

# **SITM: Robotic Assisted Gynaecological Surgery (RAGS)**

## **SECTION 1: CAPABILITIES IN PRACTICE (CiP)**

**This SITM must be undertaken with the Gynaecological Surgical Care SITM.**



**RAGS CiP 1: The doctor can be an effective assistant within the multidisciplinary robotic surgical team.**

Key skills	Descriptors
Is familiar with robotic components, instruments, mechanics, ergonomics and fundamental techniques in RAGS involved	<ul style="list-style-type: none"><li>• Understands how to set up the operating room for RAGS.</li><li>• Can correctly position the patient for robotic surgery.</li><li>• Undertakes vaginal preparation for a robotic procedure.</li><li>• Aware of principles of the robotic system and the fundamentals of the component of instruments used by the technology.</li><li>• Is able to drape the robot.</li><li>• Is able to respond to system errors.</li><li>• Able to drive the robot.</li><li>• Can maintain a clear image by cleaning/changing the camera.</li><li>• Is able to insert, change and remove robotic instruments.</li><li>• Is able to place the port to perform the robotic procedure.</li><li>• Understands different docking positions and able to dock the robot in different positions.</li><li>• Can troubleshoot and re-dock the robotic system.</li><li>• Can use suction and maintain a clear operative field to carry out surgery.</li><li>• Is able to introduce and present a loaded needle.</li><li>• Understands and can use different methods to maintain pneumoperitoneum.</li><li>• Can safely retrieve needle, swabs and specimen.</li></ul>
Safely uses energy sources as part of robotic surgery	<ul style="list-style-type: none"><li>• Uses correct energy type and setting for each procedure.</li><li>• Takes steps to prevent diathermy related complications.</li><li>• Is aware of mechanism of how to use different energy sources when performing RAGS.</li></ul>
Works effectively as part of the multidisciplinary team (MDT)	<ul style="list-style-type: none"><li>• Appreciates the impact of human factors on how the team functions and the safety of the surgery.</li><li>• Provides leadership within the MDT when carrying out robotic surgery.</li><li>• Communicates clearly with the theatre and anaesthetic team.</li><li>• Understands specimen handling and histology and cytology requests.</li><li>• Communicates with recovery and ward staff to determine the post-operative treatment plan.</li><li>• Instructs nursing staff on postoperative care and pain management.</li><li>• Makes sure someone's thromboprophylaxis type, dose and duration is communicated to postoperative teams and the</li></ul>

	patient.
<b>Evidence to inform decision</b>	
<ul style="list-style-type: none"> <li>• Reflective practice</li> <li>• TO2</li> <li>• Direct observation by senior colleagues</li> <li>• Attendance at local, deanery and national teaching</li> <li>• Completed online training module for robotic system</li> <li>• Attendance at local, regional or national robotic courses</li> </ul>	<ul style="list-style-type: none"> <li>• Confirmed participation in MDT meetings and clinics</li> <li>• Leads critical incident review</li> <li>• OSATS:             <ul style="list-style-type: none"> <li>○ docking/undocking</li> </ul> </li> <li>• CbD</li> <li>• Mini-CEX</li> <li>• TO2 (including SO)</li> </ul>
<b>Knowledge criteria</b>	
<ul style="list-style-type: none"> <li>• Understands the fundamentals of the robotic system components and instrumentation</li> <li>• Understands how energy sources are used in robotic surgery and the potential complications if they are used inappropriately</li> <li>• Understands the importance of communicating with the scrub team about needle/swab count</li> <li>• Relevant anatomy and how robotic systems could interfere with them</li> <li>• Understands indications for robotic surgery including:             <ul style="list-style-type: none"> <li>○ informed consent</li> <li>○ effects of pneumoperitoneum</li> </ul> </li> <li>• Is able to understand why the robot arm clashes and adjust its position</li> <li>• Understands the appropriate use of an assistant port to insert instruments</li> <li>• Understands neurological conditions that could be due to the patient being poorly positioned during a prolonged procedure</li> <li>• Objective methods for assessing port placement and pneumoperitoneum</li> </ul>	

