

Review

The growth of ambulatory surgery centres in the United States

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This paper looks at the development of surgery centres in the USA and the factors which have had an important impact on their growth and future. This includes growth trends and demographics such as the types of procedures performed at the surgery centres. Other factors looked at include the economic impact of surgery centres and reimbursement by government health programmes and other third party payors. Studies on complications and patient satisfaction also discussed.

Key words: Surgery centres, ambulatory surgery

The concept of outpatient surgery dates back to the early 1900s, however, the evolution of ambulatory surgery centres (ASCs) in the USA did not take place until 1969. This paper will look at the development of surgery centres in the USA and the factors which have had an important impact on their growth and future. When discussing ambulatory surgery centres the sites referenced are the 'freestanding' facilities. This can include surgery centres that are housed in buildings where they are the sole entity within that structure. These facilities can also include surgery centres that are housed within a high-rise building or structure housing other medical and/or businesses. The surgery centres described below are not housed within a hospital.

A growing trend

In 1970, Dr Wallace Reed and Dr John Ford opened the first freestanding ambulatory surgery centre in the USA. An attempt to open a facility the year before had been made by a physician in Rhode Island, but the project failed due to lack of financial backing. The primary issue that initiated the planning of this first successful freestanding surgery centre, which was built in Phoenix, Arizona, was the concern on the part of patients, insurance companies and the government of the high costs of hospital care¹. A 1968 report of the United States Natio-

nal Advisory Commission on Health Facilities included in its recommendations to lower health care costs that:

1. experimentation is needed to develop effective programmes for financing health services from a variety of sources; and
2. communities should aim to improve the less developed components of comprehensive health care services².

The United States health insurance industry was also looking for ways at this time to find alternatives to high cost hospital care. In early 1969 a member of the Health Insurance Advisory Council stated that the solution was in:

1. stimulating experiments and innovations in the organization and delivery of health care services;
2. obtaining broader health insurance coverage for alternatives to inpatient care; and
3. involving the medical profession increasingly in the effort to control costs³.

There was also a call for alternative health care delivery sites, by physicians and nurses in the hospitals who found it inconvenient to have to move from the main operating room to an emergency room or small treatment room to attend to their ambulatory surgery patients. These rooms were not equipped for outpatient surgery.

The concept of providing safe outpatient surgical care at lower prices in the USA had been discussed several years earlier. In the June 27, 1966 issue of the *Journal of the American Medical Association* it was noted from a study on outpatient surgery that, "It is possible to conduct a program of anesthesia for outpatient surgery without compromising patient safety. Intelligent selec-

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Table 1. Number of surgery centres

Year	Total no. surgery centres
1970	2
1971	6
1972	13
1973	21
1974	33
1975	42

tion of cases and anesthesia method minimizes the incidence of complications. The feasibility and practicality of outpatient surgery were demonstrated by the fact that only 33 of 804 patients (4.1%) were admitted as inpatients, and most of them during the early part of the study period. A properly equipped and staffed outpatient surgical unit is necessary; the availability of such a facility makes rapid expansion of surgical capabilities feasible in civil disaster. This flexibility is an attractive feature which can be helpful in obtaining funds for such expansions. An estimated \$28 000 in savings to patients or insurance companies was achieved and approximately 1000 hospital days were saved during the study period⁴. Thus, the need and instigation of the concept had been established for the first freestanding surgery centre to be built in the USA. After being open for its first six months in 1970 the 'Surgicenter', as it was called, had 225 surgeons on staff and approval for reimbursement from 44 insurance companies. Another ambulatory surgical facility opened later in 1970. During 1970 over 5700 procedures were performed at these two facilities. In 1971 four more ASCs opened around the country and the American Medical Association passed a resolution endorsing the concept of outpatient surgery under general and local anaesthesia for selected procedures and patients⁵.

In 1973 the American Society of Anesthesiologists issued 'Guidelines for Ambulatory Surgical Facilities'. Then in 1974 a contract was signed for a Medicare (the US federal government programme that provides health-care for individuals 65 years of age and older) demonstration project with six surgery centres. By 1975 there were a total of 42 surgery centres in the USA⁶.

