# Requirements for credentialing of robotic surgeons at Epworth Healthcare

January 2015

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1. Introduction

This document outlines requirements for credentialing surgeons to perform robotic-assisted surgery using the da Vinci® surgical system at Epworth Healthcare. This applies to surgeons with previous training and experience of robotic-assisted surgery elsewhere, those with no prior robotic experience who wish to add robotic-assisted surgery to their scope of practice (Tier B procedures), and those surgeons with or without robotic experience who wish to perform a procedure previously not undertaken at Epworth (Tier C procedure).

Currently, there are certain established robotic procedures for which credentialing guidelines are specifically described below. Credentialing requirements for less commonly performed or newer procedures are less specific, are tailored to the procedure and level of surgeon experience, and considered on a case-by-case basis. Common requirements for all new procedures and surgeons include mandatory prospective auditing of outcomes and interval presentation to the robotic subcommittee after a specified number of cases before full accreditation is awarded.

Surgical assistants

It is to be noted that these guidelines do not specifically cover the credentialing of surgical assistants. The role of a surgical assistant in robotic surgery is somewhat unique, being the only scrubbed operator at the patient bedside for the majority of the procedure. Furthermore a knowledge and understanding is required not only of the surgery, but of the robotic system itself – ie docking/undocking of arms, avoiding external collisions, trouble shooting etc. An unskilled assistant can increase the operative difficulty and risk of an adverse event, and it is the responsibility of the primary surgeon to ensure the assistant has the appropriate expertise to fulfill this role. It is therefore expected that a surgeon ensures their assistant has the necessary training and experience, and/or has completed a “bedside assistant” course in robotic surgery.
2. Summary of uncomplicated credentialing pathway

For robot-naïve surgeons, a flowchart of the credentialing process is summarized below. Details of this will vary depending upon the exact procedure, as per Sections 2-9 of this document. In Appendix 10.1 the requirements of a robotic proctor are outlined.
3. Role of the surgical proctor

The proctor carries significant responsibility in ensuring a safe procedure is performed in a timely fashion, and must be able to intervene at any point where appropriate. It is expected that a training surgeon will use the same proctor for all cases, who will then be in a position to notify the robotic subcommittee in writing when they are of the opinion that the training surgeon is able to commence independent operating (minimum of three cases). It is also expected that all proctored cases take place within the shortest possible time period (eg 3 months).

Specific points regarding proctoring are as follows:

a. A proctor is someone who is already fully credentialed to perform robotic surgery and has completed in excess of 50 cases.

b. A proctor must be free to help at the console and therefore should not be the bed-side assistant

c. For Tier B procedures where a specialist has evidence of experience in the non-robotic form of the surgery (eg anterior resection, hysterectomy), a proctor may consist of a surgeon outside that specialty but with sufficient robotic experience. In this situation the proctor is expected to assist with specific issues pertaining to positioning, system docking and instrumentation, and system trouble-shooting, but NOT the surgical performance of an operation outside their scope of practice.

d. For Tier B procedures when proctoring a surgeon of the same specialty it is expected that the proctor may be required to perform components of the surgery to assist in difficult dissection, and also ensure that the surgery is completed in a timely fashion.

e. For Tier C procedures it is expected that proctoring is performed by a surgeon who has sufficient experience in the procedure, and it is anticipated that this may often involve an international proctor. The responsibility for arranging such a proctor will rest with the surgeon applying for accreditation.
4. Maintenance of skills

