BIARGS Robotic Assisted Gynaecological Surgery Training Curriculum

Introduction

The BIARGS Robotic Assisted Gynaecological Surgery Training Curriculum has been developed to provide a structured framework for training in robotic gynaecological surgery. The Curriculum is intended for both trainees and consultants seeking to develop the knowledge, skills, and professional behaviours necessary for the safe and effective adoption of robotic surgery within gynaecological practice.

The Curriculum is platform-agnostic and is not specific to any individual robotic system or gynaecological subspecialty. It is designed to ensure that surgeons acquire transferable robotic surgical competencies that can be applied across a range of procedures and technologies.

Whilst completion of this curriculum demonstrates achievement of core robotic surgical competencies, it does not confer competence in advanced or specialist procedures. Surgeons undertaking new or complex robotic procedures should do so within an appropriately supervised training framework, consistent with established principles of surgical training, governance, and patient safety.

The BIARGS Robotic Assisted Gynaecological Surgery Curriculum is based on and aligned with the Royal College of Obstetricians and Gynaecologists (RCOG) Special Interest Training Module (SITM) in Robotic Assisted Gynaecological Surgery (RAGS). BIARGS acknowledges the significant contribution of Nahid Gul to the development of the RCOG RAGS SITM, upon which this curriculum is based. The Curriculum has been adapted to provide a practical framework for both trainees and consultants seeking accreditation in robotic gynaecological surgery. Where appropriate, evidence generated through the SITM may be used to support achievement of curriculum competencies and sign-off requirements.

Expected Outcomes

On successful completion of the BIARGS Robotic Assisted Gynaecological Surgery Training Curriculum, a BIARGS-accredited surgeon will be able to demonstrate the knowledge, technical skills, non-technical skills, and professional behaviours required for safe independent robotic gynaecological surgery.

Specifically, the surgeon will demonstrate:

Safe Surgical Practice

- Safe and effective operative skills in gynaecological surgery.
- Adherence to the principles of patient safety, clinical governance, and professional practice within a robotic surgical environment.

Technical Knowledge and Competence

Knowledge and competency in:

- Robotic port placement and theatre set-up.
- Safe positioning of patients for robotic surgery.
- Appropriate selection and use of robotic instruments, including advanced energy devices.

- Safe utilisation and coordination of robotic arms.
- Understanding and management of the limitations of robotic surgery, including reduced tactile feedback.
- Docking, troubleshooting, and emergency management of the robotic platform.
- Principles of efficient workflow within a robotic operating theatre.

Non-Technical Skills

Demonstration of:

- Effective communication within the robotic theatre team.
- Situational awareness and decision-making.
- Leadership and team working skills.
- Application of Human Factors principles.
- Professionalism and appropriate clinical judgement.

Additional Requirements for BIARGS Accreditation

In addition to successful completion and validated sign-off of all curriculum competencies, applicants for BIARGS accreditation must demonstrate evidence of the following:

- Hold current registration and a licence to practise with an appropriate regulatory body (for example, the General Medical Council) and maintain annual appraisal and revalidation requirements.
- Successfully complete all relevant platform-specific online learning modules and mandatory manufacturer training where applicable.
- Complete simulation and laboratory-based training as specified within this curriculum.
- Attend at least one recognised scientific meeting relevant to robotic surgery during the training period.
- Submit a reflective practice document demonstrating learning, professional development, and safe integration of robotic surgery into clinical practice.
- Submit a minimum of 12 months of prospective audit data, including case volume, procedural complexity, perioperative outcomes, and complications.

Successful completion of these requirements, together with satisfactory achievement of all curriculum competencies, will constitute eligibility for BIARGS robotic surgery accreditation.

Entrustment and Sign-off Requirements

Each curriculum competency must be assessed and signed off at the required level of entrustability. Trainees are expected to achieve a minimum of **Level 4**, while consultants seeking BIARGS accreditation are expected to achieve **Level 5** for all curriculum components.

The levels of entrustment are aligned with the **RCOG framework for entrustable professional activities (EPAs)** and are defined as follows:

Level	Entrustability Definition
Level 1	Entrusted to observe.
Level 2	Entrusted to act under direct supervision, with the supervisor present and within sight throughout the activity.
Level 3	Entrusted to act under indirect supervision, with the supervisor immediately available on site to provide direct assistance if required.
Level 4	Entrusted to act independently with support available. The supervisor is not required to be immediately available on site but can provide advice or attend if necessary.
Level 5	Entrusted to act independently and unsupervised, demonstrating the capability to undertake the activity safely and consistently within routine clinical practice.

Achievement of the required entrustment level should reflect consistent demonstration of safe practice, sound clinical judgement, technical competence, effective communication, and appropriate professional behaviour within the robotic surgical environment.

