

## Simulation Training for Management of Hemorrhage as a Complication of Uterine Aspiration using a Pitaya (Dragonfruit)

To practice managing complications that can occur during uterine aspiration (for abortion, miscarriage, or failed medication abortion) this training model uses a pitaya (dragonfruit) to learn management steps for abortion-related hemorrhage as a teaching tool for providers.

The pitaya is a good fruit model as it is inexpensive, mimics the size, shape, and grittiness of a uterus, and is often red on the inside (mimicking blood).



### Implementing the Workshop:

The pitaya workshop begins with the trainer(s) reviewing the basic indications of uterine aspiration (including abortion, miscarriage management, or failed medication abortion), and discussing safety, potential risks and complications. Next, the trainer can do a fishbowl style demonstration of a basic uterine aspiration that becomes complicated with excessive bleeding. The facilitator can lead the group through a brainstorm of causes and management steps for hemorrhage.

TEACH has developed an algorithm consisting of 2 management steps for each of 6 Ts: including causes of bleeding (4Ts (tissue, tone, trauma, thrombin) plus 2 additional Ts (transfer and treatment)). See Evaluation Form for details.

#### Provider Evaluation for Complication Workshop

	YES	NO	COMMENTS
<b>TISSUE</b>			
List 4Ts (Tissue first)			
Reaspirate			
<b>TONE</b>			
Medications? Appropriate routes / doses			
Massage uterus			
<b>TRAUMA</b>			
Ultrasound (Perforation? Cul-de-sac fluid?)			
Assess source (Walk the cervix / Cannula test)			
<b>THROMBIN</b>			
Bleeding history?			
Appropriate bleeding tests (i.e. clot test)			
<b>TRANSFER</b>			
Assess Vitals q 5 minutes			
Initiate transfer			
<b>TREATMENT</b>			
Start IV			
Consider foley balloon for uterine tamponade			
<b>TOTAL (of 12 correct)</b>	<input type="checkbox"/>	<input type="checkbox"/>	



Learners can split into groups of three, with one person acting as the provider, one as the assistant (holding the pitaya), and one as the evaluator (tracking progress through the algorithm). Each group should work together as a team to evaluate all possible causes of the complication using the hemorrhage management algorithm in managing the complication. In order to get practice with all steps, the patient should not respond to initial therapies.



Integrating this complication simulation into clinical settings helps teams be prepared for emergencies.

### **Set-Up:**

#### **Equipment list (per group of 3)**

- MVA (manual vacuum aspirators)
- Dilators (#9 or 10)
- Foley catheter
- Saline bag (250-1000 cc)
- IV tubing, ring forceps)
- Pitayas (any varietal)
- or papaya if unavailable

#### **Teaching and Evaluation Tools:**

- Complication slide show (optional)
- Pre and Post Test (optional)
- Provider Evaluation