

2. BASIC SURGICAL TRAINING

2.1 SELECTION AND TRAINEES

2.1.1 Policy and Procedures

Selection principles

Selection to the surgical training programme at the Royal Australasian College of Surgeons occurs as a bi-national activity. In 1998 the College endorsed the Best Practice Framework for Trainee Selection that subsequently became known as the [Brennan Principles](#) and which continues to underpin the College trainee selection processes.

Selection of Basic Surgical Trainees

College practice associated with the selection of basic surgical trainees is consistent with the [Brennan Principles](#) and audit processes are being standardised to provide ongoing assurance of College-wide compliance in all trainee selection activities.

Selection into Basic Surgical Training is a two part process requiring:

- Selection into the College training programme
- Appointment to an accredited hospital

Selection into the training programme is undertaken by the College Board of Basic Surgical Training. Appointment to a hospital is made by the appropriate Hospital Authority.

Advertisements appear in the press, in hospitals and medical/surgical journals. Candidates must apply to the College by the advertised closing date. Candidates must also apply to hospital authorities for a hospital position.

BST selection criteria and process

The College uses a ranking system with three scoring tools and provides applicants with the decile ranking for their total selection result and for each individual component of their assessment. Also, the College issues written feedback to all unsuccessful applicants and advises them of their [appeal rights](#). The BST selection criteria used in 2004 for the 2005 intake were:

- Applicants can apply to either the Australian or New Zealand programme and must be a permanent resident or citizen of either Australia or New Zealand at the time of application.
- If applying to the Australian programme, applicants must hold full medical registration in the state in which they wish to train. If applying to the New Zealand programme, applicants must hold a form of registration from the Medical Council of New Zealand that will allow completion of surgical training.
- Applicants must have completed MBBS/MBChB or equivalent.
- Applicants must be undertaking the intern year or a later year at the time of application.
- Applications for BST are to be made after the date of advertising and prior to the application deadline as advertised in regional newspapers and on the College's website.

Other guidelines provided to applicants regarding the selection processes included this information:

- All eligible applicants will be interviewed as part of the selection process.
- Applications must consist only of a completed Structured CV application form, 3 completed Training Evaluation (referee) forms and accompanied by two passport-sized photos plus two certified copies of the applicant's academic transcript (no extra attachments are considered).
- The Structured CV and Training Evaluation forms, including detailed instructions, were available to download from the College's web site from the application opening date.

The Selection Steering Committee in 2004 comprised the BBST Chair, Chair of Surgical Supervisors Committee, Chair of Examinations Committee, Chair of New Zealand Regional Supervisors Committee and the Director of the Division of Basic Surgical Training.

In addition, Jurisdictional Representatives are invited to the Basic Surgical Training Selection Workshop where key aspects of the bi-national selection process including policy and methodology, are decided. Two jurisdictional representatives sit on the Board of Basic Surgical Training. Further, each year the College informs the Commonwealth, state and territory Health Ministers of the limit, geographic distribution and process followed, to determine the prospective number of basic surgical training positions; and before finalising the figure, invites Ministers to comment within a stated period, to enable subsequent consideration of their views.

Review of BST Selection

There have been no changes to the processes for the selection of Basic Surgical Trainees in 2004.

Following the 2004 selection round for the 2005 intake for Basic Surgical Training (BST), the College conducted a workshop on Wednesday 17 November 2004. The broad aims of this workshop were to seek input from the Jurisdictions regarding the methodology of the allocation of Basic Surgical Trainees and to discuss other issues relating to BST and articulation of trainees into Specialist Surgical Training.

Attendees included Board of BST members, Jurisdictional Representatives, Representatives from the Post Graduate Medical Councils, Representatives from other National Bodies, Chairs of various College Boards and College personnel.

Following constructive and detailed discussion it was agreed to implement an "Eight Point Plan" comprising of the following principles

1. Jurisdictions with advice of AMWAC and College establish workforce requirements
2. SST positions, needing to be funded and accredited, to be recognised by the Jurisdictions and the College
3. BST intake each year, aligned with SST entry numbers, be agreed by Jurisdictions and the College
4. College with advice of the Jurisdictions to establish criteria for selection/eligibility
5. College with appropriate jurisdictional involvement to run national selection/eligibility process
6. Jurisdictions develop a national allocation methodology (for States and Territories) for the BST trainees
7. Jurisdictions establish administration of trainee allocation and appointment process to health services in consultation with College
8. The model to properly incorporate New Zealand workforce and training imperatives.
(Note: i.e. a model to reflect appropriate aspects of points 1 – 7 be developed to address the long term workforce requirements of NZ and the annual intake of trainees for NZ.)

