place
- Modality
  - Text and voice
  - Over air and user interface

# Conclusion



# CDS

- PONV CDS is possible
  - Need discrete, contemporaneous data
  - Latency - risk factor underestimation
  - Augmented vigilance
- 
- Decrease PONV and improve outcomes