The real growth in outpatient surgical centres began after 1976 with 25 new facilities opening their doors to patients. Ambulatory surgery centres were not confined to a freestanding building. Some were constructed in high-rise buildings or as part of other medical facilities. By 1980, 10 years after the first ASC opened in Phoenix, Arizona, there were over 120 surgery centres in the USA⁷.

In the 1980s over 900 ASCs have opened, bringing the total to 1221 freestanding surgery centres as of December, 1989. The number of surgical procedures increased from 1.72 million performed in surgery centres in 1988 to 2.16 million in 1989. This represents a 25.6% increase⁸. Ophthalmic, gynaecological, otolaryngological and orthopaedic surgeries represent 67% of all procedures performed in US surgery centres. Two-thirds

Table 2. Number of surgery centres and operating rooms

Year	No. surgery centres	No. operating rooms
1976	67	219
1977	80	258
1978	103	331
1979	111	382
1980	127	431

Table 3. Number of surgery centres and procedures performed

Year	No. surgery centres	Total surgeries performed
1985	459	783 864
1986	592	1 033 604
1987	865	1 383 540
1988	964	1 722 367
1989	1221	2 162 391

Table 4. Specialties performed at surgery centres

Procedure	Performed (%)
Ophthalmology	28.2
Gynaecological	18.9
Ear/nose/throat	10.8
Orthopaedic	9.5
General	8.7
Plastic	7.7
Podiatry	4.6
Urology	3.8
Gastroenterology	3.2
Dental	1.7
Pain block	1.3
Neurology	0.3
Other	1.3
Total	100

Table 5. Ownership of surgery centres

Ownership of surgery centres	1989 %	1988 %
Independent	67.1	68.4
Corporation	21.5	20.8
Hospital	11.4	10.8

(67.1%) of the surgery centres in the USA are independently owned. One-third of the remainder (11.4%) are hospital-owned and the other 21.5% are owned by corporations⁹.

The largest corporate chain ASC owner today is Dallas-based Medical Care America (MCA). In 1987,

MCA bought Alternacare (Los Angeles, CA) which had 13 facilities bringing MedCare's total to 52 ASCs nationwide. Then in 1989 MCA bought Medivision, a company composed of ophthalmic facilities. Today MCA has a total of 89 surgery centres within its corporation and has merged with a large home infusion company, Critical Care America.

From 1984 to 1989 hospitals have lost 13% of the market share of outpatient surgery. In 1984 they performed 89% of all outpatient surgery whereas in 1989 they performed 76%¹⁰.

Reasons for growth

There appear to be three primary factors impacting the growth and use of ASCs. They are advances in medical technology, consumer awareness and economics.

The medical advances that have been developed since 1970, when the first freestanding surgery centre was opened are numerous. Several advances in particular which have contributed greatly to the growth of ASCs include technological advances such as the laser, endoscopic and arthroscopic surgical instruments. These advances have allowed physicians to perform many more procedures on an outpatient basis than previously. Approximately 60% of all surgery performed today can be done on an outpatient basis. Procedures such as vaginal hysterectomies, cholecystectomies, hip arthroscopy and modified mastectomies have been performed on an outpatient basis¹¹. Also, the advances in analgesia allow the patient to be alert and able to go home within a few hours after their surgery.

The patient, as well as the physician, is becoming more aware of the advantages of having surgery performed in outpatient surgery centres. Physicians find it easier to schedule time for operating rooms in ambulatory surgery centres, compared to the hospitals where physicians compete for operating room time with inpatient surgery and emergency cases. The patient finds surgery centres comfortable and suited for their needs – a setting for the healthy patient undergoing elective surgery, compared to a hospital setting that also serves patients who are more seriously ill.

