View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Elsevier - Publisher Connector

The algorithm allows completion of the "audit loop" and ensures that if clinical inspection by an elected committee uncovers substandard performance, then corrective steps can be followed in a fair and prearranged manner.

The development and implementation of the AVA has been a challenge. Although compliance in the public hospital sector is excellent, that in private hospitals is not to the satisfaction of the ANZSVS at this stage. Some surgeons allow data managers to enter data in public hospitals, but they either do not possess the required minimal computer skills or are not prepared to spend the time to enter their own data in private hospitals. This can occur despite the application's facility to print data entry sheets from the ANZSVS Web site and have the data entered manually on their behalf. Surgeons who have familiarized themselves do not find this time-consuming except in some isolated regions where the Internet speed can vary. This aspect should no longer be an issue in Australia with the development of a National Broadband Network (already commenced). The reports reflect only discharged patients, so this aspect of data entry requires regular monitoring by the administrator. The audit will only become a robust representation of true outcomes if maximal participation is achieved.

Data validation is vital. It is very important that verification of data entered is performed. Although the method used during the first year of implementation is not very robust, it enabled the administrator to cross-check with data entered in the AVA and allowed conclusions to be made regarding whether complications occurred during admission. This process will be significantly strengthened in future years, involving site visits to hospitals to validate data entry directly.

After 1 year of operation, the ANZSVS glass of complete data entry for the AVA is 60% full and 40% empty. There is cause for high satisfaction that accurate and high-quality data are being collected, but also a realization that the audit aims of the ANZSVS will not be fully realized without maintaining a cultural shift to complete data entry.

CONCLUSIONS

An Internet-based audit of total surgical practice is possible on a national/binational level and has many benefits both for the Society of the members and for individual members alone. A unique feature of this audit is the compulsory nature of the total practice activity. Signed declarations of participation by individual surgeons are an effective means of separating complete from incomplete individual data. The AVA has already gained recognition in the public arena during its first year of operation as an important benchmark of correct professional surgical behavior. The future challenges are to improve total participation to an acceptable level and to ensure accurate data entry via a robust validation system. Only by meeting these challenges will the AVA become an accurate and credible audit of national/binational vascular surgical practice.

The ANZSVS executive sincerely thanks all members and trainee members who fulfilled their constitutional requirements by fully complying with complete data entry to the Australasian Vascular Audit during its inaugural year of operation. This greatly assists the ANZSVS in its aim to maintain and improve on high-quality care of vascular surgical patients throughout Australasia. The ANZSVS is also grateful for the excellent secretarial and administrative support during the development of the Australasian Vascular Audit (AVA) provided by Ms Abby Richardson (General Manager ANZSVS), Ms Amanda Richmond (past executive officer ANZSVS), and Mr Rhys Smith (executive officer ANZSVS).

AUTHOR CONTRIBUTIONS

Conception and design: BB, CB, MG, RF, IT
Analysis and interpretation: CB, BB, RF, IT
Data collection: BB, CB
Writing the article: BB, CB, RF, IT
Critical revision of the article: BB, CB, MG, RF, IT
Final approval of the article: BB, CB, MG, RF, IT
Statistical analysis: CB
Obtained funding: Not applicable
Overall responsibility: BB

REFERENCES

1. Menyhei G, Björck M, Beiles B, Halbakken E, Jensen LP, Lees T, et al. Outcome following carotid endarterectomy: lessons learned from a large international vascular registry. Eur J Vasc Endovasc Surg 2011;41:735-40.
2. Beard J. Comments regarding 'Outcome following carotid endarterectomy: lessons learned from a large international vascular registry'. Eur J Vasc Endovasc Surg 2011;41:741.
3. Beiles CB; Melbourne Vascular Surgical Association Audit Committee. Melbourne vascular surgical association audit. ANZ J Surg 2003;73:69-76.
4. Pettigrew RA, McDonald JR, van Rij AM. Developing a system for surgical audit. Aust N Z J Surg 1991;61:563-9.
5. Spiegelhalter DJ. Funnel plots for comparing institutional performance. Stat Med 2005;24:1185-202.
6. Hosmer DW, Lemeshow S. Applied logistic regression, 2nd ed. New York: John Wiley and Sons; 2000.
7. Grunkemeier GL, Jin R. Receiver operating characteristic curve analysis of clinical risk models. Ann Thorac Surg 2001;72:323-6.
8. Davies G. Professionalism of surgeons: a collective responsibility. ANZ J Surg 2011;81:219-26.
9. Civil ID, Dickinson IC. Surgical professionalism: are we letting this slip from our grasp? ANZ J Surg 2011;81:209.

Submitted May 15, 2011; accepted Jun 20, 2011.

INVITED COMMENTARY

Jack L. Cronenwett, MD, *Lebanon, NH*

The Australia and New Zealand Society for Vascular Surgery (ANZSVS) has implemented a regional audit system (Australasian Vascular Audit [AVA]) that received data on 40,000 vascular procedures by 60% of its members during the first year. This is an extraordinary accomplishment by this Society-owned and financed quality assurance initiative. It has many similarities with the Society

for Vascular Surgery Vascular Quality Initiative (SVS VQI) that began this year, using the model of regional quality improvement developed by the Vascular Study Group of New England (VSGNE). It is interesting to compare and contrast these new quality efforts by ANZSVS and SVS. Both the AVA and VQI use secure web-based data entry systems, have confidentiality protections in place with legal protection, and meet certain board certification requirements. Both aggregate data from multiple centers to generate risk-adjustment algorithms and provide benchmarked reports to surgeons and centers. Further, the AVA Audit Monitoring Committee and the SVS Patient Safety Organization (PSO) have very similar oversight responsibilities.

The AVA is primarily a quality assurance audit, designed to identify performance outliers in order to meet minimal expected standards. In contrast, the VQI is a quality improvement effort that is designed to identify best practices and implement these at the regional level through focused projects and quality measure reporting. Because it is organized as a PSO, its work product cannot be used to discipline individual surgeons, which encourages honest reporting for anonymous benchmarking. The AVA is mandatory for ANZSVS members and requires data from all procedures performed (although it only provides outcome reports for aortic, carotid, infrainguinal, and arteriovenous access procedures). The VQI is voluntary and includes aortic, carotid, and peripheral open/interventional procedures, but does not capture all (less frequently performed) procedures. AVA captures in-hospital data only, while VQI requires 1-year follow-up data for key outcomes, and links with national death data to calculate late survival. AVA uses an "honor system" for members to certify submission of all cases, combined with a random 5% chart audit, while VQI audits registry data against hospital billing data to insure consecutive case submission. AVA is funded by the ANZSVS while VQI is funded by participating hospitals.

Despite these differences, it is remarkable that the ANZSVS and SVS have developed such similar but parallel quality projects without directly working together. They have undoubtedly both been influenced by increasing public demands for improved health care quality and transparency. Going forward, these initiatives will no doubt learn from each other, and perhaps both will incorporate elements of quality assurance and quality improvement. The fear is that such efforts may not be sustainable, because of time, cost, or perceived lack of value. Key future efforts will require incorporation of data elements into the electronic medical record to reduce data entry burden and allow information to be used during the process of care. Further, linkage with claims data could allow population of late outcome events that are difficult to obtain in these types of registries. Finally, obtaining public/government/third party payer support may become possible if we can show improved quality through these efforts. Congratulations to both the ANZSVS and SVS for launching these laudable quality efforts.