Appendix 1.

EMIG Steering Committee
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Arnold Advincula MD, (Co-Principal Investigator)
Erika Banks MD, (ACOG Simulations Working Group)
Sandie Carson, MD / Marc Jackson MD (ACOG VP Education)
Gary Frishman, MD / Maria Fidela Paraiso, MD (AAGL Presidents)
Isabel Green MD, (EMIG Curriculum)
Frank Loffer MD, / Linda Bradley MD (AAGL Medical Directors)
Linda Michels, (AAGL Executive Director)
Malcolm G. Munro MD, (Principal Investigator)
M Jonathon Solnik MD, (AAGL Board)
Mark Woodland MD, (CREOG Chair)

Working Group
Malcolm G. Munro MD, (Principal Investigator)
Arnold Advincula MD, (Co-Principal Investigator)
Jocelyne Fletcher, (Proctor)
Lisa Matthews, (Project Coordinator, Proctor)
Craig Cocca, (Proctor)
Kim Thayn, Ph. D (Psychometrician)

EMIG Advisory Committee
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Krystle Ziebell, MD

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Appendix 2. American Association of Gynecologic Laparoscopists hysteroscopy simulator (Medical-X, Rotterdam, The Netherlands). The system comprises a proprietary base module (1); targeting module (2); polyp module (3) and polyps (4); a laptop computer with associated proprietary software (5); a 5.5 mm outside diameter hysteroscopic sheath with a 5-French instrument channel (6); a 3 mm outside diameter hysteroscope with a 30° foreoblique lens (7) attached to a remote light source (8); a medical grade video camera head (9) attached to a camera base unit and video monitor (8). In this example, the light source, camera base and video monitor are combined into one device. Hysteroscopic instruments (10) can be passed through the channel for the targeting (11) or polyp removal exercise (12). EMIG, Essentials in Minimally Invasive Gynecology.
Appendix 3. The Essentials in Minimally Invasive Gynecology (EMIG) LaparoBowl System. A. The system comprises the octagonal LaparoBowl with five internal perforated and six (three internal and three external) hook and loop fastener–type panels; a wedge to use internally to prevent loss of the sleeves if dropped and externally to provide additional angles for targets; the Pattern Cut (Exercise L-2) platform; two types of suturing blocks for mounting of Penrose targets for exercises L-3, 4, and 5; and the floor-mounted Peg Module for exercise L-1. B. The LaparoBowl is placed into the Fundamentals in Laparoscopic Surgery Trainer Box. Note the participant standing to one side of the trainer to perform the exercise. Reprinted from Essentials in minimally invasive gynecology manual skills pilot validation trial. Munro MG, Brown AN, Saadat S, Gomez N, Howard D, Kahn B, Stockwell E, et al. J Minim Invasive Gynecol 2020;27:518–534, Copyright 2020, with permission from Elsevier.
Appendix 4. FLS Laparoscopic Simulator (Limbs & Things Inc., Savannah GA). The FLS Trainer Box was used to provide the environment for the EMIG LaparoBowl system. This unit includes an integrated video camera and internal lights, while each of the two black panels was perforated with four cannulas to allow hand instrument access. The output from the video camera is displayed on a video monitor, not shown. Reprinted from Essentials in minimally invasive gynecology manual skills pilot validation trial. Munro MG, Brown AN, Saadat S, Gomez N, Howard D, Kahn B, Stockwell E, et al. J Minim Invasive Gynecol 2020;27:518–534, Copyright 2020, with permission from Elsevier. Figure originally from Limbs & Things, used with permission.
Appendix 5. Web-Based Screening Survey. Each voluntary candidate identified by the local principal investigator was instructed to take the web-based survey to determine eligibility and to provide anonymized demographic and other data for later analysis. The novice (PGY-1) cohort was required to have minimal hysteroscopic, laparoscopic and related simulator experience. For the other three groups, a minimum level of laparoscopic and hysteroscopic experience was required, the amount based upon their level of training.

1. Last Name: ___________________________________ First Name: ____________________________
   Middle Name: _________________________
   Date of birth (mm/dd/yyyy): ____________________________Gender: □ M □ F □ Other Date of Completion __ dd/mm/yyyy

A. Current Status

Current Location:

Institution: ____________________________________________________________

City ___________________________________ State/Province: ____________________________
Country: _______________________________

Training/Practice Category: Please select one of the following:

☐ OB-GYN Resident

   - Year of Training: PGY-1 □  PGY-2 □  PGY-3 □  PGY-4 □  PGY-5

☐ OB-GYN Fellowship Training

   - Year of Training: 1 □  2 □  3 □  4 □  5 □
   - Fellowship type:

   □ MFM  □ GYN Oncology  □ REI
   □ FPMRS  □ AAGL FMIGS  □ Other MIGS (Specify)