Details of the implementation of the Eight Point Plan are planned to be confirmed by April/May 2005 prior to the next selection round. Its implementation will affect the methodology by which

trainees are distributed with this responsibility transferred from the College to Jurisdictions. The Plan has further significance in being indicative of improved collaboration between the College, AHWOC and the Jurisdictions in the determination of trainee numbers.

2.1.3 Quantitative Data

Trainee intake 2004 for Australia, Basic Surgical Training, by region									
ACT	NSW	QLD	SA/NT	TAS	VIC	WA	Aust	NZ	Total
4	52	25	17	5	48	17	168	37	205

Distribution of applicants for entry to the Basic Surgical Training program 2005 intake										
Number	ACT	NSW	QLD	SA/NT	TAS	VIC	WA	Aust	NZ	Total
Applicants	8	83	64	16	5	117	18	311	63	374
Met Minimum Criteria	8	82	64	16	5	117	18	310	63	373
Offers	4	79	39	18	5	55	20	220	46	266

The Basic Surgical Training selection is a bi-national process: ranking and deciles are calculated on a national basis. In Australia and New Zealand there are required quotas for the annual intake of Basic Surgical Trainees. There is no pre-determined cut-off score for Basic Surgical Training selection. The cut-off is the lowest-ranked successful applicant to achieve these pre-determined and agreed quotas. In Australia, the result of the lowest ranked successful applicant set the cut off score 60% and fell in the First Decile; in New Zealand, the result of the lowest ranked successful applicant set the cut off score 67% and fell in the Fifth Decile.

**Summary of issues raised by applicants following selection
to the Basic Surgical Training program, 2005 intake**

Issue	Number
Request for the College to perform a recheck of scores	9
Desire to train in first preference state rather than the state originally allocated	6
Request for a detailed explanation of the component scoring system	4
Request to view selection scoring materials	3
Request for more detailed feedback on individual performance than provided by decile rankings and advice on how to improve chances of selection in future	2
Request for a detailed explanation of how the decile total is calculated / What are deciles?	2
Request for clarification of the BST ranking process (including the extent to which Selection Committee can identify applicants individually)	1
Dissatisfaction and concern regarding interviewer's decision	1
Concern about difference between interview score compared with CV and ITER scores	1
Request recheck that scores were not misidentified by ID number	1
Concern that not all references were considered	1
Requested deferral of first year	1
Desire to change first preference state after being allocated to preferred state, due to change in circumstances.	1
Request to delay entry to program by 4 months	1
Total number of issues raised, in writing to the College, by applicants/trainees	<u>34</u>

2.2 TRAINING

2.2.1 Qualitative Data

College [policies](#) for basic and for specialist surgical training undertaken with the Royal Australasian College of Surgeons are published on the College website.

Purpose of the Basic Surgical Training Program

The purpose of the Basic Surgical Training Program is to train and assess trainee surgeons in the knowledge, skills and attitudes necessary to enable progression into specialty surgical training.

During Basic Surgical Training trainee surgeons gain an understanding of the principles of surgery and acquire skills in basic surgery, clinical assessment and the use of diagnostic modalities and gain an understanding of basic surgical sciences.

Content of the Basic Surgical Training Program

The Basic Surgical Training program comprises four compulsory training and assessment components and one optional component. Training components may be undertaken concurrently and most are non-sequential. Assessment methods and timing are based on individual training components.

Compulsory Basic Surgical Training Components:

- Online Resources
 - Case Studies
 - Practice Multiple Choice Questions (MCQs)
- Clinical Placements
 - Core Surgical Rotations
 - ICU Rotation
 - Emergency Rotation
 - Elective Rotations
- Skills Courses
 - Basic Surgical Skills
 - Care of Critically Ill Surgical Patients (CCrISP)
 - Early Management of Severe Trauma (EMST)
- Examinations
 - Multiple Choice Question Examination
 - Clinical Examination

Optional courses and pathways:

- Qualifications
 - Postgraduate courses in Surgical Anatomy offered by universities
 - Combined FRACS/PhD

The training program is updated periodically and changes are communicated to trainees via the Basic Surgical Trainee Newsletter, which is administered through [Basic Surgical Training Online](#).