<b>RAGS CiP 2: The doctor uses robotic assistance to provide high-quality surgery for pelvic pathology</b>	
<b>Key skills</b>	<b>Descriptors</b>
Demonstrates safe surgical practice	<ul style="list-style-type: none"> <li>• Selects people appropriately for robotic surgery with emphasis on complex patients, high body mass index and those with deep pelvic pathology, where robotic assistance will enhance someone's surgery and recovery.</li> <li>• Can overcome lack of haptic feedback with robotic surgery.</li> <li>• Can carry out microdissection and atraumatic tissue handling with the robotic system.</li> <li>• Maintains the safety of the operative field where the surgery is performed.</li> <li>• Can perform ovarian or uterine artery ligation.</li> </ul>

- Can independently perform laparoscopic/robotic adhesiolysis.
- Can independently perform a robotic hysterectomy.
- Has appropriate suture handling and knot tying skills for robotic surgery.

#### Evidence to inform decision

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| <ul style="list-style-type: none"> <li>• Reflective practice</li> <li>• NOTSS</li> <li>• Attendance at risk management meetings</li> <li>• Attendance at skills drill events</li> <li>• Completion of online system training</li> <li>• Completion of 30 hours of simulation console training</li> <li>• Attendance at robotic course(s)</li> </ul> | <ul style="list-style-type: none"> <li>• OSATS:               <ul style="list-style-type: none"> <li>○ docking and undocking</li> <li>○ hysterectomy</li> </ul> </li> <li>• NOTSS</li> <li>• CbD</li> <li>• Feedback from trainer</li> <li>• TO2</li> <li>• Mini-CEX</li> </ul> |
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#### Knowledge criteria

- The necessary robotic equipment and how to set up the theatre
- Potential surgical complications
- How to manage major haemorrhage
- The indications and complications of robotic procedures:
  - robotic port placement
  - surgical anatomy of pelvis
- Alternative treatment options for patients with pelvic disorders, the indications that they are necessary, complications of other treatment options and getting informed consent
- Understands the fundamentals of the robotic system components and instrumentation
- Understands how energy sources are used in robotic surgery and their potential complications if used inappropriately
- Understands the importance of communicating with the scrub team and checking the needle/swab count.
- Can prevent excessive blood loss during the surgical procedure
- Is able to undertake robotic assisted suturing
- Surgical management of complications and making an appropriate referral
- Can involve another specialist and ask for help, as required.
- Is able to perform an emergency undocking procedure
- Is able to change to laparoscopy or laparotomy, as appropriate
- Demonstrate understanding of specimen handling and histology/cytology requests
- Effective communication with recovery and ward staff