Participation in surgical audit is a requirement of accreditation. It is expected that to maintain proficiency in robotic surgery, a clinician must perform an acceptable number of cases per year, and without a significant length of time between procedures. The acceptable volume of cases per year will vary depending on the specialty and the procedure performed, therefore no definite proscriptive number can be mandated to cover all situations, however activity is assessed by the robotic subcommittee and surgeons performing significantly below the expected volume will have outcomes more thoroughly reviewed to ensure patient safety is not compromised. A regular quarterly audit of all robotic surgical procedures at Epworth is performed, including benchmarking of peri-operative outcomes, and surgeons demonstrating outcomes significantly below expected results will revert to provisional accreditation requiring a further period of proctoring. Surgeons with a significant delay (eg 12 months) between robotic cases will similarly require further proctoring before recommencing independent operating. Cases performed at institutions other than Epworth Healthcare will be taken into consideration when recommending such action.
5. UROLOGY - Robotic-assisted radical prostatectomy

There are two pathways to becoming credentialed to perform robotic-assisted radical prostatectomy (RARP) at Epworth depending on prior experience and training. The first applies to urologists who are already trained and experienced in RARP and may be suited for credentialing to perform RARP independently from the outset. The other is for those surgeons who are not already fully trained and experienced in RARP and who must meet requirements to become provisionally accredited to perform RARP.

1. **Standards required for credentialing as a specialist to independently use the da Vinci® surgical system to perform robotic-assisted laparoscopic radical prostatectomy (RARP):**

   - Urologist who has completed a Fellowship in robotic surgery and audit of independent surgical practice of at least 20 cases. Proof of completion of fellowship including a surgical logbook must be provided, as well as details of any additional structured training (eg Intuitive Surgical Training Course, dry-lab training, etc)

   OR

   - Urologist with evidence of experience and competence in robotic surgery in excess of 30 cases. He or she will have also completed some formal structured training in robotic surgery such as the Intuitive Surgical Training Course or will have completed a Mini-Fellowship in Robotic Radical Prostatectomy. Surgical logbook must be provided including peri-operative outcomes.

Urologists satisfying the above criteria can be granted *provisional credentialing* to perform RARP independently. The robotic subcommittee will review performance data after 5 independent cases to decide if *full credentialing* can be recommended, or if further training/proctoring is required.

2. **Standards required for provisional credentialing as a specialist to use the da Vinci® surgical system for RARP for those who do not meet the criteria listed above:**

Urologists without Fellowship training or significant experience in robotic surgery must undergo a structured training program and a period of proctorship. Typical components of a training program include:

   a. Intuitive Surgical Online Training Program
   b. Da Vinci Surgery Training Program (Intuitive Surgical, only available overseas)
   c. Hands-on da Vinci Surgery training (Device Technologies, one day course in Melbourne)
   d. Structured dry-lab training using inanimate models (including anastomosis) – minimum 9 hr
e. Virtual reality training using da Vinci skills simulator – minimum 9 hr
f. Observation of RARP performed by a proctor (at least 5 cases)
g. Mini-Fellowship Course in RARP (typically includes steps a, c-f)

At a minimum, surgeons seeking provisional credentialing to perform RARP will have completed steps a, b, d, e, f prior to undertaking their first RARP. Alternatively, surgeons who have completed an approved Mini-Fellowship in RARP (see definitions below) will already have completed steps a, c-f and will not need to have completed step b in an overseas facility.

_Provisional credentialing_ is granted, on the proviso that a proctor must be present for at least the first three cases performed by the surgeon seeking accreditation. Following this, the proctor will issue a progress report in writing recommending either that the surgeon is competent to perform unsupervised RARP, or that a further period of proctoring is required. The robotic subcommittee will review performance data after 5 independent cases to decide if _full credentialing_ is appropriate, or if further training is required.