Duration of Basic Surgical Training

The Basic Surgical Training program takes a minimum of two years and a maximum of four years. In this time basic surgical trainees must complete at least four core surgical placements of approximately three months each as well as other clinical placements, training and assessment. Trainees may take leave of absence (Interruption of Training) from the program for up to three years subject to approval by the Chairman of the Board of Basic Surgical Training.

Facilitated Personal Mentoring Scheme

In July 2001 the College implemented a Facilitated Personal Mentoring Scheme for trainees in the restructured Basic Surgical Training Programme. The focus of the scheme is to provide trainees in the restructured basic surgical training programme with an opportunity to enhance their educational experience by having access to a personal mentor. The Scheme was implemented as a result of the findings from a pilot study that was conducted by the Women in Surgery Group of the College. The pilot study was conducted with female trainees only however the results of the pilot study indicated that the scheme would be beneficial to all trainees in the training programme.

Approximately 60 pairs remain in contact from the 2001-2003 cohorts of trainees registered in the scheme. In 2005 a review will be undertaken to investigate alternative facilitation models for mentoring relationships.

Evaluation of the program

One early outcome of the evaluation activities described above was the recognition that the Basic Surgical Training objectives need to be aligned with the RACS competencies (see section 3.2.1 of this report, adapted from the CanMEDS). This will be a priority project to be carried out early in 2005. Mapping the BST objectives to the RACS competencies will provide the benchmarks for effective evaluation of all the components and activities of the BST Programme.

In December 2004 the College appointed a Curriculum Developer for Basic Surgical Training to work with BST Boards and with the Evaluation Co-ordinator. With three staff now involved in evaluation this aspect of College work will progress.

2.2.2 Quantitative Data

A summary of active trainees and their distribution is shown in the tables below. No comparison to AMWAC figures has been included as the AMWAC figures have not been made available to the College at the time of reporting.

Basic Surgical Training (as at 31 December 2004)											
Basic Surgical Trainees by region and year of training											
Year	ACT	NSW	QLD	SA/NT	TAS	VIC	WA	Aust	NZ	O/S	Total
1	3	50	24	14	5	49	16	161	37	0	198
2	3	57	22	13	5	48	7	155	31	1	187
3	2	29	23	10	3	15	11	93	23	1	117
4	0	28	20	6	0	24	6	84	33	3	120
	8	164	89	43	13	136	40	493	124	5	622
Male Basic Surgical Trainees by region and year of training											
Year	ACT	NSW	QLD	SA/NT	TAS	VIC	WA	Aust	NZ	O/S	Total
1	3	41	20	10	3	32	9	118	29	-	147
2	2	45	18	12	5	39	4	125	24	1	150
3	1	23	19	9	2	13	10	77	19	1	97
4	-	21	17	4	-	21	4	67	23	3	93
	6	130	74	35	10	105	27	387	95	5	487
Female Basic Surgical Trainees by region and year of training											
Year	ACT	NSW	QLD	SA/NT	TAS	VIC	WA	Aust	NZ	O/S	Total
1	-	9	4	4	2	17	7	43	8	-	51
2	1	12	4	1	-	9	3	30	7	-	37
3	1	6	4	1	1	2	1	16	4	-	20
4	-	7	3	2	-	3	2	17	10	-	27
	2	34	15	8	3	31	13	106	29	0	135
<i>Although the College provides a part-time training option, there were no Basic Surgical Trainees who elected to train part-time in 2004; all those counted here are full-time.</i>											