CiP 1: The Doctor Can Be an Effective Assistant Within the Multidisciplinary Robotic Surgical Team:

Is Familiar with Robotic Components, Instruments, Mechanics, Ergonomics and Fundamental Techniques Involved in RAGS

Competency	Achieved	Assessor Signature	Date
Understands how to set up the operating room for RAGS	☐		
Can correctly position the patient for robotic surgery	☐		
Undertakes vaginal preparation for a robotic procedure	☐		
Aware of principles of the robotic system and the fundamentals of the component of instruments used by the technology	☐		
Is able to drape the robot	☐		
Is able to respond to system errors	☐		
Able to drive the robot	☐		
Can maintain a clear image by cleaning/changing the camera	☐		
Is able to insert, change and remove robotic instruments	☐		
Is able to place the port to perform the robotic procedure	☐		
Understands different docking positions and able to dock the robot in different positions	☐		
Can troubleshoot and re-dock the robotic system	☐		
Can use suction and maintain a clear operative field to carry out surgery	☐		
Is able to introduce and present a loaded needle	☐		
Understands and can use different methods to maintain pneumoperitoneum	☐		
Can safely retrieve needle, swabs and specimen	☐		

Safely Uses Energy Sources as Part of Robotic Surgery

Competency	Achieved	Assessor Signature	Date
Uses correct energy type and setting for each procedure	☐		
Takes steps to prevent diathermy related complications	☐		
Is aware of mechanism of how to use different energy sources when performing RAGS	☐		

Works Effectively as Part of the Multidisciplinary Team (MDT)

Competency	Achieved	Assessor Signature	Date

Appreciates the impact of human factors on how the team functions and the safety of the surgery	☐		
Provides leadership within the MDT when carrying out robotic surgery	☐		
Communicates clearly with the theatre and anaesthetic team	☐		
Understands specimen handling and histology and cytology requests	☐		
Communicates with recovery and ward staff to determine the post-operative treatment plan	☐		
Instructs nursing staff on postoperative care and pain management	☐		
Makes sure someone’s thromboprophylaxis type, dose and duration is communicated to postoperative teams and the patient	☐		

CiP 2: The Doctor Uses Robotic Assistance to Provide High-Quality Surgery for Pelvic Pathology

Demonstrates Safe Surgical Practice

Competency	Achieved	Assessor Signature	Date
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	☐		
Can overcome lack of haptic feedback with robotic surgery	☐		
Can carry out microdissection and atraumatic tissue handling with the robotic system	☐		
Maintains the safety of the operative field where the surgery is performed	☐		
Can perform ovarian or uterine artery ligation	☐		
Can independently perform laparoscopic/robotic adhesiolysis	☐		
Can independently perform a robotic hysterectomy	☐		
Has appropriate suture handling and knot tying skills for robotic surgery	☐		

CiP 3: The Doctor Can Recognise, Assess and Manage Complications and Emergencies in Robotic Theatre

Recognises, Minimises, and Manages Harm from Complications of RAGS

Competency	Achieved	Assessor Signature	Date
Recognises surgical complications, such as bowel, urinary and vascular injuries, and involves appropriate specialists, where needed	☐		
Recognises potential risks during surgery and makes appropriate decisions to prevent harm to the patient	☐		
Recognises the role of other specialists in managing surgical complications	☐		
Recognises the potential effect of prolonged pneumoperitoneum	☐		
Understands the indications for moving to laparoscopic or open surgery	☐		
Demonstrate situational awareness and monitors blood loss	☐		
Can assess and manage an unstable patient	☐		
Is able to perform an emergency undocking procedure	☐		
Recognises early warning signs of complications in patients who have had surgery	☐		
Manages complications after surgery and can determine the need for care from the high dependency unit (HDU)	☐		

Can Lead and Manage Robotic Theatre in an Emergency

Competency	Achieved	Assessor Signature	Date
Understands the importance of ‘human factors’ in the context of the robotic theatre environment	☐		
Manages any complication calmly and requests help early, as and when needed, as part of working in a MDT	☐		
Puts patient in a safe ergonomic position in the theatre to keep them safe	☐		
Is able to communicate clearly with the scrub and anaesthetic teams, and assistants during an emergency	☐		
Safely removes instruments under their direct vision	☐		

Additional Training Requirements and Evidence

Requirement	Evidence Submitted	Date Completed	Trainee Signature	Assessor Signature
Simulation Training: Complete 30 hours	☐	_____	_____	_____
Online Training: **Relevant modules +/- in-house training from industry**	☐	_____	_____	_____
Wet Lab Training: Satisfactory completion of training provided by industry or recognised course provider (eg BIARGS, BSGE, SERGS)	☐	_____	_____	_____
Scientific Meeting Attendance: Attendance at a minimum of one relevant to robotics	☐	_____	_____	_____
Reflective Practice: Submission of reflective practice document related to robotic surgical training	☐	_____	_____	_____
Audit Requirement: Submission of 12 months of robotic data using BIARGS data submission form	☐	_____	_____	_____

Final Certification of Completion

Requirement	Sign-off
All curriculum competencies completed and signed off	☐
All portfolio evidence submitted and reviewed	☐
Trainer recommendation for independent robotic practice	☐
Governance/audit requirements met	☐

Training Programme Director / Training Supervisor:
_____

Signature: _____

Date: _____