6. **UROLOGY - Robotic-assisted renal surgery**

Standards required for _provisional_ credentialing as a specialist to use the da Vinci® surgical system for **Robotic-assisted partial nephrectomy (RAPN)** or **Robotic-assisted pyeloplasty (RAP)**

Urologists wishing to perform RAPN or RAP must first be able to demonstrate proficiency in non-robotic laparoscopic renal surgery. They are then required to undertake a structured training program and a period of proctorship. Typical components of a training program include:

a. Intuitive Surgical Online Training Program
b. Da Vinci Surgery Training Program (Intuitive Surgical, only available overseas)
c. Hands-on da Vinci Surgery training (Device Technologies, one day course in Melbourne)
d. Structured dry-lab training using inanimate models (including suturing model) – minimum 9 hr
e. Virtual reality training using da Vinci skills simulator – minimum 9 hr
f. Observation of RAPN or RAP performed by a proctor (at least 2 cases)

Those who are already credentialed in robotic surgery are not required to fulfill steps a-e. _Provisional credentialing_ is granted on the proviso that a proctor must be present for at least the first three cases performed by the surgeon seeking accreditation. Following this, the proctor will issue a progress report in writing recommending either that the surgeon is competent to perform unsupervised RAPN/RAP, or that a further period of proctoring is required. The robotic
subcommittee will review performance data after 5 independent cases to decide if full credentialing is appropriate, or if further training is required.

7. UROLOGY - Robotic-assisted radical cystectomy

Standards required for provisional credentialing as a specialist to use the da Vinci® surgical system for Robotic-assisted radical cystectomy (RARC)

Urologists wishing to perform RARC must already have radical cystectomy and urinary diversion within their scope of practice at Epworth. They are then required to undertake a structured training program and a period of proctorship. Typical components of a training program include:

a. Intuitive Surgical Online Training Program
b. Da Vinci Surgery Training Program (Intuitive Surgical, only available overseas)
c. Hands-on da Vinci Surgery training (Device Technologies, one day course in Melbourne)
d. Structured dry-lab training using inanimate models (including suturing model) – minimum 9 hr
e. Virtual reality training using da Vinci skills simulator – minimum 9 hr
f. Observation of RARC performed by a proctor (at least 2 cases)

Those who are already credentialed in robotic surgery are not required to fulfill steps a-e. Provisional credentialing is granted on the proviso that a proctor must be present for at least the first three cases performed by the surgeon seeking accreditation. Following this, the proctor will issue a progress report in writing recommending either that the surgeon is competent to perform unsupervised RARC, or that a further period of proctoring is required. The robotic subcommittee will review performance data after 5 independent cases to decide if full credentialing is appropriate, or if further training is required.
8. GYNAECOLOGY - Robotic-assisted hysterectomy

Standards required for provisional credentialing as a specialist to use the da Vinci® surgical system for Robotic-assisted hysterectomy (RAH)

Gynaecologists without Fellowship training or prior experience in robotic surgery must first be able to demonstrate evidence of proficiency in non-robotic laparoscopic hysterectomy. They are then required to undertake a structured training program and a period of proctorship. Typical components of a training program include:

a. Intuitive Surgical Online Training Program
b. Da Vinci Surgery Training Program (Intuitive Surgical, only available overseas)
c. Hands-on da Vinci Surgery training (Device Technologies, one day course in Melbourne)
d. Structured dry-lab training using inanimate models (including suturing model) – minimum 9 hr
e. Virtual reality training using da Vinci skills simulator – minimum 9 hr
f. Observation of RAH performed by a proctor (at least 2 cases)

Provisional credentialing is granted, on the proviso that a proctor must be present for at least the first three cases performed by the surgeon seeking accreditation. Following this, the proctor will issue a progress report in writing recommending either that the surgeon is competent to perform unsupervised RAH, or that a further period of proctoring is required. The robotic subcommittee will review performance data after 5 independent cases to decide if full credentialing is appropriate, or if further training is required.