**Female Basic Surgical Trainees by region and year of training
As a percentage of total trainees**

Year	ACT	NSW	QLD	SA/NT	TAS	VIC	WA	Aust	NZ	O/S	Total
1	0.0	18.0	16.7	28.6	40.0	34.7	43.8	26.7	21.6	-	25.8
2	33.3	21.1	18.2	7.7	0.0	18.8	42.9	19.4	22.6	0.0	19.8
3	50.0	20.7	17.4	10.0	33.3	13.3	9.1	17.2	17.4	0.0	17.1
4	-	25.0	15.0	33.3	-	12.5	33.3	20.2	30.3	0.0	22.5
	25.0	20.7	16.9	18.6	23.1	22.8	32.5	21.5	23.4	0.0	21.7

Trainees removed from the Basic Surgical Training program, 2004

Reason	ACT	NSW	QLD	SA/NT	TAS	VIC	WA	Aust	NZ	O/S	Total
Maximum exam attempts reached	-	-	1	1	-	-	-	2	-	-	2
Program through-date expiry	-	1	1	-	-	2	-	4	4	2	10
Non-Financial	-	2	1	2	2	4	-	11	-	-	11
Withdrawn	-	8	5	-	1	5	1	20	2	-	22
	0	13	9	1	1	13	3	40	10	3	45

All trainees removed from the program due to reaching maximum exam attempts or maximum time limit were in their fourth year of training

Year of training for Basic Surgical Trainees who withdrew in 2004

Year	ACT	NSW	QLD	SA/NT	TAS	VIC	WA	Aust	NZ	O/S	Total
1	-	1	-	-	-	-	-	1	-	-	1
2	-	6	-	-	-	1	-	7	-	-	7
3	-	1	5	-	1	4	1	12	-	-	12
4	-	-	-	-	-	-	-	0	2	-	2
	0	8	5	0	1	5	1	20	2	0	22

Basic Surgical Training Hospitals (as 31 December 2004)

New South Wales

Albury Hospital
Auburn Hospital
Bankstown Hospital
Campbelltown Hospital
Canterbury Hospital
Coffs Harbour Hospital
Concord Hospital
Dubbo Base Hospital
Fairfield Hospital
Gosford Hospital
Hornsby Hospital
John Hunter Hospital
Lismore Base Hospital
Liverpool Hospital
Manly Hospital
Mona Vale Hospital
Mt Druitt / Bankstown Hospital
Nepean Hospital
New Childrens Hospital
Nowra Hospital
Orange Base Hospital
Port Macquarie Base Hospital
Prince Alfred Hospital
Prince of Wales Hospital
Royal North Shore Hospital
St George Hospital
St Vincent's Hospital
Sutherland Hospital
Sydney / Ryde Hospital
Tamworth Hospital
Tweed Heads Hospital
Wagga Wagga Base Hospital
Westmead Hospital
Wollongong Hospital

Western Australia

Fremantle Hospital
Royal Perth Hospital
Sir Charles Gairdner Hospital

Queensland

Cairns Base Hospital
Gold Coast Hospital
Logan Hospital
Mackay Base Hospital
Mater Medical Centre
Nambour General Hospital
Prince Charles Hospital
Princess Alexandra Hospital
Redcliffe Hospital
Rockhampton Hospital
Royal Brisbane Hospital
Royal Children's Hospital
Toowoomba General Hospital

Victoria

Alfred Hospital
Angliss Hospital
Austin Repatriation Hospital
Bendigo Hospital
Box Hill Hospital
Dandenong Hospital
Echuca Hospital
Frankston Hospital
Geelong Hospital
Hamilton Hospital
La Trobe Regional Hospital
Maroondah Hospital
Mildura Hospital
Monash Medical Centre
Royal Children's Hospital
Royal Melbourne Hospital
Shepparton Hospital
St Vincent's Hospital
Swan Hill Hospital
VPSU / Mercy Hospital
Wangaratta Base Hospital
Warrnambool Hospital
Werribee / Northern Hospital
Western Hospital

South Australia

Flinders Medical Centre /
Repatriation General Hospital
Queen Elizabeth Hospital
Royal Adelaide Hospital

Northern Territory

Royal Darwin Hospital

Tasmania

Launceston General Hospital
North West Regional Hospital
Royal Hobart Hospital

New Zealand

Auckland Hospital
Christchurch Hospital
Dunedin Hospital
Gisborne Hospital
Greymouth Hospital
Hawkes Bay Hospital
Hutt Hospital
Masterton Hospital
Middlemore Hospital
Nelson Hospital
North Shore Hospital
Palmerston North Hospital
Rotorua Hospital
Southland Hospital
Starship Children's Hospital
Taranaki Base Hospital
Tauranga Hospital
Timaru Hospital
Waikato Hospital
Wairau Hospital
Wanganui Hospital
Wellington Hospital
Whangarei Hospital

