University of Alabama at Birmingham
ObGyn Residency
Laparoscopy Training Lab

PGY 1 - 4
Individual Pelvic Trainer Tasks
2010-2011
Skill 1: Peg Board (Blue Board)

Goal: Pick up various rings and move them from peg to peg.

Skill Development:
1. 3D to 2D visual translation
2. Left and right hand coordination
3. Basic instrument orientation

Exercise:
1. Begin by operating from the left side of the trainer.
2. Place blue board all the way at the back of the trainer base. Orientate camera (or have assistant do this) so you can see all pegs and everything in focus (focus ring on front of camera lens).
3. You should have 2 rotating/disposable graspers, one in each “lateral” port.
4. Before starting, place a single ring on a single peg, all of them initially starting on the round cluster of pegs.
5. There should be a total of 6 rings: 3 washer shaped rings (washers are harder to handle than rings) and 3 rubber tubing shaped rings.
6. Using your left hand, pick up a ring from the post, pass it to the instrument in the right hand, and place it on a peg in the rectangular array of pegs. Repeat until all rings are on a new post in the other array.
7. Repeat the process passing from right hand instrument to left hand instrument and placing back on original pegs. Keep a record of all dropped rings (PENALTY) and the time spent performing the entire task.
8. Repeat the exercise from the right side of the trainer (2 recorded times for this task).
Skill 2: Key Trainer (Yellow Board)

Goal: Pass key through the key hole.

Skill Development:
1. Left and right hand coordination
2. Understanding limitations of instrument placement and management of difficult angles

Exercise:
1. Begin by operating from the left side of the trainer.
2. Place yellow board all the way to the back of the trainer so that key hole is angled at a 45 degree angle from the camera (base will be square with the back).
3. You should have 2 rotating/disposable graspers, one in each “lateral” port.
4. Pick up the key and pass through the hole until it has been passed all the way through.
5. Repeat the process in the reverse direction.
6. Time yourself for the entire process.
7. Repeat the task operating from right side of the trainer (2 recorded times for this task).
Skill 3: Cutting Curved Line (Green Board)

Goal: Cut curved line.

Skill Development:
1. Use of laparoscopic scissors
2. Use of rotating aspect of scissors to angle cut in appropriate direction

Exercise:
1. Begin by operating from the left side of the trainer.
2. Place latex glove on green pad using clips to stretch and secure glove at each corner.
3. Using curved line template and black marker, color within template to create 2 curved lines.
4. Place green board all the way to the back of the trainer with curved lines orientated generally in a vertical direction.
5. Using graspers in left hand and scissors in right, pick up top layer of glove and begin cutting on right-most black line with scissors (right line cut with right hand, left line cut with left hand).
6. Rotating mechanism of scissors should be used to stay on line.
7. Time yourself for cutting the entire line (record PENALTY for each deviation from the black line, or “injury” to bottom layer of glove).
8. Repeat task from the opposite of the trainer (2 recorded times for this task).
**Skill 4: Cutting Circle (Green Board)**

*Goal:* Cut the circle out of the top layer of the glove.

*Skill Development:*
1. Coordinated use of laparoscopic scissors and grasper
2. Compensation for cutting an object that is fixed in space with limited instrument angles

*Exercise:*
1. Begin by operating from the left side of the trainer.
2. Place latex glove on green pad using clips to stretch and secure glove at each corner.
3. Use circle template and black marker to create circle on the glove.
4. Place green board all the way to the back of the trainer.
5. Using scissors in **right** hand and grasper in the **left**, lift up top layer of glove and begin cutting circle out on black line. Continue in either clockwise or counterclockwise direction, staying on black line.
6. Time yourself for completion of task. Each excursion outside of black line, or “injury” to bottom layer of glove counts as a PENALTY.
7. Repeat task with scissors in the **left** hand and grasper in the **right** hand.
8. This task will be performed from the left side of the table only (2 recorded times for this task).
Skill 5: Laparoscopic Suturing - Extracorporeal Knot Tie (Red Pad)

Goal: Placement of suture followed by an extracorporeal knot.

Skill Development:
1. Careful placement of needle through 10 mm trocar
2. Use of laparoscopic needle driver and correct positioning of needle in driver.
3. Suturing of tissue
4. Extracorporeal knot tying

Exercise:
1. Begin by operating from the left side of the trainer.
2. Place red rubber pad in middle of trainer and choose an area to suture closed (vaginal cuff).
3. Place grasper in one lateral port and needle driver in opposite lateral port.
4. Grasp 2-0 vicryl on CT-1 needle by grasping suture approximately 1-2 cm from needle on the thread portion. Place grasper (with suture) into “suprapubic” 10 mm port and grasp needle using needle driver and lateral port grasper. Residual thread should remain hanging out of trocar.
5. Arrange needle on driver and place suture through two edges on suture pad.
6. Grasp suture thread using grasper in “suprapubic” 10 mm port as in step 4 and remove needle from trocar.
7. Feed free end of suture into knot pusher and place hemostat on the end to prevent suture from pulling out. Holding suture and knot pusher in dominant hand, use free/other strand to throw one-handed knot throw in suture. Hold both strands in non-dominant hand and use knot pusher to push down on throw and secure stitch. Pull knot pusher back up to end of suture and repeat process to perform “granny” knot followed by square knot to secure stitch. Suture must remain untwisted and untangled around knot pusher to allow knot pusher to slip knot down easily.
8. Using scissors, cut the suture in the suture pad above the knot and save for next skill.
9. Time yourself on completion of entire procedure.
Skill 6: Laparoscopic Suturing - Intracorporeal Knot Tie (Red Pad)

Goal: Placement of suture followed by an intracorporeal knot.

Skill Development:
1. Careful placement of needle through 10 mm trocar
2. Use of laparoscopic needle driver and correct positioning of needle in driver
3. Suturing of tissue
4. Intracorporeal knot tying

Exercise:
1. Begin by operating from the left side of the trainer.
2. Place red rubber pad in middle of trainer and choose an area to suture closed (vaginal cuff).
3. Place grasper in one lateral port and needle driver in opposite lateral port.
4. Suture should be no longer than 10-15cm (cut off extra)
5. Grasp 2-0 vicryl on CT-1 needle by grasping suture approximately 1-2 cm from needle on the thread portion. Place grasper (with suture) into “suprapubic” 10 mm port and grasp needle using needle driver and lateral port grasper.
6. Arrange needle on driver and place suture through two edges on suture pad.
7. Pull suture through until only 1-2 cm are hanging out of tissue.
8. Cut off remaining needle allowing enough suture to tie with and remove via 10 mm port.
   a. Grasp long end of suture using disposable grasper. Using rotating mechanism of grasper, rotate several times to place “kink” in suture to allow easier wrapping around needle driver shaft.
   b. Wrap long suture end around needle driver shaft twice (surgeons knot). Using needle driver grab short end of suture (leaving long end wrapped around driver) and pull through and tighten down.
   c. Repeat process in opposite direction using only 1 wrap. Repeat in opposite direction (total of 3 throws).
10. Time yourself on completion of entire procedure.