GYNAECOLOGY - Robotic-assisted myomectomy

Applications for performing robotic-assisted myomectomy can be made after first demonstrating proficiency in robotic-assisted hysterectomy.
9. GYNAECOLOGY - Robotic-assisted sacro-colpopexy

Standards required for provisional credentialing as a specialist to use the da Vinci® surgical system for Robotic-assisted sacro-colpopexy (RAS)

Gynaecologists without Fellowship training or prior experience in robotic surgery must first be able to demonstrate evidence of proficiency and subspecialty expertise in non-robotic (open or laparoscopic) sacro-colpopexy – eg performing in excess of 30 cases/year. They are then required to undertake a structured training program and a period of proctorship. Typical components of a training program include:

a. Intuitive Surgical Online Training Program
b. Da Vinci Surgery Training Program (Intuitive Surgical, only available overseas)
c. Hands-on da Vinci Surgery training (Device Technologies, one day course in Melbourne)
d. Structured dry-lab training using inanimate models (including suturing model) – minimum 9 hr
e. Virtual reality training using da Vinci skills simulator – minimum 9 hr
f. Observation of RAS performed by a proctor (at least 2 cases)

Provisional credentialing is granted, on the proviso that a proctor must be present for at least the first five cases performed by the surgeon seeking accreditation. Following this, the proctor will issue a progress report in writing recommending either that the surgeon is competent to perform unsupervised RAS, or that a further period of proctoring is required. The robotic subcommittee will review performance data after 5 independent cases to decide if full credentialing is appropriate, or if further training is required.
10. CARDIOTHORACICS - Robotic-assisted cardiac surgery

A. Standards required for credentialing as a specialist to independently use the da Vinci® surgical system to perform robotic-assisted cardiac surgery

- Cardiac surgeon who has completed a Fellowship in robotic surgery and audit of independent surgical practice of at least 10 cases. Proof of completion of fellowship including a surgical logbook must be provided, as well as details of any additional structured training (eg Intuitive Surgical Training Course, dry-lab training, etc)

OR

- Cardiac surgeon with evidence of experience and competence in robotic surgery in excess of 10 cases as console surgeon. He or she will have also completed some formal structured training in robotic surgery such as the Intuitive Surgical Training Course. Surgical logbook must be provided including peri-operative outcomes.

Cardiac surgeons satisfying the above criteria can be granted provisional credentialing to operate independently. The robotic subcommittee will review performance data after 5 independent cases to decide if full credentialing can be recommended, or if further training/proctoring is required.

B. Standards required for provisional credentialing as a specialist to use the da Vinci® surgical system for robotic-assisted cardiac surgery for those who do not meet the criteria listed above:

Cardiac surgeons without Fellowship training or significant experience in robotic surgery must undergo a structured training program and a period of proctorship. Typical components of a training program include:

a. Intuitive Surgical Online Training Program
b. Intuitive cardiac surgical training course (eg 4 days at designated centre)
c. Hands-on da Vinci Surgery training (Device Technologies, one day course in Melbourne)
d. Virtual reality training using da Vinci skills simulator – minimum 9 hr
e. Structured dry-lab training using inanimate models (including suturing model) – minimum 9 hr
f. Observation of robotic-assisted cardiac surgery performed by a proctor (at least 5 cases)
*Provisional credentialing* is granted, on the proviso that a proctor must be present for at least the first three cases performed by the surgeon seeking accreditation. Following this, the proctor will issue a progress report in writing recommending either that the surgeon is competent to perform unsupervised robotic-assisted cardiac surgery, or that a further period of proctoring is required. The robotic subcommittee will review performance data after 5 independent cases to decide if *full credentialing* is appropriate, or if further training is required.

11. **CARDIOTHORACICS - Robotic-assisted thoracic surgery, eg thymectomy**

    Standards required for *provisional credentialing as a specialist to use the da Vinci® surgical system for Robotic-assisted thoracic surgery*

Thoracic surgeons without Fellowship training or prior experience in robotic surgery must first be able to demonstrate evidence of proficiency in the non-robotic, minimally invasive procedure (eg VATS thymectomy). They are then required to undertake a structured training program and a period of proctorship. Typical components of a training program include:

a. Intuitive Surgical Online Training Program
b. Da Vinci Surgery Training Program (Intuitive Surgical, only available overseas)
c. Hands-on da Vinci Surgery training (Device Technologies, one day course in Melbourne)
d. Structured dry-lab training using inanimate models (including suturing model) – minimum 9 hr
e. Virtual reality training using da Vinci skills simulator – minimum 9 hr
f. Observation of robotic cases performed by a proctor (at least 2 cases)