Rural vocational training

In order to provide trainees with a wide variety of experience, hospitals which are accredited for BST will rotate trainees out to other hospitals within their network, including a number of hospitals in rural locations. At this point, the exact meaning of a rural location is not defined and as such no quantitative data is available on hospitals or basic trainees in rural locations. The College hopes to provide such information in future reports.

2.3 ASSESSMENT

2.3.1 Qualitative Data

Assessment of Basic Surgical Training and time requirements

Program component required to be achieved	Minimum Required	Assessment Activity
Basic Surgical Skills (BSS) Course	1 x 2 ½ day course	Progress record completed by instructors throughout the course
Care of Critically Ill Surgical Patients (CCrISP) Course	1 x 2 ½ day course	
Early Management of Severe Trauma (EMST) Course	1 x 2 ½-day course	
MCQ Examination	1 examination	3 days x 2 ½ hours written examination, MCQ format
Clinical Examination	1 examination	2 to 3 hour practical and written examination, OSCE format
Core Surgical Rotations	4 x 3-months	<ul style="list-style-type: none"> • Experience Portfolio • In-training assessment
Emergency Department Rotation	10 weeks	
ICU/HDU Rotation	8 weeks	
Elective Rotations	34 weeks	

Assessment of Clinical Placements during training

There are two forms of review for trainees on Clinical Placements – the Experience Portfolio and the In-training Assessment. On completion of each Clinical Placement trainees are responsible for forwarding these documents to the College and must also keep a copy for their own records.

Following each rotation, Supervising Consultants complete an In-training Assessment for each trainee and discuss this assessment with trainees individually. The purpose of the In-training Assessment is to review and assess trainees' clinical skills, technical skills, attitudes, academic performance, teaching and research activities and to make recommendations for their future training. In-training Assessment forms with an overall rating of less than 3 are deemed unsatisfactory and the related clinical rotation will not be accepted towards the participant's training – a satisfactory assessment in a further rotation will be required.

The Experience Portfolio describes trainees' clinical experience and other hospital activities. Each trainee records and reviews their clinical experience and performance for each Clinical Placement. The Experience Portfolio includes information about the trainee's experience of ambulatory care, operative experience, procedural experience, patient management, academic activities, courses undertaken and teaching responsibilities. The Experience Portfolio also includes Rotation Outlines – ongoing detailed documents maintained by trainees to provide a record of their weekly timetable, level of supervision, procedural log, operative log and their level of satisfaction with various aspects of the rotation. It is an important tool to aid self-learning and reflection.

Examination components and marking system

The aim of BST examinations is to use a number of different assessment methods and tools to assess the knowledge, skills, and attitudes of trainees.

Basic Surgical Trainees take two formal examinations; firstly the Multiple Choice Question (MCQ) Examination tests knowledge of Anatomy, Pathology and Physiology. This written examination is conducted over three consecutive days with one session of two and a half hours each day. Each paper contains 120 multiple choice questions covering each of the three disciplines. The College provides a recommended reading list, Case Studies other on-line learning resources and examples of practice Multiple Choice Questions on the College website to assist trainees prepare for the MCQ Examination.

The second formal examination for Basic Surgical Trainees is the Clinical Examination. In this practical examination trainees are assessed on their clinical skills – examination, history-taking, diagnosis, procedure skills and counselling of patients as they relate to RACS Competencies of Medical Expertise, Judgement – Clinical Decision Making, Communication and Professionalism. The Clinical Examination is conducted in OSCE format, that is, a single two- to three-hour session using a series of examination ‘stations’ at which candidates are observed by examiners as well as stations at which written responses are required.

Trainees must attempt the MCQ Examination before or in conjunction with the Clinical Examination.

The MCQ Examination is offered three times and the Clinical Examination is offered twice per year at locations around Australia and New Zealand. Examinations are overseen by the Examination Committee of the Board of Basic Surgical Training, and committees of Anatomy, Pathology, Physiology and Clinical which analyse and verify examination outcomes, generate new questions and set future examinations. Examination results are published on the College website as they become available after each sitting.