Economics is playing an important role in the growing utilization of outpatient surgery centres by third-party payors. Surgery centres can maintain lower overheads and provide high quality healthcare at lower costs, compared to hospitals which must remain open and staffed 24 hours a day as well as providing other, costlier services for sicker patients. With rising medical costs, third-party payors are taking a closer look at ASCs as the site for outpatient surgery for their beneficiaries. Approximately 50% of all surgery centres had contracts with health maintenance organizations (HMOs) or prospective payment organizations (PPOs). Patients who must pay coinsurance also find the lower costs of ASCs attractive. A survey conducted by Blue Cross Blue Shield of North Carolina (a large insurer of outpatient surgery in that state) of a comparison of hospital and surgery centre charges found an overall difference of 47%. That

is, the total charges for a hospital compared to the surgery centre for 21 procedures performed in each was 47% less in the surgery centre than in the hospital for exactly the same procedure.

This leads us to another factor that has a major impact on the utilization of surgery centres. That factor is outpatient surgery performed in ASCs for Medicare beneficiaries. Medicare is the US federal government health-care programme for citizens over the age of 65. It is administered by the federal agency called the Health Care Financing Administration (HCFA).

The US government first approved for Medicare to pay the costs of their patients who have surgery performed in ambulatory surgery centres in 1982. At that time they only approved reimbursement for approximately 100 procedures, despite the fact that they were reimbursing for all outpatient surgery if performed in a hospital. The 100 procedures if performed in an ASC were classified by Medicare according to a four-group reimbursement classification system which ranged from Group 1 (\$231) to Group 4 (\$336). This did not include the surgeon's fee but was reimbursement for the facility to cover its costs for nurses and staff salaries, utilities, equipment and medical supplies used, and overheads. Physicians, nurses and administrators who own and operate surgery centres felt that the reimbursement rates were too low to cover costs in many instances. They also felt that HCFA should not have limited to only 100 procedures those which Medicare would reimburse. If a procedure was reimbursed at a hospital as outpatient surgery it should also be reimbursed in an ASC.

ASCs must pass strict inspections by HCFA in order to be reimbursed for Medicare beneficiaries. Thus, if a facility passes such an inspection it is deemed safe and properly staffed and equipped to operate on these patients. The Federated Ambulatory Surgery Association, and other groups representing outpatient surgery in the USA, have been working very hard to have the US Congress change the regulations that limit the number of procedures that Medicare will reimburse if performed in an ASC, as well as increase the amount reimbursed. In 1987 we were successful in getting such an amendment passed that called for annual updating of the reimbursement rates and bi-annual updating of the list of procedures. However, we are now seeking additional amendments to ensure that HCFA follows Congress' mandates in a timely manner.

Currently over 2100 procedures are reimbursed by Medicare if performed in an ASC. These procedures are divided into eight payment groups ranging from \$295 to \$940.

There is a commitment on the part of Members of Congress and the President of the United States to lower the costs of health care for Medicare beneficiaries while insuring high quality medical care. Due to the lower overheads surgery centres have compared to hospitals it is believed that surgery centres will play an active role in helping the government lower healthcare costs and maintain high quality care.

Table 6. Comparison of hospital and FSAF institutional charges for 21 frequently performed surgeries

<i>Outpatient procedure</i>	<i>Institutional charge — hospital \$</i>	<i>Institutional charge — FSAF \$</i>	<i>Hospital charge @ 70% \$</i>
Removal of skin lesion, trunk	273	280	191
Removal of skin lesion, elsewhere	262	256	183
Removal of breast lesion	867	523	607
Remove wrist tendon lesion	879	517	615
Knee arthroscopy	1462	837	1023
Repair of nasal septum	1223	657	856
Remove tonsils and adenoids	964	492	675
Removal of tonsils	998	464	699
Upper GI endoscopy diagnosis	375	166	262
Diagnostic colonoscopy	461	267	323
Repair inguinal hernia	1271	601	890
Cystoscopy	453	259	317
Circumcision	952	409	666
Removal of sperm duct(s)	452	293	316
Biopsy of cervix	940	429	662
Dilatation and curettage	821	403	575
Laparoscopy of pelvis	1066	549	746
Revise median nerve at wrist	834	552	584
Lasering of secondary cataract	302	132	211
Remove cataract, insert lens	2012	835	1408
Create eardrum openings	650	398	455
Average	834	444	584
% Difference		47%	24%

Quality of care

Of primary concern to the physicians, nurses, administrators, patients and payors for healthcare in the USA is the quality of medical care.

