Cataract outcome programs proliferate along with managed care

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Cataract surgery outcomes systems hitting the market allow surgeons to track the results of their surgery. Several systems allow comparison of the surgeon's own outcomes to those in a national database.

As demand for outcomes reporting grows with the spread of managed care, a number of systems for cataract surgery outcomes documentation have appeared on the market.

They come in a range of formats, from self-contained software programs that run on the office computer to subscription services that require data entry by a central clearinghouse.

Whatever form they take, however, all the systems have the common feature of allowing surgeons to track the results of their surgery, whether for managed care or Medicare documentation or for personal analysis and improvement of technique. Several allow comparison of the surgeon's own outcomes to those in a national database.

HMOs and other managed care purchasers want to know as much as they can about the level of performance of the providers they contract with. If you have not yet been asked to supply outcomes data to a managed care contractor, those involved say, the request is probably not far off.

"Practices have collected a lot of these data in the past, but not in ways that it was usable or useful to them," said **Dick Minors**, of Summit Medical, a national medical database management company. "You need to have ways to get and keep that information.

"HMOs normally start by asking for patient satisfaction and cost analyses, and more and more are now asking for clinical data along with that," Minor said. "We and others are providing tools that allow surgeons to collect this data and have some powerful information for use in the future."

In addition to aiding documentation, some outcomes reporting systems also have practice management and practice improvement applications. The information gathered by some systems can be used to create patient records and generate letters to patients and other professionals. In other systems, results of different surgical techniques can be compared by the surgeon to see which is the most effective.

The following listing of software and service packages is not meant to be comprehensive. As one industry source said, many companies are "jumping on the outcomes bandwagon" and producing outcomes analysis systems of greater or lesser usefulness. This is a review of some of the established names in the field and what their systems are capable of doing. An accompanying chart lists the hardware and operating systems needed to run the software for each system.

ASCRS/Summit Medical

Summit Medical has been contracted by the American Society of Cataract and Refractive Surgery, initially to manage a database of cataract and refractive surgery outcomes, and eventually to track other aspects of ophthalmic care, including glaucoma and retina outcomes, patient satisfaction and cost analyses. Summit has established outcomes products in other specialties, including thoracic surgery and cardiology.

According to **Lucy Santiago** at ASCRS, the society helped develop and design the database, and contracted Summit to collect the data. However, as Summit's Minor noted, "it's really open to any ophthalmologist who's interested in the collection of this data; it's not limited to ASCRS members."

Minor said Summit offers practices the option of purchasing a license for its software package, in which case the practice enters its own data on an office computer, or of subscribing to a service in which data is collected on forms and submitted to Summit for data entry.

"The data collection forms and the software mirror each other," Minor said. Practices moving toward paperless operation can collect the data on computers in the lane or laptops. Or data can be collected on paper and then transferred to computer. If the practice chooses to subscribe and submit data for entry by Summit, they pay on a per-patient basis. "It would have to be a small practice to make subscription work for them economically," he said.

Preoperatively the Summit system allows the operator to record patient history, preop status including visual acuity, IOP, keratometry readings, etc., and operative planning data such as IOL power and procedure plan. Postoperative information includes a procedure summary and postop data at several follow-up intervals. A functional status questionnaire to be filled out by the patient is also supplied for preop and postop self-assessment.

The information collected by the computer database in the office remains available for manipulation and analysis by the surgeon, Minor said. Any fields within the database can be cross-referenced for comparison, he said.

In addition, Summit collects a computer disk from each office on a regular basis. Confidential information such as surgeon, patient and hospital identifiers are removed by Summit staff, and the outcomes data is dropped into a national database. The updated national data is then sent back to all subscribers and software licensees for them to compare their own outcomes against. Confidentiality of the data is "key and guaranteed," Minor said.

The software can also be customized to collect any additional data the surgeon wishes to analyze, Minor said, although this information would not be included in the national database.

Another feature of the system is a document generator that can be cross-referenced with patient and referral listings. This allows the practice to create letters and documents for the patient or the patient's primary care doctor. "The practice creates a shell document such as a referral letter, and then merges it with the patient data by pressing a hot key, and they've got their letter," Minor said.

Cost and patient-satisfaction databases will be added to the ophthalmic package "very soon," Minor said, at which point users will be able to cross-reference disease states, treatment modalities, cost data and patient satisfaction, he said.

The cataract database costs about $7000, Minor said. Technical and customer support is available by phone.

OPIS/CPR

The Ophthalmic Patient Information System (OPIS), is a practice management tool that was recently expanded to outcomes documentation capability with the addition of a Computerized Patient Records (CPR) module. According to **Frank Puzio**, OD, of OPIS, the system was initially designed for optometrists. Many ophthalmologists began using the original system, so Puzio created a separate MD version. Recently OPIS has been working with **Bradford Shingleton**, MD, of Boston, to create the CPR module for tracking cataract surgery outcomes.

The OPIS/CPR system "allows the surgeon to produce a clinical record electronically, eliminating the need for a handwritten record," Puzio said. "It contains thousands of prewritten text fields, composed by ophthalmologists, so that almost no typing is required to produce the record."

At the same time the record is created, the system automatically produces a letter to the primary care physician, Puzio said. At the end of each month the system creates a statistical summary report based on all the clinical data entered.

Puzio said Shingleton developed the CPR module based on the guidelines of the ASCRS preferred practice pattern for cataract surgery, modified for use in tracking surgical outcomes. The system tracks patient satisfaction in addition to the clinical data.