### RAGS CIP 3: The doctor can recognise assess and manage complications and emergencies in robotic theatre.

#### Key skills

#### Descriptors

<p>Recognises, minimises, and manages harm from complications of RAGS</p>	<ul style="list-style-type: none"> <li>• Recognises surgical complications, such as bowel, urinary and vascular injuries, and involves appropriate specialists, where needed.</li> <li>• Recognises potential risks during surgery and makes appropriate decisions to prevent harm to the patient.</li> <li>• Recognises the role of other specialists in managing surgical complications.</li> <li>• Recognises the potential effect of prolonged pneumoperitoneum.</li> <li>• Understands the indications for moving to laparoscopic or open surgery.</li> <li>• Demonstrate situational awareness and monitors blood loss.</li> <li>• Can assess and manage an unstable patient.</li> <li>• Is able to perform an emergency undocking procedure.</li> <li>• Recognises early warning signs of complications in patients who have had surgery.</li> <li>• Manages complications after surgery and can determine the need for care from the high dependency unit (HDU)</li> </ul>
<p>Can lead and manage robotic theatre in an emergency</p>	<ul style="list-style-type: none"> <li>• Understands the importance of 'human factors' in the context of the robotic theatre environment.</li> <li>• Manages any complication calmly and requests help early, as and when needed, as part of working in a MDT.</li> <li>• Puts patient in a safe ergonomic position in the theatre to keep them safe.</li> <li>• Is able to communicate clearly with the scrub and anaesthetic teams, and assistants during an emergency.</li> <li>• Safely removes instruments under their direct vision.</li> </ul>
<p><b>Evidence to inform decision</b></p>	
<ul style="list-style-type: none"> <li>• Evidence of setting up local robotic teaching programme</li> <li>• Reflective practice</li> <li>• Feedback from trainees and theatre staff</li> <li>• Attend theatre team briefing and World Health Organisation checklist</li> <li>• Attend risk management meetings</li> </ul>	<ul style="list-style-type: none"> <li>• NOTSS</li> <li>• CbD</li> <li>• Mini-CEX</li> <li>• Feedback from trainees</li> <li>• TO2</li> <li>• Local and deanery teaching</li> </ul>
<p><b>Knowledge criteria</b></p>	
<ul style="list-style-type: none"> <li>• Understands why it is important to communicate with the scrub team and assistant.</li> <li>• Aware of the impact of human factors on running a safe theatre list to reduce complications during surgery.</li> <li>• Understands what you need to do with the robot system before removing instruments</li> <li>• Understands how to overcome a system error in an emergency</li> </ul>	

- Understands that uninterrupted power supply to robot components is essential
- Teaching skills and giving clear instructions
- Understands the importance of giving precise instructions to assistant to perform arterial clip application to prevent bleeding
- Is able to give supportive, constructive feedback to trainees and assistants
- Has knowledge of how to perform an emergency undocking procedure and knows how to communicate with the team
- Can prevent excessive blood loss during a surgical procedure
- Effectively communicates with recovery and ward staff

## SECTION 2: PROCEDURES

Procedures marked with \* require three summative competent OSATS.

<i>Procedures</i>	<i>Level by end of training</i>	<i>CIP 1</i>	<i>CIP 2</i>	<i>CIP 3</i>
Docking and undocking of robot*	5	X	X	X
Robotic assisted hysterectomy*	5	X	X	
Robotic assisted myomectomy	1	X		
Robotic assisted excision of rectovaginal endometriosis	1	X		
Robotic assisted hysterectomy for gynaecological cancer with or without (+/-) lymph node dissection	1	X		
Robotic assisted procedure for pelvic floor prolapse or incontinence	1	X		

## SECTION 3: GMC GENERIC PROFESSIONAL CAPABILITIES (GPC)

### *Mapping to GPCs*

Domain 1: Professional values and behaviours

Domain 2: Professional skills

- Practical skills
- Communication and interpersonal skills
- Dealing with complexity and uncertainty
- Clinical skills (history taking, diagnosis and management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable diseases)

Domain 3: Professional knowledge

- Professional requirements
- National legislative requirements
- The health service and healthcare systems in the four countries

Domain 4: Capabilities in health promotion and illness prevention

Domain 5: Capabilities in leadership and teamworking

Domain 6: Capabilities in patient safety and quality improvement

- Patient safety
- Quality improvement

Domain 7: Capabilities in safeguarding vulnerable groups

## SECTION 4: MAPPING OF ASSESSMENTS TO RAGS CiPs

RAGS CIP	Online Modules	OSATS	Mini-CEX	CbD	NOTSS	TO1/ TO2	Reflective practice
	Possible Courses						
1: The doctor can be an effective assistant within the multidisciplinary robotic surgical team	Online Modules Simulator training certification	Simulator task based	X	X	X	X	X
2: The doctor uses robotic assistance to provide high- quality surgery for pelvic pathology	Log book Audit Project Dry lab/Wet lab robotic courses Training courses	X	X	X	X	X	X
3: The doctor can recognise, assess and manage complications and emergencies in robotic theatre	Skills drill/robotic courses Human factors/ communication course	X	X		X	X	X