*Provisional credentialing* is granted, on the proviso that a proctor must be present for at least the first three cases performed by the surgeon seeking accreditation. Following this, the proctor will issue a progress report in writing recommending either that the surgeon is competent to perform unsupervised robotic-assisted thoracic procedures, or that a further period of proctoring is required. The robotic subcommittee will review performance data after 5 independent cases to decide if *full credentialing* is appropriate, or if further training is required.
12. COLORECTAL SURGERY - Robotic-assisted colorectal surgery

Standards required for provisional credentialing as a specialist to use the da Vinci® surgical system for Robotic-assisted Anterior Resection (RAAR)

Colo-rectal surgeons without Fellowship training or prior experience in robotic surgery must first be able to demonstrate evidence of proficiency in non-robotic laparoscopic anterior resection. They are then required to undertake a structured training program and a period of proctorship. Typical components of a training program include:

a. Intuitive Surgical Online Training Program
b. Da Vinci Surgery Training Program (Intuitive Surgical, only available overseas)
c. Hands-on da Vinci Surgery training (Device Technologies, one day course in Melbourne)
d. Structured dry-lab training using inanimate models (including suturing model) – minimum 9 hr
e. Virtual reality training using da Vinci skills simulator – minimum 9 hr
f. Observation of RAAR performed by a proctor (at least 2 cases)

Provisional credentialing is granted, on the proviso that a proctor must be present for at least the first three cases performed by the surgeon seeking accreditation. Following this, the proctor will issue a progress report in writing recommending either that the surgeon is competent to perform unsupervised RAAR, or that a further period of proctoring is required. The robotic subcommittee will review performance data after 5 independent cases to decide if full credentialing is appropriate, or if further training is required.
13. UPPER GI SURGERY - Robotic-assisted gastric bypass

Standards required for provisional credentialing as a specialist to use the da Vinci® surgical system for Robotic-assisted Gastric Bypass (RAGP)

Upper GI surgeons without Fellowship training or prior experience in robotic surgery must first be able to demonstrate evidence of proficiency in non-robotic laparoscopic gastric bypass surgery. They are then required to undertake a structured training program and a period of proctorship. Typical components of a training program include:

a. Intuitive Surgical Online Training Program  
b. Da Vinci Surgery Training Program (Intuitive Surgical, only available overseas)  
c. Hands-on da Vinci Surgery training (Device Technologies, one day course in Melbourne)  
d. Structured dry-lab training using inanimate models (including suturing model) – minimum 9 hr  
e. Virtual reality training using da Vinci skills simulator – minimum 9 hr  
f. Observation of RAGP performed by a proctor (at least 2 cases)

Provisional credentialing is granted, on the proviso that a proctor must be present for at least the first three cases performed by the surgeon seeking accreditation. Following this, the proctor will issue a progress report in writing recommending either that the surgeon is competent to perform unsupervised RAGP, or that a further period of proctoring is required. The robotic subcommittee will review performance data after 5 independent cases to decide if full credentialing is appropriate, or if further training is required.
14. **ENDOCRINE SURGERY - Robotic-assisted thyroid surgery**

Standards required for *provisional* credentialing as a specialist to use the da Vinci® surgical system for **robotic-assisted hemithyroidectomy**

Endocrine/ENT surgeons without Fellowship training or prior experience in robotic surgery must first be able to demonstrate evidence of proficiency in open thyroid surgery (eg minimum or 20 cases/year and credentialed to perform thyroid surgery in a public institution). They are then required to undertake a structured training program and a period of proctorship. Typical components of a training program include:

- a. Intuitive Surgical Online Training Program
- b. Da Vinci Surgery Training Program (Intuitive Surgical, only available overseas)
- c. Virtual reality training using da Vinci skills simulator – minimum 9 hr
- d. Structured dry-lab training using inanimate models (including suturing model) – minimum 9 hr
- e. Advanced Robotic Thyroidectomy course (eg A/Prof W Chung, Korea)
- f. Observation of robotic-assisted thyroidectomy performed by a proctor (at least 6 cases)

*Provisional credentialing* is granted, on the proviso that a proctor must be present for at least the first three cases performed by the surgeon seeking accreditation. Following this, the proctor will issue a progress report in writing recommending either that the surgeon is competent to perform unsupervised robotic-assisted hemithyroidectomy, or that a further period of proctoring is required. The robotic subcommittee will review performance data after 5 independent cases to decide if *full credentialing* is appropriate, or if further training is required.

Application for credentialing in **robotic-assisted cervical neck dissection** and/or **robotic-assisted total thyroidectomy** can be made after demonstrating proficiency in hemithyroidectomy
15. HEAD & NECK SURGERY - Trans-Oral Robotic Surgery (TORS)

Standards required for provisional credentialing as a specialist to use the da Vinci® surgical system for trans-oral robotic surgery

Head & neck surgeons without Fellowship training or prior experience in robotic surgery must first be able to demonstrate evidence of proficiency of performing the proposed TORS procedure using a conventional approach. They are then required to undertake a structured training program and a period of proctorship. Typical components of a training program include:

a. Intuitive Surgical Online Training Program
b. Da Vinci Surgery Training Program (Intuitive Surgical, only available overseas)
c. Virtual reality training using da Vinci skills simulator – minimum 9 hr
d. Structured dry-lab training using inanimate models (including suturing model) – minimum 9 hr
e. Observation of TORS performed by a proctor (at least 5 cases)

Provisional credentialing is granted, on the proviso that a proctor must be present for at least the first three cases performed by the surgeon seeking accreditation. Following this, the proctor will issue a progress report in writing recommending either that the surgeon is competent to perform unsupervised TORS, or that a further period of proctoring is required. The robotic subcommittee will review performance data after 5 independent cases to decide if full credentialing is appropriate, or if further training is required.
16. Other robotic procedures

Standards required for surgeons planning to undertake procedures other than those listed above will be assessed on an individual basis by the robotic subcommittee.

This is principally due to the lower volume of expertise and surgical volume for newer procedures available. Minimum requirements will include:

a. Evidence that the proposed procedure has been performed safely elsewhere
b. Evidence that the specialist has appropriate experience of the proposed procedure in a non-robotic-assisted situation
c. The structured training outlined above will also be required and modified for the procedure in question
d. Support of a proctor (see 6.1 below)
e. Robotic subcommittee to review performance data after initial three cases before further procedures undertaken
17. Appendix

17.1 Mini-Fellowship Training

This has been shown to be of significant value for surgeons transitioning to RARP and is recommended in a number of expert guidelines. Epworth Healthcare is now involved in regular Mini-Fellowships in RARP which meet the above requirements for training, with future similar training programs in additional specialties planned.

17.2 Provisional credentialing

This form of provisional accreditation is covered under the Epworth by-laws within the following paragraph:

“PROVISIONAL APPOINTMENT
The Chief Executive acting on the advice of the Executive Medical Director may approve provisional appointment as an Accredited Practitioner and may grant Clinical Privileges to such provisionally appointed Accredited Practitioners. Clinical Privileges granted under this By-Law shall remain in force until the determination by the Board of Management at the next appropriate meeting of the Board of Management or for a period not exceeding 6 months.”

17.3 Reference

In preparing this document the following international guidelines were consulted

American Urological Association
Education and Research Inc
Standard Operating Practices (SOP’S) for Urologic Robotic Surgery