☐ Post Residency/Fellowship
B. Education:
Answer all that apply:

What was the name of your medical school?
- Name of medical school: ___________________________________________________________
- Graduation Year: __________________________
  □ MD  □ DO  □ Other (specify): ___________________________________________________

Have you had residency training in another specialty? □ Yes □ No
If Yes – For how many years? □ 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ >6
  □ What Specialty(s): _____________________________________________________________

Have you had Fellowship Training? □ Yes □ No
  □ Current Fellow - year of training? □ 1 □ 2 □ 3 □ Completed fellowship – Year ________

  □ Fellowship Type
    □ MFM  □ GYN Oncology  □ REI
  □ Other MIGS (Specify)
    □ FPMRS  □ AAGL-SRS MIGS (2 yr)  □ AAGL-SRS MIGS (1 yr)

C. Other Information:

Handedness □ Right □ Left □ No preference (ambidextrous)

Vision

Year of last formal eye exam? ______________________________

Corrected vision? □ Yes □ No

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### D. Prior Simulator Training

**Are you FLS certified?**

- Experience with FLS Simulator System (0-5, 0 meaning no experience, 5 meaning highest level of experience)

<table>
<thead>
<tr>
<th>Experience Level</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Experience with other surgical simulation systems? 0 1 2 3 4 5

Specify: __________________________________________________________________________________________

### What is your Experience with Robotic Assisted Simulators?

- Suturing:

  - Intracorporeal knot tying
  - Running suture

- Bead-Peg Transfer task

- Circle cutting task

Provide a self-evaluation of task comfort level (0-5, 0 meaning not comfortable, 5 meaning very comfortable)

- Bead-Peg Transfer task

- Circle cutting task

- Suturing:

  - Intracorporeal knot tying
  - Extracorporeal knot tying
  - Running suture

### E. Laparoscopic Surgical Experience

**What is your experience with laparoscopic surgery (Robotic excluded)?**

(0-5; 0 meaning no experience, 5 meaning highest level of experience)

- Tissue dissection (e.g. adhesion dissection or creation of bladder flap)

<table>
<thead>
<tr>
<th>Experience Level</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Suturing

  - Intracorporeal knot tying


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### F. Hysteroscopic Surgical Experience

#### What is your experience with diagnostic hysteroscopy?

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid Hysteroscope</td>
<td></td>
</tr>
<tr>
<td>(0 meaning no experience, 5 meaning highest level of experience)</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

#### What is your experience with operative hysteroscopy?

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operative Hysteroscopy/Resection Experience – (endometrial ablation device not included)</td>
<td></td>
</tr>
<tr>
<td>(0-5, 0 meaning no experience, 5 meaning highest level of experience)</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>Polyp removal</td>
<td></td>
</tr>
<tr>
<td>Myoma resection</td>
<td></td>
</tr>
<tr>
<td>Endometrial resectoscopic ablation</td>
<td></td>
</tr>
<tr>
<td>Cannulation of Fallopian tube</td>
<td></td>
</tr>
<tr>
<td>Asherman’s Syndrome/Septum</td>
<td></td>
</tr>
<tr>
<td>Foreign body removal (e.g. IUD)</td>
<td></td>
</tr>
</tbody>
</table>

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Appendix 6. L-5 running suture errors. Mean errors in mm (±standard error of the mean) (A) for each of the 10 targets (B) by cohort. Target order is reversed for those standing on the left side of the trainer box.

<table>
<thead>
<tr>
<th></th>
<th>PGY1</th>
<th>PGY3</th>
<th>Proficient</th>
<th>FMIGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target 1</td>
<td>0.5</td>
<td>0.2</td>
<td>0.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Target 2</td>
<td>0.5</td>
<td>0.1</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Target 3</td>
<td>0.6</td>
<td>0.2</td>
<td>0.8</td>
<td>0.0</td>
</tr>
<tr>
<td>Target 4</td>
<td>0.6</td>
<td>0.3</td>
<td>0.6</td>
<td>0.0</td>
</tr>
<tr>
<td>Target 5</td>
<td>0.7</td>
<td>0.3</td>
<td>0.5</td>
<td>0.1</td>
</tr>
<tr>
<td>Target 6</td>
<td>0.5</td>
<td>0.3</td>
<td>0.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Target 7</td>
<td>0.8</td>
<td>0.3</td>
<td>0.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Target 8</td>
<td>0.7</td>
<td>0.2</td>
<td>0.6</td>
<td>0.0</td>
</tr>
<tr>
<td>Target 9</td>
<td>0.4</td>
<td>0.3</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Target 10</td>
<td>0.6</td>
<td>0.3</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>All targets</td>
<td>0.6</td>
<td>0.3</td>
<td>0.3</td>
<td>0.1</td>
</tr>
</tbody>
</table>