Government regulations

In the USA ASCs are among the most heavily regulated providers of medical care. Of the 50 states, 41 require ASCs to obtain state licensure and these states usually inspect licensed facilities at least once a year. In addition, as noted previously, surgery centres wishing to be reimbursed for Medicare patients must undergo inspections as conditions of participation (as hospitals must) by the federal government and obtain certification as a Medicare provider.

Accreditation

In addition to state and federal inspections, many surgery centres choose to go through a voluntary accreditation process conducted by their peers. Many of these peer-related surveys for surgery centres are conducted by the Accreditation Association for Ambulatory Health Care (AAAHC).

In the early 1970s, when the surgery centre industry was just beginning, FASA recognized the need for the development of voluntary standards. It developed standards and in 1975 began conducting an accreditation programme for surgery centres.

In 1979, with the cooperation of several other associa-

tions involved with ambulatory health care (e.g. college health facilities, physician group practices and community health centres) FASA helped organize AAAHC. The primary purpose of AAAHC was, and still is, "to organize and operate peer-based assessment, education and accreditation programmes for ambulatory health care organizations as a means of assisting them to provide the highest achievable level of care for recipients in the most efficient and economically sound manner"¹².

AAAHC established standards for accreditation. Applicants for AAAHC accreditation are provided a manual to help them prepare for their accreditation survey. They then undergo a one to two day survey conducted by two or three professionals (usually a physician, nurse or surgery centre administrator). These surveyors undergo specific initial and ongoing training on codes and all components of the surveying process. Following their survey the survey team submits a report noting any deficiencies. Upon review by an accreditation committee the centre is awarded a 1–3 year accreditation certificate or is denied certification if warranted. Thus, between state licensure surveys, federal Medicare surveys and peer-conducted accreditation surveys, surgery centres in the USA undergo rigorous scrutiny to ensure quality of care.

Studies on complications and satisfaction

In 1984 FASA conducted a year-long study of complications experienced by patients at surgery centres and the factors that influenced the occurrence of those complica-

Table 7. Complications experienced

<i>Aetiology</i>	<i>Complications</i>
Primarily related to surgery	366
Primarily related to anaesthesia	104
Primarily related to pre-existing disease	49
Multiple factors, cause unknown or unclear, fortuitous	151

Table 8. Site of complications

<i>Phase of patient care</i>	<i>Complications %</i>
Operating room	14
Post-anaesthesia care unit	17
Post-discharge (14 days)	69

Table 9. Types of complications

<i>Surgical procedure</i>	<i>No. complications</i>
Dilatation & curettage	41
Myringotomy	40
Tonsillectomy and/or adenoidectomy	32
Excision of breast mass	20
Cystoscopy	15
Laparoscopy, diagnostic	14
Laparoscopy, sterilization	14
Arthroscopy of knee	11
Augmentation mammoplasty	11
Excision of soft tissue mass(es)	11
Excision of skin lesion(s)	6
Dental extractions	8
Herniorrhaphy	5
Bunionectomy	4
Cataract extraction with I.O.L.	2

tions¹³. The questionnaire which 40 ASCs completed for each of its patients in 1984 provided a multi-dimensional view of the ambulatory surgery population. This population encompassed 87 492 patients.

A summary of the complications associated with each of four general categories of aetiology: surgery, anaesthesia, pre-existing disease and multiple factors/other causes, are depicted in Table 7. The incidence of major complications was low – less than 1%. There were 635 patients who experienced at least one complication. About two-thirds of the complications occurred in the post-discharge period.

