INTRODUCTION

The time beginning of outpatient anesthesia and surgery can be traced since 1900s by a pioneering pediatric surgeon from Scotland, ***James Nicoll*** at the Glasgow Royal hospital. In 1916, an American anesthetist, ***Ralph Waters*** opens his Downtown Anesthesia clinic in Sioux City, Lowa. This facility which provided care for dental and minor surgery cases. After that, a little interest was directed towards outpatient anesthesia and surgery until the 1960s ***(Cohen and Dillon, 1966)***.

At 1962, hospital based outpatient units were first described in USA with development of a formal ambulatory surgery program at the university of California at Los Angeles, and at the opening of similar facilities at George Washington university in 1966 ***(Cohen and Dillon, 1966).*** The first successful free-standing outpatient facility was the Surgicenter in Phoenix, Arizona, which was established by ***Wallace Reed, and John Ford in 1969.***

Over the past decades, there has been a dramatic growth in our knowledge regarding outpatient anesthesia and surgery practice. The formal development of ambulatory anesthesia as a subspecially occurred with the establishment of the Society for Ambulatory Anesthesia in 1984. By 1985, 7.3 million operations in USA (representing 34% of all elective surgical procedures) were performed on an outpatient basis. In 1990, this figure had increased to over 11 million, with less than 10% of this cases perform in free-standing units. In 1994, over 16 million outpatient operations (representing 61.3% of all elective surgical procedures) were performed in USA alone. By the end of this century, it is expected that

over 70% of all elective operations will be performed on an outpatient basis ***(Ostman and White, 2000).***

In other parts of the world, the growth in outpatient anesthesia and surgery has occurred at a much slower rate. In Europe and Asia, tradition has favored the retention of an overnight stay even after minor surgical procedures. However, in recent years, significant growth in outpatient anesthesia and surgery has occurred in Europe. At present, outpatient surgery accounts for less than 20% of all elective procedures in the UK but the Royal College of Surgeons has recommended that this should increase to 50-60% by the end of this decade ***(Sain-Maurice et al., 1995).***

In 1988, a multidisciplinary organization consists of surgeons, radiologists and anesthetists formed the Society for Minimally Invasive Therapy and held its first meeting in London. The growth of this international organization has been aided by the rapid development of endoscopic surgical techniques. In 1995, the International Association for Ambulatory Surgery held an organizational meeting in Brussels, Belgium. The purpose of this meeting is to facilitate the worldwide development of ambulatory surgery practice ***(Pasternak et al., 1996).***

Regarding the Economic aspect and safety of outpatient anesthesia. It is commonly and correctly believed that one of the major driving forces for the shift to outpatient surgery is an economic one. Reductions in cost can be attributed largely to savings from avoiding hospitalization before and after the procedure, but other factors also play a role. Some savings reflect less preoperative preparation, intraoperative and postoperative management for healthier patients. Another economic advantage of outpatient surgery can be found in its operating hours; operating rooms

are not open unless they are being utilized. The National Audit Office in UK (1987) showed that operating facilities were unused 40% of the time that staff and utilities were being maintained (i.e., paid for). Outpatient surgery centers with efficient scheduling have a built-in advantage over the traditional operating room facility ***(Henderson, 1991).***

Many of the newer agents (e.g. propofol, mivacurium...) have been developed with an eye towards rapid recovery, such should reduce the costs associated with postoperative period. Shorter-acting agents may provide an economic advantage over traditional long-acting agents by reducing the time needed for postoperative care ***(Karp, 1995).***

Saving time appears to be one of the greatest contributions to the economic advantage of outpatient surgery. Overall costs were higher for inpatients than for outpatients undergoing arthroscopy or diagnostic laparoscopy as inpatient underwent more preoperative testing and consumes more time in the operation room than their outpatient counterparts. The calculated saving amounted to 15-20% ***(Kitz et al., 1988).***

Standards of safety for outpatient anesthesia can't be and should not differ from those of inpatient care. Personal and equipment establish the foundation for procedural safety. These elements are especially important in an outpatient surgical facility due to the relative isolation, economy of operation and limited staffing. Although outpatient surgical facility may not attract support staff with significant critical care experience, these skills can be invaluable in emergency situations. One challenge confronting outpatient centers involves the acquisition and maintenance a knowledge base and skills for CPR. In a recent study of

anesthesiologists, it was found that knowledge of resuscitation must be refreshed at a minimum of every 6 months to be judged satisfactory. The American Heart Association requires that the instructors of Advanced Life Support Course teach two courses and be tested for provider skills every two years to remain current ***(Schwid and O'Donnell, 1992).***