Rasch Model

In the Basic Surgical Training MCQ examination the College has implemented the Rasch Model.

The Rasch Model is a method of constructing tests. It provides a theory for (1) item analysis and selection, and (2) a measurement scale for reporting scores. The Rasch Model states that the probability of a person answering correctly a test item is a function of two attributes or parameters:

- (i) The *person* attribute – theoretically any trait of interest in the measurement situation but most often “ability, achievement and aptitude”. More specifically it is the amount of such a trait the person possesses to answer correctly a certain number of items like the ones on a given test.
- (ii) The *item* attribute – in effect the difficulty level defined as that point on the ability scale where the person has a fifty percent chance of answering the item correctly.

As a result the Rasch model puts people and test items on the same scale. The estimation of these two attributes – person ability and item difficulty – is termed calibration. Therefore the Rasch Model tests the ability of the person in relation to the examination rather than in relation to each other person undertaking the examination as exists under the normal curve equivalent.

In addition to the introduction of the Rasch model, further work was undertaken by the Board of Basic Surgical Training throughout 2004 to develop a process for determining a criterion referenced pass standard for the MCQ examination. A criterion referenced pass standard is pre-determined and objective (i.e. not relative) and is set at a level that demonstrates competence in basic sciences. Criterion referencing implies that the questions have been assessed by practicing surgeons and relate to the knowledge necessary for clinical practice. The criterion reference pass standard will replace the interim derived pass standard in June 2005. The name of the examination will be changed to Basic Sciences Examination to better reflect the subject matter of the examination.

Extended matching questions are available on-line for Basic Surgical Trainees to use for self-assessment.

2.3.2 Quantitative Data

	Candidates		Pass Rate (%)
	Presented	Passed	
February	67	37	55
June	98	52	53
November	90	45	50
	255	134	53

	Candidates		Pass Rate (%)
	Presented	Passed	
February	104	102	98
July	91	87	96
	195	188	96

The above tables indicate the pass rate per examination. Candidates may attempt the exams on up to and including four occasions. Therefore a candidate may attempt the exam more than once in any given year. In consideration of individuals' attempts at the MCQ examination, 211 candidates sat at least once and 130 of these passed during 2004. The annual pass rate for the MCQ examination in 2004 was 62%. For the Clinical examination, 194 candidates sat at least once and 189 of these passed during 2004. The annual pass rate for the Clinical examination in 2004 was 97%.

2.4 ACCREDITATION OF HOSPITALS

2.4.1 Qualitative Data

Accreditation of hospitals for Basic Surgical Training

Sound administrative processes are critical to maintaining a valid and reliable assessment process for the accreditation of hospitals for basic surgical training. The College has supported the establishment of a [public independent review](#) of the criteria for accrediting hospitals for basic surgical training and associated matters. The corresponding terms and conditions of that review, the public submissions to it and the draft report are publicly available. The College is currently awaiting recommendations from the Australian Competition and Consumer Commission Review Committee.

In addition, College policy on [Jurisdictional Representation](#) details the process whereby Health Ministers in each state or territory are invited to nominate persons to participate in the assessment of hospitals for basic surgical training in that Minister's state or territory; and which ensures that if the Health Minister nominates members, each team established to assess a hospital in that state or territory includes a member that the Minister has nominated. Moreover, annually, the College writes to state and territory Health Ministers asking for names of hospitals for which they seek accreditation for basic surgical training.

Notification of outcome is an important aspect of any assessment process. The College, within six months of an assessment, [advises applicants](#) (that may be hospitals, jurisdictions, the College or other entities) in writing of decisions about hospital accreditations for basic surgical training. Furthermore and pending recommendations from the Australian Competition and Consumer Commission [Review Committee on Accreditation](#), a programme of cyclic reassessments of hospital accreditations for basic surgical training — which is to occur before the existing accreditation expires — is scheduled to commence in 2005.

2.4.2 Quantitative Data

No accreditation inspections or hospital applications occurred during 2004, while criteria and processes were being established. Tables above show details of hospitals currently accredited to conduct basic surgical training.