So far the OPIS/CPR system is for personal use only, and does not allow comparison with a national database.

Hardware Requirements to Support Outcomes Documentation Software

	Computer type	Operating system	Operating environment
ASCRS/Summit OPIS	486 PC, 8 Mb RAM	DOS	Windows
	PC	DOS	Can run in Windows or with touch-screen/pen system compatible, but these are not necessary
ASSORT	386 PC, 8 Mb RAM, 20 Mb hard disk space available	DOS	

Payor analysis from the Summit Medical-ASCRS system.

Medicare 54% | HMO #1 20% | HMO #2 12% | HMO #3 6% | Medicaid 5% | Private Pay 3%

Grouped visual acuity analysis over time from the Alpins ASSORT software.

Visual Acuity Without Glasses CAT 101

Daniel S. Durrie, MD, a partner in RSS, said the firm originally planned to offer an in-office computer software system, but decided that a fax-in system would be more convenient for their customers. "Computers can crash, staff take vacations, data may be entered incorrectly," he noted. "The RSS outcome analysis system doesn't rely on staff or computers."

The service does, however, allow comparison of individual results to its national database. Each month a computer disk with operating software is sent to subscribers, who can create customized statistical reports comparing performance of individual surgeons within the practice, or comparing the user's results with the overall national database.

The fax-based system adapts well to comanagement situations as well, Durrie noted. Optometrists or other physicians conducting the follow-up care can be provided with the appropriate forms, which can then be faxed to RSS and to the surgical practice.
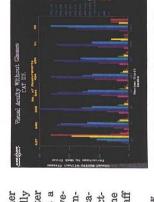
ASSORT

The Alpins Statistical System for Refractive Surgery Techniques (ASSORT) also began as a tool for analyzing results of refractive procedures, but has been expanded to include cataract surgery. Its developer, **Noel Alpins, MD**, of Melbourne, described the program as "a research and practical tool for planning and evaluating surgery."

The software uses the powerful Paradox relational database to store and manipulate surgical data, including preop and postop refractions, IOL power and style, and vision changes over the follow-up period. It is strongest in its ability to manipulate numerical information, Alpins said, but it also includes text fields for recording such events as complications, postop capsulotomy or other data. The program can sort and cross-reference using any data categories to facilitate surgical analysis.

It is inexpensive compared to some other systems available, with the complete package including the original patient-information software costing about $2000. Puzio said the CPR software might be available separately in the future, but for now "anyone who purchases it gets the whole thing."

RSS

Refractive Surgery Services (RSS), as the name implies, originally began as a service for tracking results of refractive procedures. Now a cataract outcomes version of the service has been added.

Rather than software, RSS supplies paper forms to be filled out by the practitioner. Tablets of forms for initial data entry and for each follow-up visit are provided, customized to the surgeon's follow-up schedule. The initial form records patient history and preop status and details the surgical procedure; the postop forms note changes over time.

The forms are filled out and faxed to RSS, where data entry takes place. The original forms can be kept in the practice for inclusion in the patient's medical record.

The ASSORT system can be networked to automated diagnostic instruments such as corneal topographers or keratometers, to have numerical information input directly without the need for keyboarding. It also allows the surgeon to determine a personalized A-constant for cataract surgery.

Calculation of astigmatic data for refractive cataract surgery is a particular strength of ASSORT, Alpins said. In the surgical planning stage, the program can graphically illustrate the astigmatic effect of cataract incision placement at any axis, helping the surgeon to choose the optimal incision site. During follow-up, the surgeon can chart astigmatic change using an advanced vector analysis system.

Alpins said the system "is not meant to be an automated medical records system," but rather is a tool for improving surgical results. "It's more directed toward managed care entities by demonstrating that the user objectively analyzes surgical results using numerical and graphical capabilities," he said, "and is keen to obtain the best possible outcomes, which can be demonstrated using this program."

For instance, Alpins said, a surgeon could compare two series of cases using different nuances of technique to see which yielded the best results. "You've got the data right there, and can design and execute your own studies," he said.

The ASSORT system is not currently distributed by a major ophthalmic company, Alpins said, although that may change soon. In the meantime, those interested in the system should contact Alpins directly in Melbourne, he said.

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ABES/ACES

The American Board of Eye Surgeons (ABES) has compiled a database of cataract surgical results from cases submitted by candidates for its certification process [see June 1 issue, page 33]. The organization plans to offer a service within several months, through which surgeons can compare their cataract surgery results to the national database, according to **Priscilla Perry**, MD, president of the ABES Board of Directors.

Although the program is "still in the development stage," Perry said, the plan is to allow those certified by ABES, as well as members of the American College of Eye Surgeons (ACES), to submit a sampling of cases to be compared to the ABES database. ACES is the educational arm of ABES, primarily responsible for the annual Quality Surgery Seminar and other educational programs.

In the ABES certification process, applicants submit data to ABES for evaluation, detailing 50 consecutive cataract surgery cases on standardized forms. The forms list preop, operative and follow-up data, including early and late postop visits. A videotape evaluation as well as additional data collection is performed onsite at the applicant's practice as a second part of the evaluation.

Once the certification process is complete, the surgical data is sent on to the Center for Clinical Research (CCR) in Chicago, where it is entered into the national database. The CCR is "not involved in the certification process at all," according to a spokesperson, but only in the management of the database.

The ABES database contains information on more than 13,000 cataract procedures performed by 260 surgeons. Collection of data began more than a decade ago with the establishment of the ABES certification process. It is said to be the largest database of cataract surgical results in the world. ∎