The two most common complications were bleeding and wound infection; however, the incidence of wound infection was very low and the incidence of bleeding was well within the anticipated and established range. There was a definite relationship between the incidence of complications and the length of surgery. In addition, there was a significant relationship between complications and certain specific surgical procedures such as tonsillectomy and adenoidectomy, augmentation mammoplasty, arthroscopy of the knee, and other more complex plastic surgical procedures.

There was only one death reported during the course of this study. The patient was a 75 year old man who expired on the third post-operative day. He had a history of severe and multiple pre-existing diseases. He was scheduled for direct laryngoscopy and bronchoscopy using general anaesthesia. His course during the operating room and post-anaesthesia care unit phases of care were uneventful. The patient died on the third post-operative day following a myocardial infarction. There was no evidence that the patient's experience in the ASC was related to his death.

A more recent study, conducted in 1988 by the US Department of Health and Human Services' Office of the Inspector General (OIG), compared Medicare beneficiaries' satisfaction with selected outpatient surgical and diagnostic procedures in both hospital outpatient departments and ASCs¹⁴. The OIG surveyed 837 Medicare beneficiaries who had had either cataract extraction with intraocular lens implant, upper gastrointestinal endoscopy, colonoscopy or bunionectomy procedures between January and March of 1988. The major findings from the survey were as follows:

- Beneficiaries prefer outpatient surgery to inpatient hospital stays;
- Beneficiaries were very satisfied with both ASCs and hospital outpatient departments: 98% of ASC patients compared to 94% of hospital outpatient departments rating the facilities good or better;
- Most respondents reported no postoperative complications;
- Postoperative care was not a problem for most beneficiaries;
- Physicians, not beneficiaries, decide whether the surgery will be performed in an ASC or the hospital outpatient department.

The report went on to pronounce ASCs and hospital outpatient departments, "equally safe environments".

Reasons patients cited for a preference of ASCs over hospital outpatient departments included less paperwork, less cost and a more convenient location and parking. Also cited was no waiting at the ASC, more organized and friendlier staff compared to crowded and uncomfortable hospital settings. It appears from the survey that respondents who had cataract surgery spent less time at the ASCs than they did in the hospital outpatient departments. Two-thirds of the ASC cases spent less than four hours in the facility, whereas, 25% of the hospital department cataract patients spent more than six hours at the hospital. Thus, the growing preference for outpatient surgery to inpatient hospital surgery and the ability of physicians to perform more procedures on an outpatient basis due to advances in analgesics and medical technology point to future growth of surgery centres in the USA.

The future for ASCs

As noted previously, over two million procedures were performed in ASCs in 1989. This figure exceeded 2.5 million in 1991.

In addition to improved drugs and medical technology, the development of overnight recovery care centres on the medical scene in the USA has expanded the scope of complexity of procedures that can be performed in surgery centres. These overnight recovery care centres currently exist in states such as Arizona, North Carolina and California. In fact, the state of California has approved a demonstration programme on utilization of recovery care centres there. The purpose of the overnight recovery care centre is to provide a lower costing alternative to hospitalization when a patient who has undergone outpatient surgery may need observation or minor medical attention for 24–48 hours following surgery. Not being in need of the more expensive, in-hospital setting, recovery care centres allow a patient to undergo their surgery at the less costly outpatient surgery centre and then spend a night at the recovery care centre which is next to or connected with the ASC.

The overnight recovery care centres can provide a more comfortable, less hospital-like setting for the patient and his/her family. The overnight recovery care centre provides homelike bedrooms which aesthetically include the necessary safety precautions such as oxygen in each room. Also, patients have comfortable lounge areas to relax in and receive gourmet-quality meals. The acceptance and development of the overnight recovery care centre as part of the outpatient surgery experience will assist in the growth of the number of surgical procedures performed in ASCs.

Conclusion

It has been predicted that by 1993 there will be over 1600 ASCs in the USA. Looking back at our beginning in 1970 with only two ASCs performing 5700 procedures that year it is apparent that the once small and frail

surgery centre industry has survived, proven itself as a viable and necessary part of the US healthcare delivery system and is now thriving into the 1990s.

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