The development of a reflective vascular training portfolio: Using a country-specific infrastructure

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Reflective learning is considered an advanced form of learning; however, it has not been routinely incorporated into postgraduate and subspecialty educational surgical portfolios. The concept of training portfolios is not clearly understood by both trainees and teachers. Subspecialty surgical programmes rely heavily on logbooks and other forms of formative assessment to certify candidates. Case-based self-reflection in postgraduate training may be used as an additional educational tool and incorporated into the curricula vitae of trainees. We describe the method used to assess a vascular case, based on a self-reflective training method (vascular case portfolio).

The objective of this article is to describe the format of a vascular case portfolio (VCP) programme intended for South African (SA) vascular trainees. It integrates current training, educational and certification activities with formal portfolio organisation and assessment. The following aspects are discussed: current status of fellowship education and training; vascular portfolio; VCP programme; VCP template; facilitator, faculty and mentor responsibilities; and programme assessment.

**Vascular fellowship training and education**

Vascular trainees may enter a 2-year fellowship programme once they have registered as a specialist general surgeon. There are eight accredited (and university affiliated) vascular surgery training units in SA. Between 8 and 10 trainees are active at any one time. National Board Certification (Colleges of Medicine of SA (CMSA)) is achieved after a minimum of 2 years. The current certification requirements are the compilation of a logbook (surgical cases), and success in the college examination: multiple-choice questions (MCQs) and viva voce.

The Vascular Society of Southern Africa (VASSA) is mandated by the CMSA to administer and prepare the examinations. VASSA organises two to three dedicated fellowship seminars a year (attended by all fellows and a teaching faculty) which consist of didactic lectures and case presentations. VASSA has recently included peer-reviewed research as an additional requirement. Fellows are encouraged to visit centres of excellence and attend accredited symposia locally and abroad.

**Vascular training portfolio**

The vascular training portfolio is the written summary to be submitted prior to participating in the CMSA examination:

- logbook (surgical activity over the 2 years)
- description and brief critical analysis of symposia attended and/or visits to training centres (should include benefit or criticism of activity/learning experience)
- research
- documentation related to VCPs
- other activity (trainee teaching, institutional activities, etc.) may be listed.
Vascular case portfolio programme

The objective of the VCP is to encourage trainee reflection, self-assessment and subsequent self-monitoring of specific activities. This practice-based assessment involves self-evaluation of ‘real cases’ by filling in a standardised template. The case assessment should be a dynamic assessment of a case of the trainee’s choice. The case portfolio should allow for flexibility and include a trainee’s experiences (e.g. competency, novel concept, complication). Once the VCP document is completed, it will be forwarded to a facilitator who will ‘blind’ the document and attach a reference number. The facilitator will then forward the document to an external mentor who will complete the VCP documentation by appropriate feedback and commentary. The facilitator will ensure ‘mentor blinding’ and return the VCP documentation to the trainee within 7 - 10 days. Timely feedback facilitates appropriate trainee adjustment in subsequent practice. Copies of VCP documents will be retained by the facilitator. A completed ‘blinded’ document will be forwarded to a fellow seminar faculty member (other than the mentor), who will present the document as a case report at a fellow seminar (all fellows present). The faculty member will receive the VCP document at least 2 weeks prior to the fellowship seminar. Further VCP evaluation and sharing of similar trainee experiences will be encouraged at the seminar.

The VCP logistic will be explained to fellows, mentors, faculty members and facilitators prior to programme initiation. This will comprise a pre-programme fellowship meeting and subsequent written communication.

Vascular case portfolio template

The discussion and learning experience should be autonomous, self-reflective and thought provoking. It may include positive, negative (complication). Once the VCP document is completed, it will be forwarded to a facilitator who will ‘blind’ the document and attach a reference number. The facilitator will then forward the document to an external mentor who will complete the VCP documentation by appropriate feedback and commentary. The facilitator will ensure ‘mentor blinding’ and return the VCP documentation to the trainee within 7 - 10 days. Timely feedback facilitates appropriate trainee adjustment in subsequent practice. Copies of VCP documents will be retained by the facilitator. A completed ‘blinded’ document will be forwarded to a fellowship seminar faculty member (other than the mentor), who will present the document as a case report at a fellowship seminar (all fellows present). The faculty member will receive the VCP document at least 2 weeks prior to the fellowship seminar. Further VCP evaluation and sharing of similar trainee experiences will be encouraged at the seminar.

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Facilitator, faculty and mentor responsibilities

The facilitator is essentially ‘task master’ who ensures trainee compliance (three VCPs per year). The facilitator may stipulate prespecific target dates for each trainee and correlate this with fellowship seminars (anticipate four to six VCP discussions per seminar). Appropriate telephonic and mail reminders are essential. The facilitator will compile a list of volunteer mentors and may allocate VCPs to mentors with specific interests. Ideally, the facilitator should be a member of the executive committee of VASSA. The facilitator will keep records of all VCPs submitted and will be responsible for mentor/trainee blinding and substitution with reference numbers. Records may be submitted to VASSA Exco for future analysis of the programme. Prior to fellowship symposia, the facilitator will submit appropriate VCPs to faculty members for formal case presentation at the seminar. The VCP topic will be part of the seminar programme. The seminar faculty will present the VCP case and stimulate further discussion among fellows and all attendees. Two faculty members will be tasked with assessing the quality of the VCP in a standardised format:
- concise presentation of case
- specific learning issue identified
- evidence used to substantiate argument
- demonstrate reflection with understanding of topic.

Standardised mentor feedback will include gaps in knowledge, existing knowledge, level of understanding, potential existing errors, specific suggestion on improvements and correlation with evidence.

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<th>Table 1. Vascular case portfolio template</th>
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<tr>
<td>Fellow details</td>
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<tr>
<td>Year of training</td>
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<tr>
<td>Date</td>
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<tr>
<td>Title of case</td>
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<tr>
<td>Diagnostic studies</td>
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<tr>
<td>Medical management</td>
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<tr>
<td>Intervention</td>
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<tr>
<td>Evidence/literature (list papers)</td>
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<td>Mentor feedback</td>
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Each point will carry a 1 - 5 grading. The VCP quality grading analysis will be submitted to the facilitator for record keeping (Excel format). Two sets of VCP MCQs (for each VCP) will be constructed as a separate faculty task and submitted to the examination convenor. A separate VCP MCQ bank will be developed with a date allocation to each MCQ.

Vascular case portfolio programme assessment

Various aspects of the programme will be assessed at different stages. Compliance (number of VCPs submitted per year) and subjective trainee satisfaction will be documented by the facilitator. VCP quality will be assessed during fellowship seminars. An independent assessment of VCP MCQs will be undertaken after each examination (compared with non-VCP MCQs). Other assessments, such as overall candidate examination success v. rate/quality of VCP submissions, may be undertaken. Incremental data collection will ensure continuous programme evaluation.

Conclusion

While there is no consensus regarding an optimal fellowship curriculum vitae, the total vascular training portfolio will provide direction and standardisation of educational activity. Self-reflective activities (VCP programme) may encourage ‘special interest’ development and motivate fellows towards specific research initiatives. Merging an existing educational and examination programme with a VCP programme allows for easy implementation. Similar portfolio development programmes may also benefit other subspecialist trainees (e.g. gastrointestinal tract, trauma). If undertaken by various societies, future analysis of more robust multidisciplinary portfolios will provide invaluable educational information.

References